
















































GEMSTONE VARIETIES

Gemstones are among the most individual of nature's creations: perfect crystals, with no two alike. Below, we list some of the most popular gemstone varieties but there are many more rare collector's gemstones.

Although some gemstone varieties have been treasured since ancient times and others were only discovered recently, all are nature's gifts to us.

A gemstone is the naturally occurring crystalline form of a mineral which is desirable for its beauty, valuable in its rarity, and durable enough to be enjoyed for generations.

Click on the item names to go to details.

GEMSTONE VARIETIES © Created by ICA Gem Bureau Idar-Oberstein			
 Emerald	 Ruby	 Sapphire	 Amethyst
 Opal	 Topaz	 Peridot	 Aquamarine
 Citrine	 Ametrine	 Garnets	 Tsavorite Garnet
 Demantoid Garnet	 Mandarin Garnet	 Tourmaline	 Rubellite Tourmaline
 Green Tourmaline	 Paraiba Tourmaline	 Yellow Tourmaline	 Blue Tourmaline
 Multicored Tourmaline	 Tanzanite	 Lapis Lazuli	 Fancy Sapphires
 Quartz	 Jade	 Zircon	 Iolite
 Spinel	 Fire Opal	 Moonstone	 Alexandrite
 Chrysoberyl	 Kunzite	 Beryls	 Morganite
 Chrome Diopside	 Andalusite	 Amber	 Turquoise
 Coral	 Agate	 Onyx	 Bloodstone
 Jasper	 Pearl	 Diamond	

Emerald



Emeralds are fascinating gemstones. They show the most beautiful, deepest and most brilliant green imaginable: Emerald green. Inclusions are allowed, and nevertheless, in top qualities fine Emerald are even more valuable than diamonds.

The name Emerald was derived from French "esmeraude" which in turn goes back via Latin to the Greek root "smaragdos", meaning simply "green gemstone". There are uncountable adventure stories involving this splendid gemstone. Even the ancient Incas and Aztecs in South America, where the best Emeralds are still being found today, worshipped it as a holy stone. However, probably the most ancient occurrences which were known are located near the Red Sea. These gemstone mines were already exploited by Egyptian Pharaohs between 3000 and 1500 B.C., gained fame under the name of "Cleopatra's Mines", but had already run out when they were rediscovered.

Many centuries ago in the Veda, the ancient sacred writings of Hinduism, there was written down information on the valuable green gemstones and their healing power: "Emeralds promise good luck", or "The Emerald enhances your well-being". It does not come as a surprise, then, that the treasure chests of Indian Maharajas and Maharanis contained most wonderful Emeralds. One of the largest Emeralds in the world is the "Mogul Emerald". It goes back to the year 1695, weighs 217.80 carats and is about 10 cm high. One side is inscribed with prayers, on the other side there are engraved opulent flower ornaments. The legendary Emerald was auctioned off at Christie's of London for 2.2 million US dollars to an anonymous buyer.

Emeralds have been coveted ever since ancient times. Some of the most famous Emeralds can therefore be admired in museums and collections. For example, The New York Museum of Natural History not only shows a cup from pure Emerald which was owned by Emperor Jehingar, but also a Colombian Emerald crystal weighing 632 carats. The collection owned by the Bank of Bogota contains no less than five valuable Emerald crystals weighing between 220 and 1796 carats. Also in the Irani State Treasure there are guarded some wonderful Emeralds, among them the tiara of ex-Empress Farah.

Green of Life and of Light

Emerald green is the colour of life and of eternally returning spring. For centuries, however, it has also been the colour of beauty and of eternal love. Even in ancient Rome green was the colour dedicated to Venus, goddess of love and beauty. Today there are still many cultures and religions where green holds a special position. For example, green is the holy colour of Islam. All states of the Arabian league sport green banners symbolising the unity of their religion. But also within the Catholic church green holds an important status, as among the liturgy colours green is considered the most natural and elementary one.

Splendid Emerald green is a colour communicating harmony, love of nature and a primeval joy of life. You cannot ever get too much of this unique colour, as Pliny already pointed out "Green is pleasant to the eye without tiring it.". Green is characterised as fresh and full of life, never as monotonous. And as this colour keeps on changing gradually between bright daylight and artificial lamplight, Emerald green in all its hues and shades will preserve its vivid energy.

[top](#)

Fingerprints of Nature



The vivid brilliance of its colour makes Emerald a unique gemstone indeed. But really good qualities are rare, as inclusions will often spoil the impression - traces of an active history of origin characterising the gemstone. Fine inclusions, after all, do not diminish the value; on the contrary. An Emerald of deep, vivid green with inclusions will be valued higher than an inclusion-free stone of paler colour. Almost endearingly, experts call the many crystal inclusions or fissures which are so typical for this gemstone a "jardin". The tender green plant-like structures in the Emerald garden are considered as identifying characteristics of a naturally grown Emerald.

Where do they come from and why are they acceptable? In order to answer this question we must look back in history over 65 million years to the times when Emeralds were created. From a chemical-mineralogical point of view, Emeralds are beryllium aluminium silicates achieving the good hardness of 7.5 to 8. Like blue **Aquamarine**, pale pink **Morganite**, golden Heliodor and pale green Beryl, Emerald is also a member the **Beryl gemstone family**. Pure Beryl is colourless. Colours only exist when traces of certain elements are added in the process. For Emerald, traces of chrome are mainly responsible for the fascinating colour. These elements usually occur concentrated in the Earth crust at completely different locations from beryllium, and therefore Emeralds should not exist at all. However, in the course of extreme tectonic processes these contrary elements were brought together and created one of our most beautiful crystals in the process of crystallising under enormous heat and high pressure. Due to the tensions involved in the geological conditions there occurred several smaller or larger disturbances during creation. And a view inside the heart of an Emerald, with a magnifying glass or a microscope, will tell us something about the wild and vivid process of creating this unique jewel: there may be smaller or larger fissures recognisable, perhaps there will be a miniature

crystal or a small bubble within, and a variety of structures may be discerned. Some of these phenomena had the time to heal out in the growth phase and show the serrated three-phase-inclusions, which are so typical for Colombian emeralds: cavities filled with liquid, often containing also a small gas bubble and tiny crystals.

Obedying the laws of logic, such a history of creation makes it virtually impossible for larger crystals to grow without imperfections. Therefore, then, it is a rare event indeed when a larger emerald of good colour and good transparency is found. And this is why such fine Emeralds are so valuable. But the very fact that Emeralds have a vivid past mean that we like to see traces of this in the stone - provided there is only a fine "jardin" apparent in the stone, and not a wildly overgrown and untamed jungle of a garden, which negatively effects colour and transparency.

The World of Fine Emeralds

Colombia is still the main country of occurrence for fine Emeralds. About 150 mining sites are known there, but not all of these are currently being exploited. The most famous names in this context are Muzo and Chivor, where even in pre-Colombian times the Incas mined Emeralds. The economically most important mine is Coscuez. Estimates ascribe about three quarters of the current Colombian emerald production to the about 60 locations belonging to the Coscuez mine. Colombian Emeralds are set apart from Emeralds of other origin by their especially fine and brilliant green which is not influenced by any bluish tinge. Depending on the place of occurrence, the colour of Emerald may vary. This fascinatingly beautiful colour is highly coveted in the international Emerald trade, so that even visible inclusions which can be discerned with the mere eye are acceptable. But Colombia has more to offer: from Colombian Emerald mines occasionally there come Emerald rarities on the market, like "Trapiche-emeralds" displaying a six-ray-star, or like the extremely rare Emerald Cat's Eye.



Although undoubtedly the best and finest qualities of emeralds are from Colombia, it would be wrong to suppose that the "birthplace" of a stone automatically guarantees immaculate quality. Fine emeralds are also found in other countries such as the Zambia, Brazil, Zimbabwe, Madagascar, Pakistan, India, Afghanistan or Russia. Mainly Zambia, Zimbabwe and Brazil have gained an international reputation for fine Emeralds. From Zambia there are exported excellent Emerald crystals in a beautiful, deep emerald green showing good transparency. Their colour is usually darker than that of Colombian stones and often has a fine bluish undertone. From Zimbabwe's famous Sandawana mines there come usually smaller, but very fine Emeralds in a vivid and deep green, often with a slight yellowish-green shade. Brazil's gemstone mine Nova Era at present even challenges the famous Colombian Emerald mines: their production of Emeralds in beautiful shades of green compete in their attractive beauty with the gemstones offered by the neighbouring country. Because of the occurrences found in Africa and Brazil, Emeralds are fortunately available in larger amounts today than in earlier times - much to the pleasure of their fans.

A Capricious Gemstone

The good hardness may well protect Emeralds from scratches to some extent, but its brittle structure and the many fissures can make cutting, setting and cleaning the stone somewhat problematic. Cutting Emeralds always means a new challenge even for experienced cutters, on the one hand because of the high value of the rough crystal involved, on the other hand because of the frequent inclusions. But this does not diminish their fascination with the unique gemstone. They have developed a special cut, especially for Emeralds: the so-called emerald-cut. The clear design of the rectangular or square cut with its bevelled edges underlines the beauty of the valuable gemstone perfectly, while at the same time offering protection from mechanical strain. Emeralds, however, are also cut in many other, usually classical shapes. But if the raw material is veined by a multitude of inclusions, it is often cut as softly rounded cabochon or as Emerald pearls, which are especially popular in India.

Many Emeralds today are treated with oils or natural resins. This is customary in the trade, but it has the effect that the green jewels react often quite sensitively to in-expert treatment. For example, they must not be cleaned ultrasonically. The substances used by the cutter in the process of cutting or applied subsequently seal the fine openings on the surface of the gemstone and these would be removed in the course of such a cleaning procedure - resulting in a rather matted gemstone. Therefore Emerald rings should always be removed before the hands are immersed in any kind of detergent.

A Question of Trust

As Emerald is not only one of the most beautiful gemstones, but also one of the most valuable ones, there are unfortunately a multitude of syntheses and imitations. How can you feel safe that you do not fall for one of these impostors? The best strategy here is to buy your gemstone from an expert of your trust. Especially larger emeralds should only be purchased with an accompanying certificate provided by a renowned gemmological institute, where modern methods of analysis will be employed to assess a stone and separate natural from synthetic Emeralds, and where you will be informed about any treatments the stone was subjected to that you should know about.

And now a last piece of advice for buying Emeralds: other than diamonds, which show their sparkling brilliance even in sizes below one carat, a coloured gemstone should be preferred in larger sizes. There does exist beautiful

jewellery set with smaller coloured stones as decorative accents, but Emeralds like other coloured gemstones will best display their brilliance in larger dimensions. How big your perfect Emerald should be - this depends on your personal preferences and also on your purse. Really big Emeralds of good quality are rare. In these cases the price for an Emerald of top quality will be higher than the price for an equally large diamond of the same weight. After all - Emerald is a gemstone with a unique fascination ...[top](#)

Ruby



Which colour would you spontaneously associate with love and vividness, passion and power? Obviously this will evoke the colour red. Red symbolizes love, it emanates warmth and a strong sense of life. Red is also the colour of Ruby, the King of gemstones. After all, in the fascinating realm of gemstones rubies are the generally accepted emperors.

For thousands of years Ruby has been considered one of the most valuable gemstones of our Earth. It has got all it takes for a precious stone: a wonderful colour, excellent hardness and an overwhelming brilliance. Besides, it is an extremely rare gemstone, especially in the finer qualities.

For a long time India was considered as the classical country of Rubies. The literature of India contains a rich and varied knowledge collected and handed down for over two thousand years. Even the term "corundum" which we use today is derived from the Sanskrit word "kuruvinḍa". In the Sanskrit language Ruby is called "ratnaraj", which does in fact translate as "King of Gemstones". And it was a royal welcome indeed which used to be prepared for this King of Gemstones: Whenever a spectacular Ruby crystal was found, the emperor sent out his notables to meet the precious gemstone and welcome it in appropriate style. Today Rubies decorate the insignia of many Royal Houses. But are they really all Rubies? Read on to find out more ! [top](#)



Only a Bit of Chrome



Ruby is the red variety of the corundum mineral, one of the hardest minerals on Earth which also includes Sapphire. Pure corundum is colourless. Slight traces of the colour creating elements such as chrome, iron, titanium or vanadium are responsible for the colour.

These gemstones show an excellent hardness. On the Moh's Scale they achieve a hardness of 9, second only to diamonds. And only red corundum may be called Ruby, any other colour is denominated as Sapphires. The close relationship of Ruby and Sapphire has been known since the beginning of the 19th century. Up to that time, also red Garnets or Spinells were thought to be Rubies – and due to this misclassification the so-called "Black Ruby" as well as the "Timur Ruby" decorating the British Crown Jewels are probably actually no Rubies at all, but Spinells.

Ruby, this magnificent red variety of the multi-coloured corundum family, consists of aluminium oxide and chrome as well as smallest proportions of other trace elements - depending on the respective occurrence. In really fine colours and good clarity, however, this gemstone is mined only rarely all over the world. Responsible for this scarcity is in fact the colour-creating element chrome. Millions of years ago, when the gemstones were being created, chrome was the element awarding Ruby its wonderful colour deep inside the core of the Earth. But at the same time it is also responsible for causing a multitude of fissures and tiny irregularities inside the crystals. Only very few ruby crystals could grow undisturbed to considerable sizes and crystallise to form a perfect gemstone. Therefore, then, fine Rubies are quite scarce in sizes above 3 karats. Thus it is no miracle that Rubies with hardly any inclusions are so valuable that in good colours and larger sizes they will achieve top prices at auctions, which surpass even those paid for diamonds.

Some Rubies show a wonderful silky shine, the so-called "silk" of the Ruby. The reason for this phenomenon are finest rutile needles. And now and then we will come across one of the very scarce Star Rubies. Again the rutile mineral is involved here: it is embedded asterisk-shaped within the Ruby thus causing the charming light effect which is termed "Asterism" by the experts. If such Rubies are cut as half-dome shaped cabochons, this will result in six-ray stars which seem to magically glide across the surface of the moving stones. Star Rubies are expensive rarities. Their value is assessed according to beauty and attractive colour, while transparency is secondary. Fine Star Rubies, however, should always display rays which are completely shaped including the rounding, and the stars should be situated right in the centre.

Ruby-red means Passion

Red like Ruby. Ruby-red. The most important characteristic about that valuable stone is its colour. There is of course a reason for this: the name "Ruby" was derived from the Latin word "rubens" meaning "red". The red of Rubies is in a class all by itself: warm and fiery. Two magical elements are associated with the symbolism of this

colour: fire and blood, implying warmth and life for mankind. And thus Ruby-red is not just any old colour, no, it is the epitome of colour: hot, passionate and powerful colour. Like no other gemstone Ruby is the perfect symbol of powerful feelings. A ring set with a precious Ruby does not really symbolise a calm and moderate sympathy, but rather passionate and unbridled love which two people feel for each other.

Birthplace of Fine Rubies

Which is the most beautiful Ruby? This an excellent question. After all, a Ruby may show very different shades of red depending on its origin. The range of the different reds is quite considerable; compared to hotel categories one might say it ranges from luxury accommodation to simple and plain inns. For example, if the gemstone experts talk about Burmese Ruby this indicates the top luxury category. However, it does not necessary follow that the stone has to be of Burmese origin. It is basically an indication of the fact that the colour of said Ruby is the typical shade originally shown by stones from the famous occurrences in Burma, nowadays called Myanmar: a satiated red with a slightly bluish hue. Sometimes "dove-blood-red" is also mentioned, but the term "Burma-colour" is far more precise. An expert will immediately associate this colour with the legendary "Mogok Stone Tract" and the gemstone centre of Mogok in the North of Myanmar. Here we will find the famous Ruby occurrences of the country situated in a mountain valley surrounded by high summits. By hard labour gemstones are brought to daylight in the "valley of Rubies", stones with a fascinating brilliance second to none. Unfortunately, fine qualities are quite scarce here, too. The colour of Burma Ruby is considered to be exceptionally vivid. It is said to display its unique brilliance in any light, natural or artificial.

The journey to the most important Ruby occurrences of the World leads us further on to the small city of Mong Hsu in the North-East of Myanmar, where we can find the most important Ruby occurrences of the nineties. Originally these were hardly considered adequate to be used for jewellery, as Mong Hsu Ruby crystals show two colours when untreated: a purple to blackish core and a bright red brim. Only when it was discovered that the dark core would disappear after heat treatment and only the deep red would remain, Rubies from Mong Hsu could find their way to the jewellery market. Today the Mong Hsu gemstone mines are still among the most important Ruby suppliers. They mostly offer heat-treated Rubies in commercial qualities and sizes between 0.5 and 3 carats.



Ruby occurrences exist also in the neighbouring country of Viet Nam, near the Chinese border. Rubies of Vietnamese origin generally display a slightly purplish hue. Rubies from Thailand, another classical supplier of Rubies, however, produces Rubies which are often dark red tending towards brown. This "Siam colour" - an elegantly modulated deep red - is considered almost as beautiful in Rubies as the Burma-colour, and is especially cherished in the USA. The Ceylon-Rubies, however, which are quite scarce nowadays, were mainly light red, like ripe raspberries.

Other Ruby occurrences are located in Northern Pakistan in the Hunza-Valley, or in Cashmere, Tadchikistan, Laos, Nepal, and Afghanistan. But Rubies are also produced in India, wherein the Federal states of Mysore and Orissa there were discovered occurrences with relatively large Ruby crystals, which are, however, full of inclusions, but nevertheless excellently suited to be cut as Ruby beads or cabochons.

Currently East Africa has become an issue concerning Ruby occurrences. Rubies from Kenya and Tanzania managed to surprise everybody, including the experts, when they were discovered in the sixties. The reason for this was their remarkably beautiful colour, which may vary from light to dark red. But also in the African mines fine and clear Rubies in good colour and size are rarely found. Usually the qualities mined are more or less simple average.

Colour above (almost) Everything

As stated above: colour is Ruby's most important feature, and transparency is secondary only. Therefore, then, inclusions do not effect the quality of a Ruby, unless they decrease the transparency of the stone or are located right in the centre of its table. Quite the contrary applies: inclusions within a ruby are something like the gemstones fingerprints, stating its individuality while at the same time proving its genuineness like a certificate provided by Nature. The cut is essential: only a perfect cut will underline the beauty of this valuable and precious stone appropriately to make it really the "King of Gemstones". But just as true love is rare indeed, so are really perfect Rubies. And if you find one, it is bound to cost a small fortune. Nevertheless: once you found "your" Ruby, do not hesitate: go for it and keep it! **top**





Sapphire

The sky is just a gigantic blue Sapphire stone into which the earth is embedded – this belief was cherished in ancient times. And, in fact, does there exist a better image to describe the beauty of an immaculate Sapphire of purest blue? This gemstone exists in all the shades of blue skies, from the deep blue of evening skies to the bright and deep blue of a clear and beautiful summer sky which charms all people. The splendid gemstone, however, also comes in many other colours, not only in the transparent greyish misty blue of far horizons, but also displaying the bright fireworks of sunset colours – yellow, pink, orange and purple. So Sapphires are really and truly heavenly stones, although they are being found in the hard soil of our so-called "blue planet".

Blue is Sapphire's main colour. Blue is also the favourite colour of about 50 per cent of the population, men and women alike. This colour, which is strongly associated with sapphire, is also linked to emotions such as sympathy and harmony, friendship and loyalty. These emotions belong to features which are permanent and reliable – emotions where overwhelming and fiery passion is not the main element, but rather composure, mutual understanding and unshakeable trust. Sapphire blue has thus become a colour related to anything permanent and reliable, and this is one of the reasons why women in many countries settle on Sapphire for their engagement rings. Sapphire symbolises loyalty and faithfulness, while at the same time expressing love and yearning. The most famous musical example for this melancholic shade of blue can be found in George Gershwin's "Rhapsody in Blue". Sapphire's blue colour is also evoked where clear competence and controlled brainwork are the issue. After all, the first computer ever to wrangle a victory from a chess grandmaster and world champion was named "Deep Blue".

What makes Sapphire a fancy stone?



Its beauty, magnificent colours, its transparency but also its resistance and permanence are characteristics which gemstone lovers and experts assign to this gemstone – however, this does not only apply to blue Sapphire as will be pointed out later on. Sapphire belongs to the corundum group which is set apart from other gemstones by their very good hardness (Grade 9 on the Mohs' scale). They are second in hardness to diamonds only, and diamonds represent the hardest mineral on Earth! Because of their good harness, sapphires are easy to care for as gemstones and demand from their wearers only the usual and normal care.

The corundum group consists of pure aluminium oxide, which a long time ago was caused to crystallise into beautiful and splendid gemstones by the pressure and heat in the depths of the ground. Small proportions of other elements, mainly iron and chrome, are responsible for the resulting colours and make the basically white crystals a blue, red, yellow, pink or greenish Sapphire. But this does not necessarily imply that any corundum is a sapphire. Which stone may be termed a Sapphire – this is a question which for centuries has fuelled heated discussions among experts. Finally agreement was achieved to call ruby-red Sapphires "Rubies", and all other colours "Sapphires".

If we talk about Sapphires, most gemstone lovers will immediately think of a velvety blue. It is an adaptable colour which is attractive on many people. A blue Sapphire is optimally suited to a well-balanced style of life, where reliability is joined with spirit, and where there is an openness for new ideas and influences – just like the woman wearing it. The fact that this beautiful gemstone does also exist in many other colours was for a long time an piece of information known to insiders only. In the gemstone trade any non-blue Sapphire is termed "fancy". And to clear up matters the colour denominations are also used, so that when talking about **fancy Sapphires**, we talk about yellow, purple, pink, green or white Sapphire, etc. Fancy sapphires are the epitome of individualism, the perfect choice for women who love unique coloured gemstone jewellery. These Sapphires exist in a charming variety of designs - set in rings, as pendants or earrings, as solitary stones, in elegant line-ups or as sparkling pavée.



But there are even more surprises about Sapphire: for example, there is an orange colour variety with a fine pinkish undertone, which has been given the poetic name "Padparadsha", meaning "lotus flower". Another rarity are the **star Sapphires**. These are stone cut in half-dome shape displaying a star-shaped light phenomenon, which seems to dance magically across the stone's surface when the Sapphire is moved. There exist rumours about gemstone lovers who have forever and truly lost their hearts to these sapphire rarities – but then, permanence and loyalty come along with these stones.

Top-Sapphires are rare

Sapphires, these gemstones of the skies, rest hidden away in only few places of the earth and have to be brought to daylight in laborious procedures. Sapphires are found in India, Burma, Ceylon, Thailand, Vietnam, Australia, Brazil and Africa. From the gemstone mines the rough crystals are supplied to the cutters, where skilled hands turn them into sparkling gemstones. A cutter must draw on all his experience and deftness when cutting sapphire, because these gemstones are not only hard, they also display a different colouring and saturation depending on the perspective. Therefore, then, the cutter must align the orientation of the stone in such a way as to bring about the best possible display of colour.

Depending on the place of occurrence the depth of colour as well as the shade displayed by the cut stones will vary, which in turn offers a wider range to select from. So shall a woman who has decided on a sapphire go for the medium blue stone evoking the summer skies even on a rainy day? Or should she rather prefer a lighter blue, because it sparkles brilliantly also in the evening? Bright daylight makes most Sapphires shine more vividly than the somewhat muted artificial light. Therefore the most highly cherished colour for blue sapphires is not the darkest blue as is often claimed, but a deep and satiated blue, which even in dim artificial light remains to appear blue. For experts and connoisseurs the Cashmere-colour with its velvety sheen is considered the most beautiful and valuable shade. The wonderful Cashmere gemstones, which were found in 1880 after an avalanche had come down in a height of 5000 m, and which were intensively mined then for eight years, have for all times set the standard for our ideas of the colour of a top quality Sapphire. Typical for the Cashmere colour is a pure and intensive blue, which is enhanced by a fine, silky gloss. It is reported that this colour does not change in artificial light. But Burma-colour is also considered especially valuable. It ranges from rich royal blue to deep cornflower blue.

The oldest Sapphire mines are situated in Ceylon, today called Sri Lanka, where gemstones were mined in ancient times. The expert recognises Ceylon sapphires from the luminosity and brilliance of their light to medium blue colour. Most blue Sapphires, however, come from Thailand or Australia.

Their value depends on size, colour and transparency. For very fine qualities these criteria are supplemented by information on the origin of the gemstone. The colour as such is not necessarily linked to the geographic origin of the Sapphire, and this explains why there are such enormous price differences between the respective qualities. The most valuable sapphires are real Cashmere stones. Almost as highly cherished are stones from Burma, followed by Ceylon-Sapphires. Another factor reflecting on the price for a sapphire is a possible treatment, as in our age of gemstone cosmetics a stone which has definitely not been treated becomes more and more desirable. And if this rare beauty should be a real Cashmere- or Burma-Sapphire with a certificate to document this, than you will definitely have to pay a collector's price.

Only rarely some courageous pioneers will succeed in locating a gemstone occurrence of such dimensions as happened in Madagascar some years ago, when in the Southeast of the island there was found a large gemstone occurrence stretching out across several kilometres. Since then, there have not only been enough blue Sapphires on the market, there also appeared some magnificent yellow and pink Sapphires of special beauty and transparency. In the meantime experts also succeeded in finding the first evidence for two larger gemstone occurrences in Tanzania, where good, although not very large Sapphire crystals are found in blue, yellow and orange colours. And recently Brazil has joined the ranks as third country where blue to purple and pink Sapphires have been found. So, Sapphire lovers may rest assured: The "heavenly" gemstones with the fine colour spectrum will be available in the future in sufficient amounts. Top-quality Sapphires, however, remain a rarity in the gemstone mines all over the world. [top](#)



Amethyst: a Royal Purple

Purple has long been considered a royal color so it is not surprising that amethyst has been so much in demand during history. Fine amethysts are featured in the British Crown Jewels and were also a favorite of Catherine the Great and Egyptian royalty. Amethyst, transparent purple quartz, is the most important quartz variety used in jewelry.

Leonardo Da Vinci wrote that amethyst was able to dissipate evil thoughts and quicken the intelligence.

Because amethyst was thought to encourage celibacy and symbolize piety, amethyst was very important in the ornamentation of Catholic and other churches in the Middle Ages. It was, in particular, considered to be the stone of bishops and they still often wear amethyst rings.

In Tibet, amethyst is considered to be sacred to Buddha and rosaries are often fashioned from it.

The Greek word "amethystos" basically can be translated as "not drunken." Amethyst was considered to be a strong antidote against drunkenness, which is why wine goblets were often carved from it! The gemstone still

symbolizes sobriety.

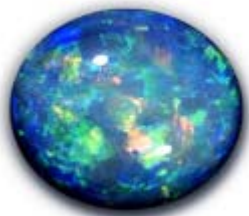
The legend of the origin of amethyst comes from Greek myths. Dionysius, the god of intoxication, was angered one day by an insult from a mere mortal and swore revenge on the next mortal that crossed his path, creating fierce tigers to carry out his wish. Along came unsuspecting Amethyst, a beautiful young maiden on her way to pay tribute to the goddess Diana. Diana turned Amethyst into a statue of pure crystalline quartz to protect her from the brutal claws. Dionysus wept tears of wine in remorse for his action at the sight of the beautiful statue. The god's tears stained the quartz purple, creating the gem we know today.

Amethyst ranges in color from pale lilac to deep purple. The pale colors are sometimes called "Rose de France" and can be seen set in Victorian jewelry. The deep colors are the most valuable, particularly a rich purple with rose flashes.

Amethyst is mined in Brazil, Uruguay, Bolivia and Argentina, as well as in Zambia, Namibia and other African countries.

Generally, amethyst from South America tends to be available in larger sizes than African amethyst but amethyst from Africa has the reputation for having better, more saturated, color in small sizes. Very dark amethyst, mostly in small sizes, is also mined in Australia.

Amethyst is available in a wide range of calibrated sizes and shapes, including many fancy shapes. Large fine stones may be sold in free sizes but generally amethyst is cut in standardized dimensions. [top](#)



Opals

All of Nature's splendour seems to be reflected in the manifold opulence of fine Opals: fire and lightning, all the colours of the rainbow and the soft shine of far seas. Australia is the classical country of origin. Almost ninety-five per cent of all fine opals come from the dry and remote outback deserts.

Numerous legends and tales surround this colourful gemstone, which can be traced back in its origins to a time long before our memory, to the ancient dream time of the Australian aborigines. It is reported in their legends that the creator came down to Earth on a rainbow, in order to bring the message of peace to all the humans. And at the very spot, where his foot touched the ground, the stones became alive and started sparkling in all the colours of the rainbow. That was the birth of the Opals.

The group of fine Opals includes quite a number of wonderful gemstones, which share one characteristic: they shine and sparkle in a continually changing play of colours full of fantasy, which experts describe as "opalising". Depending on the kind, place of occurrence, and colour of the main body, we differentiate Dark or Black Opal, White or Light Opal, Milk or Crystal Opal, Boulder Opal, Opal Matrix, Yowah Nuts from Queensland – the so-called "picture stones", and also Mexican and **Fire Opal**. Opal variations are practically unlimited. They all show in their own special way that unique play of colours – except for Fire Opal, which due to its transparency, however, is nevertheless also considered a Fine Opal specimen. If Opals are lacking the typical play of colours, they are simply named "Common Opal".

Upala, opalios or Opalus – fascination created by tiny spheres

The name Opal was probably derived from Sanskrit "upala", meaning "valuable stone". This was probably the root for the Greek term "opalios", which translates as "colour change". In the days of Roman antiquity there existed a so-called "opalus", or a "stone from several elements". So the ancient Romans may already have had an inkling why the Opals show such a striking play of colours. But we will come to this later ...

Pliny, the famous Roman author, called Opal a gemstone which combines the best possible characteristics of the most beautiful of gemstones: the fine sparkle of Almandine, the shining purple of Amethyst, the golden yellow of Topaz, and the deep blue of Sapphire, "so that all colours shine and sparkle together in a beautiful combination".

Up to the first half of the 19th century, Opals were relatively rare. But then their career boomed suddenly and made them one of the most popular gemstones, and the start of this development brought them to the gemstone cutters of the gemstone centre of Idar-Oberstein. In the era of Art Deco the Opals experienced their flourishing, with contemporary gemstone artists preferring them to all other stones because of their subdued charm, which in turn was excellently suited to be combined with enamel, another very popular material of those days.

Opal's colour play emanates a very special attraction and fascination. But what causes this phenomenon? This question was impossible to answer for a very long time. Only when in the 1960s a team of Australian scientists analysed Opals with an electron microscope, it was discovered that small spheres from silica gel caused interference and refraction manifestations, which are responsible for the fantastic play of colours. The spheres,

which are arranged in more or less compact structures, succeed in dissecting the light on its passage through the gemstone and turning it into all the colours of the rainbow, always new and always different.

Australia, classical Opal country

Australia is the classical Opal country and today is the worldwide most important supplier of Fine Opals. Almost 95 per cent of all Opals come from Australian mines. The remaining five per cent are mined in Mexico, and in Brazil's north, also in the US states of Idaho and Nevada, but recently the stones have also been found in Ethiopia and in the West African country of Mali.

The history of Australian Opal began actually millions of years ago, when parts of Australia were covered by a vast inland sea, and stone sediment was deposited along its shoreline. When the water masses flooded back, they flushed water containing silica into the resulting cavities and niches in the sedimentary rocks, and also the remains of plants and animals were deposited there. Slowly the silica stone transformed into Opal, for basically Opals are simply a combination of silica and water. Or, to be more precise: Opals are a gel from silica, with varying percentages of water.

In 1849 the first Opal blocks were accidentally found on an Australian cattle station called Tarravilla. The first Opal prospectors started in 1890 at White Cliff mining the Opal rocks. And even today the eyes of Opal lovers light up when somebody mentions places like White Cliffs, Lightning Ridge, Andamooka or Coober Peddy: for these are the legendary sites of the Australian Opal fields. The most famous one is probably Lightning Ridge, the place where mainly the coveted Black Opal is found. Andamooka, where Crystal Opal and Light Opal are brought to the light of day, can boast to be the place where the probably largest Opal was found, with a weight of 6,843 kilograms, the "Andamooka Desert Flame". Coober Peddy, by the way, is a word from Aborigine language meaning „white man in a hole“. This clearly describes how Opal was in fact mined: many Opal prospectors made their home in deep holes or caves in the ground, to protect themselves from the burning heat of daytime and from the icy winds of night time. Usually they worked only with tools such as pick and shovel. Buckets full of soil, hopefully containing Opal rocks, were pulled up out of the depths of 5 to 40 m deep shafts by hand, for this is the depth of the Opal containing crevices and cavities, which are also mined nowadays.

Being an Opal prospector is still not an easy job, although today of course there are some technical means available, such as trucks or conveyor belts. And still the hope to make the find of a lifetime which will let you live happily ever after attracts many men and women to come to the hot and dusty Australian outback.

About cabochons, doublets and triplets

In order to best bring out the play of colour in a Fine Opal, the stones are cut and polished to round or oval cabochons, or any other softly domed shape, depending on the raw material. Only the best qualities of Fire Opal, however, are suited to faceting. The Opal cutter will first of all carefully remove any impurities using a diamond cutting wheel, before working out the rough basic shape. Then comes the fine cutting, the finishing with sandpaper and then the final polishing with a wet leather wheel.



Opal is often found as flat lenses, or thin layers, bigger pieces are rather rare. If you leave a thin but supporting layer of the harder mother rock, you will receive a pre-stage of the Opal-doublets which are frequently used today for mass produced jewellery. These are gemstone combinations consisting of a surface from millimetre-thin Opal plates, which have been mounted on Onyx, Obsidian, artificial black glass, or Potch-Opal. Triplets have been developed from this design, here the Opal layer receives an additional cover from Rock Crystal, Plastic, Hard Glass or Lead Glass for protection.

Opal love to be worn on the skin

Due to the differing percentage of water, Opals may easily become brittle. They always contain water – usually between 2 and 6 per cent, but sometimes even more. Thus if stored too dry or exposed to heat over a longer period of time, Opals will show fissures and the play of colour will become paler. Therefore, Opal jewellery should be worn as often as possible, for then the gemstone will receive the needed humidity from the air and from the skin of its wearer.

Opals are not very hard: they only achieve 5.5 to 6 on the Mohs' scale. Therefore they appreciate a protective setting. In earlier days Opal's sensitive surface was often oiled, but today also sealing them with colourless artificial resin has become quite popular.

From Harlequin to Peacock: Opal experts lingo

When Opal experts talk about "harlequin", "church windows" or "needle fire", do not be surprised. They are probably discussing Opals. The play of colour in this stone is described with many imaginative terms for various structures and phenomena, like, for example, "flame opal", "lightning and peacock opal", or the above named "harlequin" and "church window".

Opal's value is not only determined by the body colour, transparency and factors based on place of occurrence. (Body colour refers to the basic colour of the gemstone, which can be black, dark or light and coloured). It is also

important if the stone is transparent, translucent or opaque. And the opalizing effect may also influence the transparency.

Black Opal or Opal with a dark grey body shows the most brilliant play of colours imaginable. Crystal opal, which comes immediately after Black Opal in the hit list, should be more transparent with a deep play of colours. White or milky Opals show more diffuse colours and are the least expensive Opals. The occurrence-specific characteristics include, for instance, denominations such as "Black Opal from Lightning Ridge" (we are talking absolute top luxury here) or "Mexican Fire Opal".

The most important criterion for determining the price of an Opal, however, is the play of colour, the colours as such and their pattern. If the colour red appears when looking through the stone, all the other colours will appear also. For evaluating Opals the thickness of the Opal layer is considered, the beauty of the patterning, the cut, weight and finish. Finally the total impression will be decisive, and of course offer and demand will determine how much you will have to pay for "your" Opal. If you are interested in a really valuable specimen, get an Opal expert to advise you, because it takes a real expert to know about the many criteria which determine the price.

Opals and emotions

For ages people have been believing in the healing power of Opal. It is reported to be able to solve depressions and to help its wearer find the true and real love. Opals are supposed to further enhance the positive characteristics for people born under the zodiac sign of Cancer. Black Opal is recommended to those born under Scorpio, and Boulder Opal is the lucky stone for Aries.

The fantastic colour play of Opal reflects changing emotions and moods of people. Fire and water, the sparkling images of Boulder Opal, the vivid light flashes of Black Opal or the soft shine of Milk Opal – striking contrasts characterise the colourful world of this fascinating gemstone. Maybe this is the reason why it depends on our daily mood which Opal we prefer. Opals are like human emotions: you always experience them different and anew. **top**

Topaz: Gem of the Setting Sun



The Egyptians said that topaz was colored with the golden glow of the mighty sun god Ra. This made topaz a very powerful amulet that protected the faithful against harm. The Romans associated topaz with Jupiter, who also is the god of the sun. Topaz sometimes has the amber gold of fine cognac or the blush of a peach and all the beautiful warm browns and oranges in-between. Some rare and exceptional topaz are pale pink to a sherry red.

Wear topaz only if you wish to be clear-sighted: legend has it that it dispels all enchantment and helps to improve eyesight as well! The ancient Greeks believed that it had the power to increase strength and make its wearer invisible in times of emergency. Topaz was also said to change color in the presence of poisoned food or drink. Its mystical curative powers waxed and waned with the phases of the moon: it was said to cure insomnia, asthma, and haemorrhages.

Perhaps the most famous topaz is a giant specimen set in the Portuguese Crown, the Braganza, which was first thought to be a diamond. There is also a beautiful topaz set in the Green Vault in Dresden, one of the world's important gem collections.

Brown, yellow, orange, sherry, red and pink topaz is found in Brazil and Sri Lanka. Pink topaz is found in Pakistan and Russia.

Today we also have blue topaz, which has a pale to medium blue color created by irradiation. Pale topaz which is enhanced to become blue is found in Brazil, Sri Lanka, Nigeria, and China. In early 1998, a new type of enhanced topaz made its appearance, the surface-enhanced topaz, with colours described as blue to greenish-blue or emerald green.



Topaz is a very hard gemstone but it can be split with a single blow, a trait it shares with diamond. As a result it should be protected from hard knocks.

Topaz is the birthstone for those born in the month of November. **top**



Peridot

The vivid, slightly golden shimmering green of Peridot is the ideal gemstone colour to complement a light summertime outfit. This is no surprise – Peridot, after all, is assigned to the summer month of August.

Peridot is an ancient and yet currently very popular gemstone. It is so old that it can be found even in Egyptian jewellery from the early second millennium BC. The stones used in those days came from an occurrence on a little volcanic island in the Red Sea, about 70 km off the Egyptian coast, off Assuan, which was rediscovered only around 1900 and has been completely exploited since. Peridot, however, is also a very modern stone, for only a few years ago Peridot occurrences were discovered in the Cashmere region, and the stones from there show a unique beauty of colour and transparency, so that the image of the stone, which was somewhat dulled over the ages, has received an efficient polishing.

The ancient Romans were already quite fond of the gemstone and coveted the brilliant green sparkle, which does not change either in artificial light. They already named the stone “Evening Emerald”. Peridot is found in Europe in many medieval churches decorating several treasures, like, for example, in the Cologne Cathedral. In the era of Baroque the deep green gemstone experienced another short flourishing, before it became forgotten.

Spectacular “Cashmere Peridot”

But suddenly, around the middle of the 1990s, Peridot was the great sensation on the Gemstone Trade Fairs all around the world. The reason: In Pakistan there had been found a sensationally rich occurrence of finest Peridot on a rough mountainside, in about 4,000 m height. The extremely hard climatic conditions only allowed mining to go on through the summer months, and yet the unusually large and fine crystals and rocks were brought down into the valley. These stones were of finer quality than anything else ever seen before, and the occurrence proved so rich that the high demand can be met without problems at present.

In order to underline the outstanding quality of such Peridot from Pakistan the stones have been termed “Cashmere-Peridot”, reminding of the fine Cashmere Sapphires. Creative gemstone cutters have in fact succeeded to create fascinating and beautiful unique stones of over 100 karats from some of the larger and fine crystals in a deep and breathtakingly beautiful green.

The depth of green depends on iron

The gemstone is actually known under three names: Peridot, Chrysolith (derived from the Greek word “goldstone”) and Olivin, because Peridot is the gemstone variety of the Olivin mineral. In the gemstone trade it is generally called Peridot, a name derived from the Greek “peridona”, meaning something like “giving plenty”.

Peridot is one of the few gemstones which exist only in one colour. Finest traces of iron account for the deep green colour with a slight golden hue. Chemically Peridot is just an iron-magnesium-silicate, and the intensity of colour depends on the amount of iron contained. The colour as such can come in any variation from yellow-green and olive to brownish green. Peridot is not especially hard – it only achieves about 6.5 to 7 on the Mohs’ scale – and yet it is easy to care for and quite robust. Very rare treasures indeed, however, are Peridot-Cat’s Eye and Star-Peridot.



The most beautiful stones come from the Pakistan-Afghanistan border region. Peridot as gemstone does also exist in Myanmar, China, the USA, Africa and Australia. Stones from East Burma, today’s Myanmar, show a vivid green with fine silky inclusions. Peridot from the American state of Arizona, where it is quite popular in Native Indian jewellery, often shows a yellowish to golden brown shade.

Uncomplicated – but not for the cutter

Peridot is cut according to its crystal structure, usually in classical table and faceted cuts, round, antique, octagonal or oval shaped. Smaller crystals are cut as calibrated stones, larger ones are shaped by gemstone designers to fancy unique specimen stones. The material which is rich in inclusions is worked as cabochons, because this shape will provide the best effect for the fine silky inclusions.

Gemstone cutters know that this stone is not easy to process. The rough crystals can be devious and are easy to break. The tensions existing inside the crystal are often quite considerable. When the cutter has removed the most disturbing inclusions, however, Peridot is a jewellery stone which is excellently suited to daily wear, without requiring special care.

Ideal summer stone

Peridot is a gain for the green gemstone’ colour palette. There is trend to use it not only as individual stone, but also in jewellery series. And since the world of fashion has just discovered a preference for the colour green, the popularity of this deep green gemstone has increased accordingly. And the rich occurrences in Pakistan and Afghanistan have provided the market with sufficient raw material, so that the individual taste and each budget can

be met. But if the "right" stone for you is a large and transparent one, intensely coloured, be prepared: they are quite rare and valuable. Peridot is a gemstone which one should definitely get to know. Its fine pistachio green or olive green ideally complements a light summertime outfit. [top](#)



Aquamarine

From lightest sky-blue to the deep blue of the sea – aquamarines show all these shades of an exceptionally beautiful range of usually light blues. It is a truly fascinating stone. Women all over the world covet it because of its fine blue colour, which suits almost any complexion or eye-colour to perfection, and creative gemstone artists get their inspiration for new cuts more often from aquamarines than from other stones.

Its light blue arises feelings such as sympathy, trust, harmony or friendship. These are good feelings, which involve a partner or companion, and prove their value in long-lasting relationships. Aquamarine blue is a divine and eternal colour, since it is, after all, the colour of the skies. Aquamarine blue, however, is also the colour of water with its life-giving properties. And in fact aquamarine seems to have managed to embody the light blue of the seas. This is not surprising, for according to legend it has its origin in the treasure chest of the legendary mermaids, and has for ages been reputed to be a lucky stone for sailors. Its name has been derived from the Latin terms "aqua" meaning water, and "mare" or sea. Allegedly its powers develop best if the stone is immersed in sun-drenched water. However, it seems a wiser course to carry it, because according to ancient traditions, carrying an aquamarine is supposed to guarantee a happy marriage and to make its owner happy and rich at that – the ideal gemstone, not only for lovers and married couples.

Gemstone with many excellent characteristics

Aquamarine is one of our most popular and famous gemstones and is characterised by many excellent features. It is almost as popular as the classical stones Ruby, Sapphire and Emerald. It is related to **Emerald**, which just like Aquamarine belongs to the gemstone **family of Beryls**. However, the colour is more evenly distributed throughout the stone in Aquamarines compared to Emeralds. More frequent in occurrence than its famous green brother, Aquamarine is usually almost free of inclusions. It possesses a good hardness (7 _ to 7 _ on the Mohs' scale), and a breathtaking brilliance. Its good hardness makes it quite robust and protects it generally from getting scratched. Iron is the substance responsible for the colour in Aquamarine, and the shades of blue displayed range from almost colourless pale blue through to bright sea blue. The more intense the colour of an Aquamarine, the higher its value. Some Aquamarines show a slightly greenish hue – that is also considered typical. But a really pure and clear blue is still cherished as typical Aquamarine colour, as it best brings out the immaculate transparency and high brilliance of this gemstone.



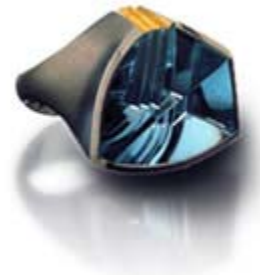
Santa Maria makes the hearts bet faster

The light blue of this fine Beryl finds more and more friends. The different shades of Aquamarine are distinguished by their own promising names: "Santa Maria" is the name for the rare, intensely deep blue Aquamarines found in the Santa Maria de Itabira mine in Brazil, and they are bound to cause excitement among gemstone lovers in general. Similar colours are found in some of the sparse Aquamarine gemstone mines in Africa, especially in Mozambique. In order to better distinguish them, these Aquamarines are denoted as "Santa Maria Africana". Not quite as deeply blue are "Espirito Santo" Aquamarines from the Brazilian state of Espirito Santo. Another beautiful colour has in fact been named in honour of a Brazilian beauty queen from 1954, and has become famous as "Martha Rocha".

The names of the colours already point out the importance of Brazil as the main country where Aquamarines are found. Most of the rough crystals on the world market come from the gemstone mines of this huge South American country. From time to time, then, large Aquamarine crystals of immaculate transparency and splendid colour are found here, a rare occurrence indeed where these gemstones are concerned. Now and then even sensationally large crystals are found, such as, e.g., in 1910 at Maraimba/ Minas Gerais, where a 110.5 kg crystal was mined. Or there is the "Dom Pedro" weighing 26 kg, which was cut in 1992 by Idar-Oberstein gemstone artist Bernd Munsteiner, thus achieving the title of largest ever cut Aquamarine. Nevertheless, Aquamarines are also found in other countries, such as, for example, Nigeria, Madagascar, Mozambique, Afghanistan or Pakistan.

Favourite stone of modern designers

There is hardly another gemstone, which is equally often used for modern jewellery design in such versatile variety. Clear and transparent in classical steps cut, or as modern fancy cut: Aquamarine is always fascinating and beautiful. Even uncut or with many inclusions, which designers often opt to include on purpose when developing their cuts, the stone is ideal for realising imaginative creations. Designers have named it their



favourite stone. Again and again they surprise everybody with new and modern cuts, which they seem to prefer to craft in Aquamarine. These creative designer cuts have no doubt contributed to its high popularity. Aquamarine's light colour makes it easy to discern inclusions within. Therefore Aquamarines should be as transparent as possible. But sometimes the design of the cuts adds special attractiveness to a stone by including these imperfections to create special effects. Aquamarine's light colour allows for a special creative freedom for designers to bring out the character and brilliance of a stone by integrating fine fissures and traces, rounded shapes as well as edges. Thus each Aquamarine becomes a unique original, which no woman will be able to resist. [top](#)



Citrine: Mellow Yellow

Citrine is one of the most affordable gemstones, thanks to the durability and availability of this golden quartz. Named from the French name for lemon, "citron," many citrines have a juicy lemon color.

Citrine includes yellow to gold to orange brown shades of transparent quartz. Sunny and affordable, citrine can brighten almost any jewelry style, blending especially well with the yellow gleam of polished gold.

In ancient times, citrine was carried as a protection against snake venom and evil thoughts.

Although the darker, orange colors of citrine, sometimes called Madeira citrine after the color of the wine, has generally been the most valued color, in modern times, many people prefer the bright lemony shades which mix better with pastel colors. Citrine is generally more inexpensive than amethyst and is also available in a wide range of calibrated sizes and shapes, including very large sizes.

Most citrine is mined in Brazil. Supply of citrine is good from the Brazilian state of Rio Grande do Sul, particularly from the Serra mine, which is producing 300 kilos a month of hammered goods. The Iraã mine produces an additional 100 kilos a month of hammered goods.

Sometimes you will hear citrine referred to as topaz quartz, which is incorrect. This name was used in the past in reference to the color, which is sometimes similar to the color of topaz. Since topaz is a separate mineral, this type of name can be confusing and should not be used. However, citrine is considered an alternative to topaz as the birthstone for November.

Since most citrine on the market started its life as amethyst which was heated to turn its color to gold, citrine jewelry, as well as amethyst jewelry, should be kept away from prolonged exposure to strong light or heat. With this precaution, citrine jewelry will last for many generations. [top](#)

Ametrine: Spinning Purple into Gold



Do you love both the purple of amethyst and the sunny gold of citrine? Are you a rabid Minnesota Vikings fan? I have the perfect gem for you! Sometimes amethyst and citrine colors are found in the same crystal of quartz. These bicolor yellow and purple quartz gemstones are called Ametrine.

With Ametrine, you can have both gem colors for the price of one! Ametrine is especially inexpensive when you consider that it comes from only one mine in the world.

The Anahi Mine in Bolivia is the major world producer of Ametrine. The mine first became famous in the seventeenth century when a Spanish conquistador received it as a dowry when he married a princess from the Ayoreos tribe named Anahi. Ametrine was introduced to Europe through the conquistador's gifts to the Spanish queen.

Ametrine is most typically faceted in a rectangular shape with a 50/50 pairing of amethyst and citrine. Sometimes a checkerboard pattern of facets is added to the top to increase light reflection. Ametrine can also be cut to blend the two colors so that the resulting stone is a mix of yellow, purple, and peach tones throughout the stone. Ametrine is also popular among artistic cutters and carvers who play with the colors, creating landscapes in the stone.

Ametrine is a very durable gemstone suited for a variety of jewelry uses. Most sizes and shapes are available but the color contrast is most pronounced in sizes over seven carats.

So why compromise when you can have two varieties of quartz for the price of one! [top](#)

Garnet



Garnets - aren't these the wonderfully deep red gemstones which are often found in antique jewellery? Well, this is only the partial truth, as a warm and deep red is indeed the most frequently occurring colour for Garnets. But unfortunately only few people know that the realm of Garnets holds many more bright and beautiful colours. The traditional image of Garnet has been brightly transformed by spectacular finds, mainly from Africa. Although red remains the major colour, Garnets today easily adapt to any new colour trend in fashion due to the rich



range available. And because of the new finds, there are reliable sources for steady supply in these fancy colours. All this explains why this very gemstone family manages to keep on providing new impulses for the jewellery events in our days.

An expert will understand "Garnet" as the denomination for a group of over ten different gemstones with a similar chemical structure. Although the colour red is the one which occurs most frequently, there are also Garnets showing different shades of green, pale to bright yellow, fiery orange and fine earth- and umbra-shades. Only blue is a colour which is not available in Garnet. Garnets are gemstones which are in high demand and are often worked into pieces of jewellery - especially since today not only the traditional gemstone colours red, blue and green are cherished by the consumer, but the intermediate shades and hues are also very popular. Besides the realm of Garnets also possesses rarities such as asterism or atones which change their colour from daylight to artificial light.

What else characterises this gemstone family? First of all, there is the excellent hardness of 7 to 7.5 on the Mohs' scale. This applies, with minor variations, to all the members of the Garnet group. And this is also an explanation why these gemstones are so excellent to wear. Garnets are quite sturdy and resistant to everyday wear and tear, and uncomplicated to work into jewellery. Only to hard impact or uncontrolled heating they will react adversely. Another point in favour of Garnets is their high refraction of light, the reason for the amazing brilliance of Garnets. The shape of the rough crystal is also interesting. Garnet, after all, means something like "the grainy" and is derived from the Latin word "granum" meaning "grain". This refers to the typically rounded shape of Garnet and also reminds of the seeds of the pomegranate. In the middle ages, Garnet was also called "karfunkel" in German, referring to the glowing red reminding of the sparks of fire. Today there are a lot of imaginative names used in the trade, such as Arizona Ruby, Arizona Spinel, Montana Ruby or New Mexico Ruby. **top**

The Garnet illuminated Noah's Ark

Garnets have been widely known for thousands of years. Even Noah, it is reported, used a lantern from Garnet in order to safely steer his Ark through the darkness of the night. Garnets are found in jewellery from ancient Egyptian, Greek and Roman eras. Many courageous discoverers and travellers wore Garnets for protection, as they were considered popular talismans and protective stones, because it was believed in those days that Garnets illuminate the night and prevent their wearer from any sort of evil. Today science explained to us that the proverbial luminosity of Garnet is caused by its high refraction of light.



Garnets come not only in many colours but also under many names: Andradite, **Demantoid**, Grossularite, Hessonite, Pyrope, Rhodolith, **Tsavorith**, **Spessartine**, Uwarowite etc.. Let us focus on the most important ones, and let us start with red Garnets. First of all, there is fiery red Pyrope. Its fierce and often slightly bronze coloured red was highly popular as gemstone colour in the 18th and 19th century. Worldwide renowned in those days were the Bohemian Garnets from an occurrence in the north-eastern part of the former Kingdom of Bohemia - small stones in a wonderful colour. In Europe they were frequently used for jewellery in Victorian times. This genuine Bohemian Garnet jewellery is traditionally decorated with many small stones which are tightly arranged along each other like the seeds of a pomegranate. Today Garnet is still found in the Czech Republic, and the stones are still arranged in the traditional way, tightly joined, so that the attraction of the classical Garnet jewellery is caused by the beauty of the stones only.

The large central stones of the typical "rosette" arrangements are usually also Garnets, but these come from another category. Almandines, named after the ancient gemstone city of Alabanda in Asia Minor, are a little different in their chemical structure from Pyropes. Why these are preferred as central stones? Well, Nature only grows Pyropes in small sizes, but allows for Almandine crystals in larger dimensions.

Another red Garnet variety is Rhodolith, a crystal mixture from Almandine and Pyrope This popular red Garnet shows a wonderful velvety red with a fine purple or raspberry coloured undertone. Originally discovered in the

USA, it is mainly found in gemstone mines in East Africa, India and Sri Lanka nowadays.

Colourful World of Garnets

The fantastic find of an up to then extremely rare Garnet variety puzzled experts all over the world some years ago. On the Kunene river, on the border between Namibia and Angola, there was the surprising and spectacular discovery of bright orange to red **Spessartine Garnets**, which were originally named after their occurrence in the German Spessart mountains. Until the legendary mine was discovered in Namibia, Spessartines had existed as mere collector's items or rarities. They were hardly ever used for jewellery because they were so rare. But the find changed the world of jewellery gemstones. From this time on, an exceptionally fine and brightly orange-red gemstone has completed the offered range. The trade name "**Mandarine -Garnet**" was coined, and the wonderfully orange coloured Fine Garnet became world-famous almost overnight. Unfortunately the mine in the remote Namibian mountains could only be exploited for a few years. Prospecting for the gemstones in the isolated bush land became more and more complicated and expensive. It had to be expected, then, that the very upstart among the quality gemstones would only be available in limited amounts from the stocks of few cutters. However, another sensation was caused by discovering another occurrence of the orange-coloured treasures, this time in Nigeria. In colour and brilliance they are so similar to the Namibian stones that only experienced experts will be able to tell them apart.

And now let us focus on green Garnets. Green Garnets - do they really exist? Of course! There are even several known green Garnet varieties. First of all, there is Grossularite, which was created by Nature in many fine colours from yellow to green and brown, and which is especially cherished because of the many in-between shades. And earth-colours. Here there was also a sensational find: In the last year of the 20th century large Grossularite occurrences were discovered in Mali. The Mali Garnets are charming because of their high brilliance, which makes even the usually not so popular brown colour attractive and vivid, and the natural appeal is in wonderful harmony especially with ethno-look inspired trends.

Possibly the most famous green Garnet is **Tsavorith** or **Tsavolith**, another Grossularite. Tiffany's in New York re-named the stone which had been discovered in 1967 by British geologist Campbell R. Bridges in North-East Tanzania. The emerald-green stone was named after its occurrence near the famous game park Tsavo-National Park. Tsavorith is of a vivid light to velvety deep green and, like all other Garnets, of strikingly high brilliance.

The star among green Garnets is rare **Demantoid**, a gemstone for connoisseurs and lovers. It shows enormous brilliance, higher even than that of Diamond. Russia's leading court jeweller Carl Fabergé loved the brilliant green Garnet from the Urals more than any other stone, and liked to use it in his creations. Nowadays Demantoid turns up more often in the gemstone market because of the new finds in Namibia. Demantoids from Namibia show good colour and brilliance, however, they lack a minor characteristic: the so-called "horsetail-inclusions", fine bushy-shaped inclusions which are the characteristic birthmark identifying Russian Demantoids.

Gemstone Colours for each Fashion Trend

If you love the immaculate naturalness and sun-drenched warm colours of Indian summer, you will fall in love with range of colours displayed by Garnets. Today these stones come mainly from African countries, also from India, Russia, central and south America. The skilled hands of cutters all over the world shape them in many classical forms and more and more also in modern fancy designer's cuts. Garnets appeal generally because of their natural and not manipulated beauty, their wide variety of colours and their magnificent brilliance. If you buy Garnet jewellery you can be certain to enjoy this gemstone gift from Nature permanently and without inhibitions. [top](#)



Tsavorite

Brilliant green Tsavorite is rather a young gemstone with a truly ancient geological history. Its native country is the bushland along the frontier between Kenya and Tanzania. The sparse mines there are situated in a uniquely beautiful landscape of dry grassland with bare and dry hills. It is a dangerous region, where snakes feel at home and now and then a lion will hunt for prey. It is in this very region, not far away from the Tsavo National park, where our story begins.

The Once upon a time, in the year 1967, the British geologist Campbell R. Bridges was prospecting for gemstones in the north-eastern part of Tanzania. Suddenly he came across some very odd, potato-shaped stone objects. And like in a fairy tale, he found breathtakingly beautiful green grains and crystal pieces inside these weird objects. Gemmological tests showed that he had discovered green grossularite, a mineral which had up to then been considered very rare, which belongs to the colourful Garnet family. The stones were very beautiful and of high transparency, so that his find made experts sit up and take notice. Even Tiffany & Co. in New York expressed their interest in the newly discovered green jewel. But in spite of all efforts it was impossible in those days to get an export licence for taking these stones out of Tanzania. Campbell Bridges, however, did not admit defeat. As

geologist he knew that those layers in the soil which carry gemstones are generally not limited to just one spot, but usually stretch out over vast areas – and such a layer was what he had encountered according to his opinion. After all, the stone belt which accommodates most of East Africa's gemstone mines is truly ancient. It was created many millions of years ago, when the continents were still moving around a lot. In those times the region in question had been part of the bottom of the sea. The sedimental residue was compacted, folded and thus shaped by the movements of the earth plates. The extremely high pressure and high temperatures effected changes in the originally existing stones. Thus new and amazingly beautiful gemstones were created – among them also Tzavorite. But the gigantic forces of Nature involved in the process of creation had already damaged most of the crystals so that we usually only find grains and pieces of them today.

Campbell R. Bridges stubbornly continued his search. His theory that the gemstone loaded vein might even extend into the Kenyan territory finally set him on the right track. In the year 1971 he discovered the brilliantly green gemstone for a second time, this time in Kenya, where he could officially register his find and could start exploiting the occurrence. This was the beginning of a new adventure: in order to protect himself from wild animals Bridges lived in a tree house at first. And as he did not want his treasure to be stolen, he cunningly employed the workers' fear of snakes and had the rough stones guarded by a python snake. It was a beautiful find indeed. Unfortunately, however, the stone was only known to experts. This changed quickly when in 1974 Tiffany's started a special promotion campaign making Tzavorite well-known in all the USA in only a short time. Other promotion campaigns in other countries followed, and soon Tzavorite was a name known everywhere. [top](#)

Green like Garnet ...

Why is it called Tzavorite or Tzavolith respectively if it is after all a green Grossularite from the colourful **Garnet** family? Naming gemstones is performed according to certain rules. Modern mineralogical nomenclature demands that gemstones are given a name ending in "ite". To honour the Tzavo National Game Park and the Tzavo river running through this area, Henry Platt, the former president of Tiffany & Co, who accompanied the gemstones rise to popularity, had suggested the name Tzavorite. Sometimes, however, Tzavolith is used but both denote the same stone. The ending "lith" is simply the Greek word for "stone".

What makes Tzavorite so desirable? First of all there is its vividly brilliant green. The colour scale shown by Tzavorite ranges from spring-like pale green via intensely bluish green to deep forest green. – colours which have an invigorating and fresh effect on the senses. The gemstone is also coveted because of its high brilliance. Like all other Garnets it enjoys an especially high light refraction index (1.734/ 44). Not without reason, then, did old legends claim that garnets were difficult to hide. Their sparkling light was reported to be visible even through clothes.



Contrary to other gemstones, Tzavorite are not heated or oiled. This is not necessary for this gemstone. Like all other Garnets it is a piece of immaculate and pure nature. Another positive characteristic is its robustness. Although showing a hardness similar to Emerald - circa 7 1/2 on the Mohs' Scale – it is far less sensitive in its handling. This is not only important for cutting and setting the stone, but also for wearing. Tzavorite is less likely to become damaged or to splinter even as consequence of abrupt or incautious impact. It is excellently suited for the favoured style of "invisible setting", where stones are set closely joined, and which cannot be recommended for Emeralds. Due to its high brilliance, Tzavorite here is an equal match for the classical stones like Diamond, Ruby and Sapphire.

Only occasionally a rough crystal of over 5 carats is found, so that cut Tzavorite are quite rare and valuable starting from sizes of 2 carats on. But the brilliance and luminosity of the stone are displayed even in smaller sizes.

It is really something special, this young gemstone with the ancient history. Its bright and vivid green, excellent wearing and high brilliance at relatively inexpensive prices make it without doubt one of the most convincing and honest gemstones. [top](#)



Demantoid

Demantoid is in fact one of the most brilliant gemstones, although so far generally only collectors and gemstone fans have known about it. Actually it is a green garnet, or should we say the star among green garnets? There is a reason for its name, which comes from Dutch and means something like "similar to diamond". It refers to the striking characteristic of this gemstone: its unique brilliance and luminosity. Some gemstone dealers have claimed that Demantoid shines and glows even in the shade.

Demantoid is a member of the large gemstone family of garnets. But it is more than that: it is the most expensive garnet variety and one of the most valuable stones of all, highly coveted for its rarity and its incredible brilliance. There is a plausible explanation for this phenomenon: Demantoid has a relatively high refraction of light (1.888).

Remarkable, however, is also the dispersion, i.e., its ability to reflect the light coming in through the facets and to disassemble this light into all the colours of the rainbow. Demantoid is a champion in this respect, even better than Diamond.

Demantoid colour spectrum includes many shades of green and ranges from slightly yellowish green to brownish green with a golden shine. Most valuable is a deep emerald green, which, however, is very rare indeed. It is not only a fine and rare stone, usually it is also quite small so that larger specimens are difficult to come by. Only few stones achieve more than two carats after cutting, most stones weigh about one carat. So should you come across Demantoid set in a piece of jewellery, you will probably be able to expect only smaller stones.

Favourite Stone of Russia's Star Jeweller

The fascinating world of gemstones knows stories about many beautiful and attractive stone which made a brief comet-like appearance only to disappear again after only a short period. This might almost have happened to Demantoid – hadn't there been a wandering goatherd in Namibia. But more on this later.

When the Demantoid was first discovered in the Urals mountains in Russia in 1868, it quickly advanced to the position of a much coveted gemstone. Like a comet it sparkled and shone, displaying its fire at jewellers' studios in Paris, New York and St Petersburg. Especially Russia's star jeweller Car Fabergé was fascinated by it because of its striking brilliance, and so he loved to use the stone in his precious objects. But after the difficult times of World War I, the green star lost some of the attention. Only now and then it appeared on the gemstone market, and if that happened at all, it was usually as a stone set into an old piece of jewellery or from leftover storage from the historical occurrences in the Urals. There were single finds of Demantoid also in other places in the world, like e.g. in the Congo or in Korea in 1975, however, the qualities were only suitable for collectors of stones, not for jewellers. The situation changed suddenly when in the middle of the 90s there was discovered a new vein in Namibia which rendered Demantoid in interesting amounts and quality.

The story of how the vein was discovered seems to have been taken from an adventure novel: the setting is Southern Damara-land, near Spitzkoppe mountain, sometimes also termed the African Matterhorn. There is no movement in the vast steppe below the scorching African sun. Far away at the horizon the "black mountains" range seems to be drifting in blue haze. It is a dry and hard land. And yet for an eternity it has been hiding an unknown treasure. Gemstones. Millions of years ago, liquid magma pushed from the very core to the Earth's surface here, and petrified a little below the actual surface. Wind and weather have in the course of time eroded the layers until only the characteristic granite mountain of the pointed Spitzkoppe remained – and, of course, the precious stones. But nobody had any idea that they existed at all, until in December 1996 a wandering goatherd came across some crystalline structures which struck his interest. After he showed them around in the neighbouring settlement, experts became interested in the matter. Soon they managed to find out which valuable stones had been discovered. In the meantime, the Namibian government have handed out mining concessions. For these precious stones. Now the rare stones are carefully picked out by hand from the surrounding rocks. As little as possible of the valuable raw material shall be lost in this process.

Why a horsetail influences the value of Demantoids

Demantoids from Namibia show a vivid light green to a deep bluish-green. Their good brilliance is quite striking. Due to the hardness of little below 7 on the Mohs' scale they are excellently suited for use in jewellery. But they are missing one characteristic which up to then had been characteristic for Demantoid, identifying it without fail at first glance through a microscope: the so-called horsetail-inclusions. Usually radial crystal rays of golden yellow Byssolith appeared in virtually each and every Demantoid – but they are missing in the relatively inclusion-free gemstones from Namibia. Unfortunately this is no good news. After all, these inclusions are not only typical for Demantoid, but may even increase its value if they are very pronounced. This may sound surprising, since inclusions are usually not very coveted since they decrease the transparency of a stone. But horsetail inclusions are quite a different matter in this respect. A beautiful and well-shaped inclusion in Demantoid will considerably increase the value of a stone. Many gemstone collectors are willing to pay extra for such interesting characteristics.

So should you be offered a Demantoid, do not forget to take a look at it through the gemstone microscope. If the stone is of Russian origin, you may see some fibres and strands reminding of a horsetail. In this case you will have reliable proof about the origin of the stone. At the same time, this "fingerprint of nature" proves that you are holding one of the rarest and most valuable gemstones in the world in your hands. However, you are bound to find this rarity also expressed in the price, since Russian Demantoids are valued considerably higher than the equally highly brilliant green garnets from Namibia. **top**



Mandarin Garnet

Like fiery comets in the evening sky there appeared some ten years ago the first Mandarin Garnets in the gemstone trade. Experts and enthusiasts both agreed: the

wonderful colours and excellent brilliance of the orange-red treasures are unique indeed. What kind of gemstones are they and where do they come from?

Just close your eyes and dream a little bit: Africa ... orange-red is the evening sky in the Northwest of Namibia, over quiet mountains and a lonely river. The next settlement is about nine hours away by car. The temperatures are extreme here: in summer, 40 to 50 degrees centigrade are the rule, while in winter temperatures drop to almost freezing point. Here, far away from any kind of civilisation the Kunene River has for centuries followed its route to along the border between Namibia and Angola through the mountains. This remote and isolated place, one of the last placed untouched by the modern world, is the place where in 1991 the first Mandarin Garnets were found. Embedded in mica and mica slate, at the very same location where they came into existence millions of years ago, there were discovered small crystals of exceptional colour and transparency which gained the experts' attention. Gemmological tests proved that the first theories and speculations had been right: the orange-coloured stones were in fact variations of the rare Spessartine stones, members of the large and colourful Garnet-family. So far Spessartine had been found only in Sri Lanka, Upper Burma, Madagascar, Brazil and Australia as well as in Kenya and Tanzania, but they were rare stones for enthusiasts and collectors and had hardly been used for jewellery. The reason for this moderate situation was simple: they were offered only rarely in really good colour and quality in the gemstone mines. However, the spectacular crystals from Namibia were of an exceptionally fine, intensively bright orange. Some even sparkled in a deep red-orange of the last rays of the light, when the sun has already set beyond the horizon. They were more beautiful and brilliant than anything available before. Almost no inclusions disturb the brilliant appearance of the "imperial garnets".

Very quickly the rough stones came on the market via only few gemstone cutters. Mostly the stones were faceted, as the facets best bring out their unique colour and brilliance. Unfortunately the mine on the Kunene River was soon exploited. In the beginning the stones were found there direct at the surface of the mines, but the excavations had to be taken deeper and deeper as time passed on. The results got less and less, while the costs kept increasing. So finally the mine gave up production. Further prospecting in the remote bush region of Namibia would have been far too expensive and too complicated. Traders and gemstone lovers both regretted very much that this gemstone which had managed so quickly to attract an enthusiastic group of fans was only available sparsely from stocks of only few cutters.

A real shooting star

The beautiful gemstone had in a short period of time managed to develop into a real shooting star in the international jewellery sector. There had been some minor disagreements about its name first among gemmologists and gemstone traders. Some called the brilliant orange to orange-red beauties first "Kunene Spessartine" according to their occurrence, other talked about "Hollandine". But quite soon the evocative denomination "Mandarin Garnet" spread throughout the international market. And thus the stone made its successful appearance all around the world. And this very fitting name has remained in use till today – though, fortunately, the occurrence at the Kunene River has not remained the only one. About in April 1994 there appeared again orange-coloured stones on the market, this time from Nigeria. They resembled remarkably to those Mandarin Garnets from Namibia, although experienced experts would be able to note fine differences. Their occurrence is situated in the utmost Southwest of Nigeria, not far away from the neighbouring state of Benin. The mine is located in a former riverbed in the bush land. During the rain season pumps have to be employed in order to draw the water out of the mines. Garnet specialist Thomas Lind from Idar-Oberstein was enthusiastic about the attractively of the new stones: "From Nigeria some beautiful, bright orange Mandarin Garnets have been brought onto the market. Among them there are repeatedly stones which achieve sizes over one carat. We are delighted that they supplement the meanwhile stable offer on the market of this formerly so rare stone." Now Mandarin Garnet is available once again in reliable amounts, even though top quality stones remain rare.

Orange symbolises joy of life and individuality

What makes Mandarin Garnet so special? First of all there is, of course, its colour, this bright orange, sometimes with brown undertones, in all the range from the colour of ripe peaches to deepest red orange. These are colours which announce energy and joy of life, individuality and spirit of adventure. A person wearing orange has no inhibitions about being noticed, this colour signals self-confidence. It is unmistakably the colour for extroverted people. But there is more to orange than just that. For example, the colour orange plays a very important role in Asian arts, more important than in European art. Asian gods are often dressed in orange robes, and even the sky may be painted orange. Yellow and red, the two colours constituting orange, are not considered opposites in Asia but rather complement each other. Orange is also the colour for the robes of Buddhist monks, cut from a single piece of cloth. Here orange symbolises the change all life is subjected to. Any existence is understood as permanent process of reciprocity between the active male Yang principle and the passive female Yin. Again, both principles are no opposites, but they keep on changing and continually influence each other. Life means change – and orange symbolises this permanent change better than any other colour.

Besides its wonderful colour, however, Mandarin Garnet has additional advantages which make it a truly unique gemstone. On the one hand there is its good hardness. It is an uncomplicated gemstone and makes ideal companion for any situation or event. On the other hand it has a remarkably high refraction of light lending it an exceptional brilliance. Even in unfavourable light conditions small, brilliant cut and inclusion-free Mandarin garnets will sparkle vividly. And in addition there is its rarity. Nobody can predict how long it will – as currently – remain available in reliable quantities. Colour, brilliance, hardness and rarity make this beautiful and easy-to-care-for

gemstone something special indeed. Thus on seeing it, individualists with strong sense of style will exclaim: this is my stone! [top](#)

Tourmaline



Tourmalines are precious stones displaying a unique splendour of colours. According to an ancient Egyptian legend this is the result of the fact that on the long way from the Earth's heart up towards the sun, Tourmaline travelled along a rainbow. And on its way it collected all the colours of the rainbow. This is why nowadays it is called the "Rainbow gemstone".



However, the name "Tourmaline" has been derived from the Sinhalese expression "tura mali", which translates as "stone of mixed colours." The very name already refers to the unique spectrum of colours displayed by this gemstone, which is second to none in the realm of precious stones. Tourmalines are **red** and **green**, range from **blue** to **yellow**. Often they show two or more colours and are cherished for this **partly or multi-coloured** appearance. There are Tourmalines which change their colour from daylight to artificial light, others display chatoyance. No Tourmaline exactly resembles another one: this gemstone shows many faces and is thus excellently suited to match all moods and tempers. It does not come as a surprise, then, that ever since ancient days it has been attributed with magical powers. Tourmaline is supposed to be an especially powerful influence on love and friendship, lending them permanence and stability.

Colours, Names and Nicknames



In order to understand this multitude of colours you will have to polish up your knowledge of gemmology: Tourmalines are mixed crystals of complex aluminium-borosilicate varying in their composition. The slightest changes in composition will result in completely different colours. In fact, crystals showing one colour only are quite rare; generally one and the same crystal displays several shades and colours. Not only the wide range of colours characterises this gemstone, it also shows a remarkable dichroism. Depending on the angle of view the colour will be different or at least show different intensity. The deepest colour always appears along the main axis, a fact that the gemstone cutter has to keep in mind when cutting the stone. This gemstone is excellently suited for wearing and is uncomplicated to care for, since all Tourmalines show a hardness of 7 to 7.5 on the Mohs' scale. Thus Tourmaline is an interesting

gemstone in many aspects indeed.

The different shades of colour have been assigned different names in the trade. For example, deep red Tourmaline is named "**Rubellite**", provided it shows the same fine ruby-red shade in daylight and in artificial light. Should the colour change when the source of light changes, the stone will be called a "Pink Tourmaline". Blue Tourmalines are called "Indigolith", "Dravite" is a golden-brown to dark brown Tourmaline, and black Tourmalines are known as "Schorl". The latter stone is mainly used for engravings and in esotericism, where it is highly cherished because it is reputed to ward off harmful radiation from its wearer.



Very popular is "Verdelith", the **green Tourmaline**, however, if its fine emerald-like green is caused by traces of chromium, the stone is named "Chromium-Tourmaline." But the outstanding highlight among Tourmalines is of course **Paraiba Tourmaline**, a gemstone showing a vivid deep blue to bluish green, found for the first time in 1987 in the mines of the Brazilian state of Paraiba. In good qualities these stones are much coveted treasures. Since **yellow Tourmalines** from Malawi of brilliant colour have been offered on the market, the formerly missing colour yellow has been added in excellent quality to the apparently unlimited range of colours shown by the "Rainbow Gemstone."

These are by no means all the names Tourmaline has achieved: there still have to be mentioned bi-coloured and multi-coloured Tourmalines. Very popular are also slices cut as cross-sections through Tourmalines, as these will render the full splendour of colours embedded in a specific Tourmaline. For example, such slices taken from Tourmalines with red heart and green border are called a "Watermelon-Tourmaline"; slices with a clear heart and a black border are called "Moor's head -Tourmaline"

Tourmalines are mined everywhere in the world. There are important occurrences in Brazil, in Sri Lanka and South and Southwest Africa. Other occurrences are situated in Nigeria, Zimbabwe, Kenya, Tanzania, Mozambique and Madagascar, Pakistan and Afghanistan. Tourmalines are also found in the USA, first of all in Maine and Utah. But although there are rich occurrences of Tourmalines all over the world, good qualities and fine colours are only rarely offered on the market. Therefore, then, the price range achieved by Tourmaline almost matches its wide range of colours.

The "Ashes-Extractor"

Not only designers are fascinated by Tourmaline because of its incomparable wealth of colours providing unlimited inspiration. Scientists are also intrigued due to its astonishing physical characteristics: by heating and subsequently cooling down Tourmalines will be charged up. The stone will then show positive charge at one end, and negative charge at the opposite pole. This is termed "pyro-electricity", according to the Greek word "pyros" denoting fire. Pressure will also lead to the stone's charging, and in the course of discharging the plus- and minus-poles will alternate, so that the stone will show vibrations similar to Rock Crystal, but much stronger. The Dutch, who originally brought Tourmaline to Europe, already knew about this effect long before it was subjected to scientific study. They used heated Tourmalines to extract the ashes from their meerschaum pipes and named the gemstone "Aschetrekker".

Tourmaline is a very special stone indeed and holds an outstanding position in the fascinating world of gemstones. Its excellent availability and unique splendour of colours make it one of the most popular gemstones – and besides almost every Tourmaline is an original. [top](#)



Rubellite Tourmaline

Tourmalines Rubellith is an outstandingly beautiful gemstone from the colourful Tourmaline family. Its colours sparkle in the most beautiful shades from red to pink.

Tourmalines are closely related gemstones which are supplied by Nature in many different colours. The trade generally uses no separate denominations for the individual varieties, but rather adds the colour to the name Tourmaline, thus referring to red, green, yellow or blue Tourmalines. But there are exceptions to this rule: this applies especially to the red and pink stones.

Red and pink Tourmalines come in many different shades from palest shell-pink via bold pink to a deep ruby red. But only a selected few of these are called "Rubellith". The name is derived from the Latin term "rubellus" which means "reddish". Rubelliths are not simply red or pink Tourmalines. This exceptionally beautiful gemstone shows a decisive characteristic: its steady colour in daylight and artificial light. In fact, many gemstones change their colour depending on the source of light. A Rubellith never changes colour: it shines as brilliantly and clearly in daylight as in artificial light. In contrast to this, the colour of most other pink and red Tourmalines shows a more or less noticeable brownish hue in artificial light.

Appreciated inner life

While generally coloured gemstones in good qualities are expected to be almost free of inclusions, such imperfections are tolerated for Rubellith, even welcomed to some extent, since they make the stone more interesting. Of course, this assumes that the inclusions are really tiny and do not interfere with the light refraction in the stone, because otherwise the stone might appear dull or milky. In any case, a Rubellith with small and fine inclusions will be more valuable than a stone displaying clearly visible inclusions.

While it is essential that the cutter bears in mind the different distribution of colour, Rubelliths are cut in various ways. The majority of the stones are found in Brazil, Madagascar, Mozambique, Nigeria and Pakistan. Some beautiful pink Rubelliths have been discovered in a gemstone mine in the USA.



Seductive red

The colour of this stone is the epitome of seduction. Its components are red, pink and purple – the typical colour harmony representing joy of life and lust. There is hardly another stone within the fascinating world of gemstones which shows a comparable erotic flair. The colour of Rubellith includes pink as well as the ambivalent purple. These two colour components provide the perfect foil for stressing its seductive red. Fortunately Nature supplies Rubellith in many shades of colour, so that every woman may find the Rubellith which perfectly suits her. She only has to find it – and this is no easy matter at all. It gets even more difficult when you are looking for two or more stones of the same shade. However, a woman who has become aware of the extravagance and beauty of this gemstone will certainly enjoy her Rubellith. [top](#)



Green Tourmaline

Tourmaline is a virtually unique colour miracle : this gemstone exists in red and green, blue and yellow, and even in colourless and black respectively. Often there are even two or more colours displayed in one and the same Tourmaline crystal. Highly coveted rarities are colour changing Tourmalines or chatoyant ones. However, the classical colour for Tourmaline is green. And if you ask gemstone dealers for Tourmaline, the green variety will almost inevitably be the first one to come to their minds.

Nevertheless, even the green Tourmalines come in a wide range of shades. Some are very light, others are so dark that the green colour is only discernible when light is shone through the stone. There are green Tourmalines in fine leek-green shades, but there are also intensely coloured yellow-green, olive-green and brownish-green stones. And especially the colour range from blue-green to darkest bottle-green is covered spectacularly by wonderful Tourmalines, for these colours are the best for these stones. They are rare and highly coveted. Tourmaline is loved as a perfect jewellery stone by many women, but it has also come to be preferred nowadays by quite a few men.

Why Brazilian Tourmaline might come from Africa

Sometimes Tourmalines are offered by traders with an additional byname, which at first sight seems to explain the stone's origin. For example, bottle-green Tourmaline might also be offered as "Brazilian Tourmaline". Here it should be noted that this does not necessarily imply that the stone was actually mined in Brazil. In the past it was considered a rigid fact that all bottle-green Tourmalines came almost exclusively from Brazil, while blue-green to green shades were usually found in Africa. Today things have changed, but the trade names have been kept so that bottle-green Tourmalines are still called "Brazilian" and bluish-green ones "African" Tourmalines, irrespective of the actual place of origin. Another rarely used name which is generally applied only among experts is the term "Verdelith". It has been composed from the Latin word "viridis" for "green" and the Greek suffix "lith" meaning "stone". But in general we talk about green Tourmaline.

Chromium makes green Tourmalines resemble Emeralds

Tourmalines are complex borosilicates . The different colours are in fact caused by minute traces of other material in smallest quantities. Due to the complex structure of this gemstone it exists in many different varieties and shades, depending on where it grew. This individuality is very fascinating, since each place of occurrence brings forth a special kind of Tourmaline. With a little bit of luck you will discover one or the other rare Tourmaline highlight on the market: the precious Chromium-Tourmaline. This is the trade name for the emerald-green Tourmaline variety from Tanzania which owes its colour to traces of Vanadium and Chromium. Its colour is outstandingly beautiful and strikingly similar to the colour of fine Emerald, which is in turn one of the most expensive gemstones in the world.

Tourmalines are found almost everywhere on the globe as small and usually dark crystals. However, those locations where large and beautiful crystals can be mined , which are worth being cut into splendid jewels, are rather rare indeed. The most important occurrences are located at Brazil, Namibia, Nigeria, Mozambique, Pakistan and Afghanistan. But in good colour and transparency Tourmalines are rarely found in all these gemstone mines. And should they show hardly any inclusions at that, they will be very highly treasured.

Not easy to cut

Green Tourmalines can be cut in many different variations. However, this demands a high degree of craftsmanship and expertise, since most Tourmalines show a varied colour saturation throughout the crystal depending on the axis of growth. Therefore, then, dark stones have to be cut in such a way that the table will be parallel to the main axis. In contrast to this, for lighter coloured stones the table should be parallel to the longitudinal axis in order to achieve a deeper colour. The cutter has to keep this characteristic well in mind when planning and executing the cut, since otherwise the colour of the cut stone might end up too dark or to pale. And that would be a real shame, because you need not be a gemstone expert in order to appreciate the fascination of green Tourmalines. The colours are wonderfully harmonic and pleasant, almost spiritual. Green Tourmalines are an epitome of life, encompassing all its facets of vivid individuality. [top](#)



Paraiba Tourmaline

Small, rare and very valuable are those copper-containing Tourmalines mined at the Mina da Bathalha in the Brazilian state of Paraiba. The vivid turquoise blue to green colours are not shown by any other gemstone in the world, The exclusive uniqueness of the legendary occurrence make these rare gemstones real treasures.

"Paraiba" – the word as such holds a special charm and attraction for gemstone lovers, after all, this is the denomination of a gemstone showing an exceptional, almost electric blue to green shades. It was discovered not long ago, to be precise: in the year 1987. The world owes this sensational find to an individual man and his unshakeable belief: to Heitor Dimas Barbosa. Never tiring, he had been digging with his helpers for years in the pegmatite layers of a small mountain range in the state of Paraiba in Brazil.

Heitor Dimas Barbosa was not just simply a gemstone prospector, and, first of all: he was not searching for something known. He was deeply convinced that somewhere under the famous "Paraiba" hill there was hidden something "completely different" – and in the end his vision proved to be right. As early as 1981 he had started with the first preliminary steps for excavations in old abandoned mines. Hole after hole was driven into the hard soil – but in vain. However, all of a sudden, five and a half years after the first digging, in the labyrinth of shafts and passages there showed the first hints of a Tourmaline occurrence. Finally in autumn 1989 a handful of finest Tourmaline crystals was brought to the light of day from one of the many dark passages. These crystals showed colours which had never been dreamt of before. Unfortunately the "Father of the Paraiba Tourmaline" had to recover from an illness at this time, and could not be there at the mines. The rough crystals were sold without him ever setting eyes on them. After the find had become publicly known, the most adventurous stories happened at the mines. For a period of another five years the relatively small mountain range measuring only 400 m in length, 200 m in width and 65 m in height, had been turned into a virtual honeycomb of shafts and tunnels, and the mountain had almost been levelled. But in vain. And by now, nobody expects another find any more.

Copper makes the difference

Brazil is the classical Tourmaline country. This multi-coloured gemstone family shows practically all the colours of the rainbow. However, a brilliant turquoise shade had always been missing for a long time – until the valuable find was made at Paraiba.

Usually it is traces of iron, manganese, chromium and vanadium which are responsible for giving Tourmalines their many beautiful colours. But this is quite different for the rare Paraiba Tourmaline: it owes its spectacular colour to copper, an element which had not shown up in Tourmalines before. There is a clear part of its weight made up by copper. In addition, it often also contains manganese as scientists have found out.

The combination of these two elements causes a wide range of beautiful and fascinating colours in Paraiba Tourmalines: emerald green, turquoise to sky-blue, sapphire blue, indigo blue, dark purple to red purple. Certain mixtures of copper and manganese may also result in pale grey to purplish-blue colours. A high concentration of copper is responsible for the much coveted brilliant blues, turquoises and greens, while purples and reds are caused by manganese. By heating the stones, experienced cutters are able to eliminate the red traces, so that only the bright copper colour will show.

The exceptionally vivid character of Paraiba Tourmalines, however, can only be appreciated after the stone has been cut. When it has been faceted, a unique fire and brilliance is displayed, which makes the stone seem to glow and shine from within even when there is little light. Therefore the colour is often characterised as "electric" or "neon". Fresh and full of energy is the charm and attraction of these treasures of Nature. A Paraiba Tourmaline in "swimming-pool blue" is the epitome of vividness and easy to discern even for an amateur.

Paraiba Tourmalines are almost always very small, as the beautiful copper-containing Tourmaline crystals mined in the "fine hill" at Paraiba were almost exclusively fragments and splinters. Larger, unfragmented rough stones weighing over 5 gram were rare, and only very few achieved weights of more than 20 gram. Therefore you will hardly find a larger Paraiba Tourmaline at a jeweller's or gemstone trader's, besides, only a select few of these will even carry this kind of stone.

The beauty and vividness of colour shown by Paraiba Tourmalines gave reason to enthusiasm for the gemstone world. Within only a short period considerable popularity had been gained, and these stones today belong to the most coveted and most expensive stones in the world. Prices continue to go up, and in the meantime they have reached such regions which used to be considered utopian for Tourmalines in the past. Five digit carat prices are asked and paid for fine, larger Paraiba Tourmalines. The market almost completely and immediately soaked up the limited offer of rough stones. This is easy to understand, for here Nature created a gemstone which is second to none concerning colour, brilliance and luminosity. And without Heitor Dimas Barbosa and his vision to find "something completely different", it probably would not exist on the market at all.



Is Paraiba situated in Africa?

The Paraiba story should actually end here. But Nature always holds some surprises for all of us. The story was in fact continued in the beginning of 2001, but the setting was in quite another part of the world. Suddenly in 2001 there appeared brilliant bluish-green Tourmalines from Nigeria on the market, similar to those which had been known from Paraiba. It was a perfect scoop: just like the Paraiba Tourmalines these stones show their real beauty after being heated carefully. In general their colours seem a little lighter, but the difference is hardly discernible for somebody who is not an expert. Also the scientists find it difficult to come up with characteristic features which

differ between Tourmalines from Nigeria and Paraiba respectively. The copper-containing mines in Nigeria explain the similarity in chemical components. Both specimen owe their colour to copper and manganese. How is that possible? Has Paraiba moved to Africa? Well, of course not. But this example of a valuable gemstone clearly illustrates the phenomenon of the continental drift. We only have to consult a card and compare the silhouettes of the African and the South American continent. If we project the coastline of South America onto Africa, both elements fit like in a jigsaw puzzle. And Nigeria would then be directly linked to north-east Brazil. Probably the brilliant and bright copper Tourmalines from Nigeria were created under the same conditions as the Paraiba ones, before the continents drifted apart. Is that the explanation why they are so difficult to tell apart? This will remain one of the mysteries and secrets in the world of gemstones. And gemstone lovers will be happy that African Tourmalines in vivid green-blue offer an alternative on the market to the legendary Paraiba Tourmalines. [top](#)



Yellow Tourmaline

Tourmaline is a virtual miracle of colours. It comes not only in green and red, colourless and black, or as multi-coloured or colour-changing precious stone or as chattoyant stone. There exist besides uncountable mixed colours in all imaginable shades and depth, even very unusual colours occur in Tourmalines. However, until recently there was one striking gap in the sheer endless range of colours displayed by the "rainbow gemstone": the pure yellow shades were missing. Most of the yellow Tourmalines found up to now show a slightly brownish tinge. But Tourmaline not only comes in many colours, it is also always full of surprises - like at the beginning of the 90s, when suddenly there appeared on the market fantastic bluish-green to turquoise-coloured Tourmalines from the Paraiba mines in Brazil.

In the meantime the most colourful gemstone in the World has managed to surprise us all yet again with another colour variation, and this time it was the long-missed yellow. In the south of East Africa, in Malawi, gemstone occurrences containing beautiful yellow stones were discovered in the autumn of the year 2000. Their fresh colour reminds of springtime, and these Tourmalines are clear and pure and show just the finest greenish hue. Named "Canary", the new Tourmaline variety is already being offered in the market.

These gemstones are a very intriguing variation of Tourmaline. The almost electric yellow colour is caused by fine traces of magnesium. Since not all rough crystals show the brilliant yellow on being found, some of the stones will have to be treated at circa 700 degrees Celsius in an oven before they can be cut. Failing such treatment, the colour would keep a brown undertone. The beauty-treatment can only be successful anyway, because it is typical for Tourmalines to show different colours and different saturation respectively when viewed from different perspectives. The heating in such cases simply turns the second colour, a slight brown, into the coveted bright yellow. This kind of treatment is frequently applied to many kinds of gemstones, and the results are always irreversible.

Larger yellow Tourmalines, however, rarely occur even in Malawi; after all, only about 10 per cent of all the mined stones are suitable for jewellery. When cut, over 95 per cent of the harvest will weigh less than one carat. But nevertheless, they are excellently suited for wearing, since like all Tourmalines the canary-yellow beauties from Malawi achieve the good hardness of 7 to 7.5 on the Mohs' scale.

There is another special characteristic feature which sets these stones apart from the others: and that is their fine scent. It will not be registered by the wearers, but by the cutter who gives the gems their final shape with a steady hand, using all his skill and expertise to bring out the fresh yellow colour as best possible. Experienced cutters love working with these stones: " These are the only gemstones which smell nice."

Why does a gemstone have a scent? The explanation is, in fact, quite simple. On the place of their occurrence, Tourmaline crystals are often embedded into black material, which will of course have to be removed before the stones are cut. One day one of the owners of a Malawi gemstone mine found out that the obnoxious black matter was easily removed if you boil the rough crystals in water to which you add some lemon juice. And ever since then the yellow Tourmalines from Malawi not only resemble fresh lemons in their pleasant colour, but also in their fine scent – at least until they have been cut. [top](#)



Blue Tourmaline

Tourmalines may well claim to be the most colourful group of gemstones. They come in any colour variation, from green, red, blue to yellow, colourless and even black or multi-coloured. They are thus second to no other gemstone group concerning their

wide range of colours, however, not all these colours are equally frequent or even equally known. The best known specimen from the Tourmaline group are the green Tourmaline and the pink or red Rubellite or Rubellith. True blue Tourmalines are scarce indeed, since most of the blue specimen show a more or less clearly pronounced shade of green.

Tourmalines in pure blue colour are much coveted due to their beauty and rarity. In fine qualities, blue Tourmalines will almost always be individual pieces, which are considered as rare and desirable items by collectors. Most valuable are such stones showing a dark and brilliant blue reminding of an Aquamarine or a beautiful Sapphire. A purely blue Tourmaline will emanate a high degree of harmony. Perhaps this is the reason why according to gemstone legends blue Tourmalines are reported to bring about openness and tolerance.

The rare blue gemstones usually come from the classical Tourmaline country of Brazil, to be exact, from the North of that country, where also the spectacular Paraiba Tourmalines have been discovered. However, these rarities are also found in the gemstone mines of Namibia, Afghanistan, Pakistan, and, lately, also in Nigeria.

Gemstone experts sometimes name blue Tourmaline "Indicolite". This means simply "blue stone". But generally we talk about "blue Tourmaline".

Cutting Tourmalines requires a great deal of patience and as much experience. Only few lapidaries know the unique character of this stone and have studied its complex structure in detail, and are thus qualified to cut also "difficult" Tourmalines. Tourmalines often display interior tensions and will then easily split when being cut. If the cutter turns the stone only once in the wrong direction when putting it against the cutting wheel, he will be left with a completely ruined and splintered useless stone. In addition, the distinct dichroism (being made up of two colours) must be kept in mind while cutting. The table must be arranged in such away in the rough crystal as to achieve best possible colour in combination with highest possible weight. So a cutter will often try to keep the less attractive, darker colour out of the stone, if possible.



Having successfully passed the cutting procedure, Tourmaline proves a relatively robust stone with a hardness of 7 to 7.5 on the Mohs' scale, demanding little maintenance. This applies for all Tourmalines, even the blue ones. So: should you be lucky enough to come across a blue Tourmaline, go for it! You will never cease to enjoy this beautiful and rare gemstone. [top](#)



Multicoloured Tourmalines

Tourmaline is a virtually unique colour miracle. Crystals displaying just one colour are quite rare, usually one and the same crystal does in fact show various shades and colours. Thus the Tourmaline family alone has sufficient members to supply all the whims of man and woman concerning colours: the range is almost unlimited.

Often Nature creates very special Tourmaline crystals which will then be cut into sophisticated multicoloured gemstones. You would like to know how this is possible?

Tourmalines are mixed crystals of complex aluminium boro-silicates in various manifestations. It is indeed quite a complex group of minerals. Even small changes in composition will result in completely different colours. Thus it is possible that in one and the same naturally grown crystal there will appear completely different colours, usually arranged in longitudinal columns on top of each other, just as if Nature had put coloured rings on top of each other. The crystal a such may be as small as a knitting needle or as thick as a thigh. Some will show only slightly shaded colour fields, while others display contrasting colours and clear colour zoning. And since Tourmaline crystals are often grown into others, a cross section might even show tightly joined triangles arranged around a core.

What makes a Watermelon a precious object?

Especially coveted are such stones which show two or more strong colours. Depending on shape and colour, these Tourmalines are traded as Multicoloured or Bicoloured specimen. Some have earned quite interesting names, for example, an almost colourless crystal with black end is called a "Maur's Head" or "Moor's Head". If the tip is red, then this used to be called a "Turk's Head Tourmaline". Bicoloured Tourmalines with a red core that changes into green around the perimeter is still called "Watermelon Tourmaline". And if the colour zones are arranged on top of the other, than in Brazil this is called a "Papageios" or a "Rainbow Tourmaline".

The most important occurrences for Tourmalines are situated in Brazil and in Africa. But also



from other gemstone occurrences all over the world – like, for example, from Sri Lanka or Madagascar - Nature's gifts are brought to us in the form of this beautiful gemstone, which because of its enormous variety of colour will keep on surprising us.



The epitome of individuality

Tourmalines are popular as jewellery stones but also as healing stones. Due to their good energetic conductivity and their wealth of mineral elements they are supposed to have recreational and constructive effects. They are uncomplicated to work with and because of their good hardness are excellently suited for everyday wear. Beautiful multicoloured Tourmalines are best suited for highly individual jewellery designs, since each stone is different from the other. In addition to this: almost each occurrence of this worldwide existing gemstone will display a specific colour variation. However, this fact makes it difficult for cutters to find matching stones in one and the same colour, for even two stones cut from the same rough mother crystal will often show different colours. But it

is just this characteristic which makes Tourmalines so attractive, especially the multicoloured ones. Such gemstones are very much in demand at present. The fact that each stone is a unique original inspires goldsmiths and designers, who love to integrate this precious stone into their individual jewellery creations as the attractive centerpiece. [top](#)

Tanzanite



Tanzanite is a very special and unique gemstone. World-wide it occurs only in one specific location. Its blue colour which shimmers in a slightly purplish hue is magnificent indeed. Because of its unusually attractive flair it was easy for New York Jeweller Tiffany's to make it one of the most sought-after and popular gemstones in the world.

Its name reminds of the world-wide unique occurrence in the east-African state of Tanzania. Africa – the name of this continent does not immediately remind us of gemstones. Nevertheless, Africa is a continent from where many splendid and beautiful stones find their way to the world markets. An example for this is Tanzanite, which was enthusiastically celebrated after its discovery in 1967 as "Gemstone of the 20th Century" The gemstone experts literally held their breaths when they were shown the first deep blue crystals mined in the Merelani Hills near Arusha in the north of Tanzania. Millions of years ago, metamorphous slates, gneiss stone and quartzites shaped impressive flat insular mountains on the wide planes near Mount Kilimanjaro. In the core of these unusual rises there are stored the valuable crystals. For a long time they remained hidden for the eyes of men, until one day some Massai-herdsmen passing by noticed crystals sparkling in the sun and picked them up.

Today at Merelani the popular crystals are searched for in several, usually smaller mines, to some extent by means of modern methods. Generally only smaller grains are being found, but now and then the miners strike a lucky vein and produce a larger crystal – much to the pleasure of the mine-owners and the numerous Tanzanite enthusiasts everywhere in the world.

The Tanzanite trade is managed by many, usually small-scale licensed traders who have built up good business relationships with gemstone firms in Germany, India, Israel and the USA. An estimated 90 per cent of all Tanzanite traders are registered members of the International Colored Stone Association ICA and thus dedicated to the respective high ethical standards of ICA. In this way, then this exclusive gemstone is not brought to the world markets via suspicious back-street dealers, but in spite of its rarity is distributed via reliable and trustworthy official channels to well-reputed gemstone-cutters, and then passed on to the most important jewellers all over the world.

Actually only a blue Zoisite ...

Tanzanite is in fact the blue variety of Zoisite gemstone. However, the hydrated calcium aluminium silicate mineral achieves only hardness 6.5 to 7 on the Moh's scale, and is thus not very resistant. Therefore it should be worn with care, never be cleaned by ultrasonic method and never come into contact with acids.

When New York Jeweller Louis Comfort Tiffany was presented with the first Tanzanites right after they had been discovered, he was immediately convinced: this gemstone is a sensation! However, he recommended finding a new name for the blue beauty, since the gemmologically correct denomination "blue Zoisite" reminded unfortunately of the word "suicide". So Tiffany suggested the name Tanzanite instead, derived from the place of occurrence, and the new name quickly became established on the market. And it was in fact the firm of Tiffany's who introduced the stone to the public in a spectacular promotional campaign two years after it had been discovered.

... but what a spectacular colour!

Spectacular and magnificent is the deep blue of Tanzanite, ranging from ultramarine to a light purplish blue. The most coveted colour is a blue which shows a purplish hue shimmering around it, which is extremely spectacular in sizes above ten carats. Typical for Tanzanite is the appearance of several colours in one and the same stone: depending on the perspective, the stone appears blue, purple, or dun yellow. Most rough crystals, however, show a disturbingly large proportion of brownish-yellow, but the cutter may cure this by carefully heating the stone in an oven to about 500°C. In the course of this heating, utmost concentration is demanded, for it is essential to determine the moment when the colour turns blue. Heating is therefore a treatment which is generally accepted in the trade, however, the rough stone has to be as free of inclusions as possible, as otherwise the process will lead to fissures in the stone.

Working with Tanzanites is a task which will cause even experienced cutters to tread carefully, as the cleavage of the gemstone is very high in one direction. The exclusive stone is cut in any imaginable shapes and forms, from classical round cuts to imaginative designer cuts.

Tanzanite is always fascinating because of its unusual appeal that will hold everybody in its thrall. The deep blue with the slight purple shade is one of the most extravagant colours available. It symbolises immaculate but unusual elegance. Whoever purchases such a unique gemstone wants to be set apart from the masses. Wearing it communicates self-confidence and individuality. The almost magical colour of a perfectly cut Tanzanite is not only attractive on young women, it also emphasises the individuality of a mature woman.

For Tanzanites in especially good qualities and larger sizes almost any price will be paid by now. What is it that makes this stone so coveted? Is it only the spectacular colour? Well, it seems we must also take the exclusive origin into account here. As the stone is found on one special location only in all the world, it is especially valuable. After all, the desire to own something unique and rare has always been a decisive criterion for assessing the value of special gemstones. [top](#)



Lapis Lazuli

Lapis is a gemstone straight out of fairy tales of the Arabian Nights: deepest blue with golden shining Pyrite inclusions which twinkle like little stars.

This opaque, deep blue gemstone looks back at a long history. It was one of the first stones ever to be used and worn for jewellery. Excavations in the antique cultural centres all around the Mediterranean provided archaeologists with samples for jewellery which was left in tombs to accompany the deceased into the hereafter. Again and again this jewellery consisted of necklaces and objects crafted from Lapis lazuli – the clear indication that thousands of years ago the people in Mesopotamia, Egypt, Persia, Greece and Rome cherished deep blue Lapis lazuli. It is reported that at the legendary city of Ur situated on the Euphrates river, there was a busy trade in Lapis lazuli as early as four thousand years BC. In those days the stones were mined in the famous occurrences in Afghanistan. But in other cultures Lapis lazuli was also worshipped as a holy stone. Especially in the oriental countries it was considered as a gemstone with magical powers. Numerous seals, rings, scarabs and objects were crafted from the blue stone, which was introduced to Europe by Alexander the Great. Here the colour was called „ultramarine“, meaning „from beyond the seas“.

Most expensive blue of all times

The evocative name is a compound of „lapis“, the Latin word for stone, and the Arabian word „azul“, denoting the colour blue. So it is basically just a blue stone – but what a special blue! The value of this colour for the world of art was for example enormous: in fact the ultramarine blue paint used by the Grand Old Masters was nothing else but pulverised Lapis lazuli. It was pulverised and added to a mixture of binding agents, thus turning the marble-like gemstone into a bright blue paint, suitable for watercolours, tempera and oil paintings. Before it became possible in 1834 to manufacture this colour also artificially, the only kind of valuable ultramarine in the market had to be made from real Lapis lazuli, which still displays its splendour in many works of art. For example, many portraits of the Virgin Mary would have been impossible to create without Lapis lazuli blue. However, even in those days ultramarine blue was not only considered fine and rare and so powerful that it dulled all other colours, it was also very expensive indeed. But contrary to all other material employed to create the colour blue, Lapis lazuli has not lost anything of its brilliance, while other compositions have long since faded. Currently the blue pigment derived from Lapis lazuli is still applied especially for renovations, restorations and for those who love historical colours.

Stone of friendship and truth

For many people all over the world Lapis lazuli is considered a stone of truth and friendship. The blue stone is reputed to bring about harmony in relationships and to help its wearer being an authentic individual who may openly state his or her opinion.

Lapis lazuli is an opaque stone consisting mainly of Diopside and Lasurite. It was created millions of years ago in

the course of metamorphosis process turning chalk into marble stone. When unpolished, Lapis lazuli seems dull and dark blue, often with golden inclusions and whitish veins from marble. Contrary to former theories, however, the small twinkling and shining inclusions which lend the stone the attractive appeal of a star-spangled sky, are not gold but Pyrite, i.e., they are caused by iron. The blue colour, on the other hand, is caused by the sulphuric contents of Lasurite, and may result in purest ultramarine to pale blue shades. In comparison to other gemstones, the hardness is not too high and amounts to something between 5 and 6 on the Mohs' scale.

When the cutter inhales the stone ...

Many a cutter will make a face when cutting Lapis lazuli, because as soon as the stone comes into contact with the cutting wheel, it will emanate a typical, slightly foul smell. An experienced cutter will thus recognise from the smell alone the saturation of colour shown by the stone. When polishing the stone it must be treated gently and without too much pressure due to its low hardness. But no need to worry: a Lapis lazuli which has dulled because of having been worn too often may be easily polished up. Lapis lazuli is often surface sealed with colourless wax or synthetic resin. As long as no colour is added during this procedure, the sealing only serves to improve the resistance of the stone against wearing. Still, it should definitely be protected from contact with acid substances or from extravagant exposure to sunlight.

Just like over 50,000 years ago, the best rough stones are still mined in the rough Hindukush Mountains of Afghanistan. Forcefully extracted from the rocks, the blue stone nodes are transported on donkeys from the rough mountain ranges in Northeast Afghanistan down to the valleys in the summer months. Other occurrences have been provided by Nature in Russia, west of Lake Baikal, and in the Andes in Chile, where the blue stones are often veined with white or grey chalk. Lapis lazuli is also found in smaller amounts in Italy, Mongolia, the USA and Canada, in Myanmar and in Pakistan. In really good qualities, however, it is rare everywhere. Lapis lazuli jewellery is therefore available in widely differing price ranges, from luxurious to affordable. The price demanded for the gemstone depends mainly on the stone's beauty and intensity of colour. The most favoured colour is a deep and intensive blue. Women with a fair complexion, however, often prefer the lighter blues. Finely distributed crystals resembling glimmer, from golden Pyrite, will increase the value of the gemstone, while an irregular, pronounced or spotty patterning will reduce it.

Lapis lazuli is a highly appreciated stone suitable for many purposes, which shows remarkable stability in the light of quickly changing fashion trends. This is not too surprising, after all, its fairy-tale colour and its golden Pyrite light reflections have been fascinating men and women for thousands of years. [top](#)

Sapphires: Beautiful Beyond Blue



Sapphire is often considered to be synonymous with the color blue: you can easily picture sapphire seas. However, sapphire is beautiful beyond blue, in every color but red, because red is called ruby.

The other colors of sapphire can be just as beautiful and rare - or even rarer - than the blue but they are usually priced less. Yellow, orange, lavender, and other pastel shades are especially affordable.

Since our ancestors did not realize that ruby and sapphire are actually the same mineral, they left us with a dilemma: where should pink shades be classified? Long ago, people decided to call all gemstones of the mineral corundum as sapphire, except the red color, which was called ruby. But pink is really just light red. The International Colored Gemstone Association has passed a resolution that the light shades of the red hue should be included in the category ruby since it was too difficult to legislate where red ended and pink began. In practice, pink shades are now known either as pink ruby or pink sapphire. Either way, these gems are among the most beautiful of the corundum family.

The most valuable other fancy sapphire is an orange-pink or pinkish-orange called "padparadscha" after the lotus blossom. Padparadscha sapphires are very rare and the exact definition has always been a matter of debate: different dealers and different laboratories around the world disagree on the exact color described by this term. Some dealers even argue that the term should not be limited to the pastel shades of Sri Lankan sapphires but should also include the more fiery shades of reddish-orange from the Umba Valley in Tanzania. Padparadscha sapphires sell at a premium, nearing the price for a fine blue sapphire. Although the exact description is debated, the beauty of these rare gemstones is not, with their delicate blended shades the color of fresh salmon and sunsets.

Other very popular shades of fancy sapphires are yellows, bright oranges, lavender and purples, and a bluish green color.



Generally, the more clear and vivid the color, the more valuable the fancy sapphire. If the color is in the pastel range, the clarity should be good: because in lighter tones inclusions are more noticeable, the trade usually prefers the gemstones to be cleaner

with fewer visible inclusions. In a lighter colored gemstone, the cut is also more important: it should reflect light back evenly across the face of the stone, making it lively and brilliant. With darker more intense colors, the cut is not as critical because the color creates its own impact.

No matter what the color, sapphires combine durability and beauty for generations of pleasure. [top](#)



Quartz: Common Chameleon

If you gaze deep inside a crystal ball, you will see a versatile gemstone, one of the most popular gems on earth. Beautiful quartz, the "rock crystal" used in ancient times to make crystal balls and bowls, is today more often seen set in gold jewelry. Despite the popularity of quartz gems like **amethyst**, **citrine**, **Ametrine**, rose quartz, onyx, agates, chrysoprase, rutilated quartz, and other quartz gemstone varieties, many people in the jewelry industry take quartz for granted because of its affordable price.

Throughout history, quartz has been the common chameleon of gemstones, standing in for more expensive gemstones ranging from diamond to jade. But the incredible variety of quartz is now beginning to be appreciated for its own sake.

Purple to violet amethyst and yellow to orange citrine are jewelry staples that continue to increase in popularity. Ametrine combines the appeal of both amethyst and citrine as well as both the purple and yellow in one bicolored gemstone. Different colors and types of chalcedony, from agate to chrysoprase, have grown in popularity with the growing appreciation for carved gemstones and art cutting and carving. And unusual quartz specialties like drusy quartz, with its surface covered by tiny sparkling crystals, and rutilated quartz, which has a landscape of shining gold needles inside, are adding variety and nature's artistry to unusual one-of-a-kind jewelry.



Rose quartz

The pale pink color of quartz, which can range from transparent to translucent, is known as rose quartz. The color is a very pale and delicate powder pink. Transparent rose quartz is very rare and is usually so pale that it does not show very much color except in large sizes. The translucent quality of rose quartz is much more available and is used for beads, cabochons, carvings, and architectural purposes.

Smoky quartz

Smoky quartz is a brown transparent quartz that is sometimes used for unusual faceted cuts. The commercial market is limited due to the limited demand for brown gemstones. This variety was sometimes known as smoky topaz in the past, which is incorrect and misleading, since the mineral variety is quartz, not topaz.

Tiger's Eye

Tiger's Eye quartz contains brown iron which produces its golden-yellow color. Cabochon cut stones of this variety show the chatoyancy (small ray of light on the surface) that resembles the feline eye of a tiger. The most important deposit is in South Africa, though Tiger's eye is also found in Western Australia, Burma (Myanmar), India and the U.S. (California).



Rock crystal

The transparent colorless variety of quartz is still known as rock crystal. Long ago, people believed that rock crystal was a compact form of ice: crystallos actually means "frozen." The best rock crystal has the clarity and shimmer of water. Although colorless quartz is relatively common, large flawless specimens are not, which is why crystal balls these days are made of glass, not quartz. Rock crystal has often been used in jewelry, particularly carved pieces. Many stunning Art Deco jewelry designs featured the black and white quartz combination of rock crystal and onyx.

Colorless quartz crystals have also become popular in jewelry due to the popularity of legends about the powers of quartz crystals. Many people believe that wearing quartz crystals benefits a person's health and spiritual well being.



Rutilated quartz and tourmalinated quartz

While most varieties of transparent quartz are valued most when they lack inclusions, some varieties are valued chiefly because of inclusions! The most popular of these is known as rutilated quartz. Rutilated quartz is transparent rock crystal with golden needles of rutile arrayed in patterns inside. Every pattern is different and some are breathtakingly beautiful. The inclusions are sometimes called Venus hair. Less well known is a variety called tourmalinated quartz which, instead of golden rutile, has black or dark green tourmaline crystals.

Chalcedonies

Quartz that is formed not of one single crystal but finely grained microcrystals is known as chalcedony. The variety of chalcedony is even greater than transparent quartz varieties because it includes cryptocrystalline quartz with patterns as well as a wide range of solid colors. Agates are banded, bloodstone has red spots on a green ground, moss agate has a vegetal pattern. Jasper sometimes looks like a landscape painting. Another staple of the jewelry industry is black onyx, chalcedony quartz which owes its even black color to an ancient dyeing process that is still used today. Carnelian, another chalcedony valued in the ancient world, has a vivid brownish orange color and clear translucency that makes it popular for signet rings and seals. Chrysoprase, a bright apple green translucent chalcedony, is the most valued. It was a particular favorite of Frederick The Great of Prussia, who loved its bright green color. It can be seen today decorating many buildings in beautiful Prague, including the Chapel of St Wencelas. Chrysoprase is found today mostly in Australia. Unlike most other green stones, which owe their color to chromium or vanadium, chrysoprase derives its color from nickel. Its bright even color and texture lends itself well to beads, cabochons, and carvings. [top](#)



Jade: Chinese Stone of Heaven

Since at least 2950 BC, jade has been treasured in China as the royal gemstone, yu. The character for jade resembles a capital I with a line across the middle: the top represents the heavens, the bottom the earth, and the center section, mankind. The word yu is used in Chinese to call something precious, as in English we use gold. Jade was thought to preserve the body after death and can be found in emperors' tombs from thousands of years ago. One tomb contained an entire suit made out of jade, to assure the physical immortality of its owner. For thousands of years, jade was a symbol of love and virtue as well as a status symbol.

In Central America, the Olmecs, the Mayans, the Toltecs all also treasured jade and used it for carvings and masks. The Aztecs instituted a tax in jade, which unfortunately led to the recycling of earlier artworks.

The history of jade in Europe is not quite as distinguished. Although prehistoric axes and blades carved from jade have been found by archaeologists, most Europeans were unfamiliar with jade as a gemstone for jewelry use until the sixteenth century when jade objects were imported from China and, later, Central America. The Portuguese, who brought home jade pieces from their settlement in Canton, China, called jade *pedre de ilharga*, or stone of the loins, because they believed it to be strong medicine for kidney ailments. Jade objects brought back to Spain from the new world were called by the Spanish version of this phrase *pedra de hijada*. This became the French *ejade* and then, finally, jade.

The ancient jade carved in China was what we today call nephrite jade: an amphibolite mineral. (Interestingly enough, the word nephrite comes from the Greek word for kidney, nephros, a bit more scholarly version of the same thing.) In the 19th Century, it was discovered that the material from the new world was not the same mineral as the jade from China. The mineral from Central America, a pyroxene, was called jadeite to distinguish it from the original nephrite.

The Chinese knew about jadeite, travelers had brought back some jadeite from Burma as early as the thirteenth century. But China was turning inward at that time and this foreign Kingfisher Stone, as they called it, referring to the brightly colored feathers of the bird, was not considered to be real jade. It only became popular in the eighteenth and nineteenth century when trade with Burma opened up again.

Today it is jadeite jade that is considered the real jade, commanding prices much higher than nephrite because it comes in much more vivid green colors and finer translucency than nephrite jade. Jadeite jade is produced in Burma, which is now known as Myanmar. Every year, the state-owned Myanmar Gems Enterprise holds



the Myanma Gems, Jade, and Pearl Emporium where boulders are sold by tender to the top jade dealers from around the world.

Jadeite dealers must be some of the world's biggest gamblers because of the way they buy. Boulders are sold intact, with only a tiny window cut in the side to expose a small section of the interior. The buyer has no idea what lies inside: valuable green jadeite or perhaps only white or brown-stained inexpensive material. He has only his instinct, and on that basis he pays hundreds of thousands of dollars for what may turn out to be the deal of the year or a huge loss.

The top jadeite jade is usually cut into smooth dome shapes called cabochons. Jadeite bangles are also very popular in Asian countries. Beads are also very beautiful and some important jadeite necklaces made during the art deco period have fetched hundreds of thousands of dollars in auctions in the past few years.

Because of its smooth even texture, jade has long been a preferred material for carving. The most common shape is the flat donut-shaped disc called a pi, which is commonly worn as a necklace.

The Emerald Buddha, the sacred image that is enshrined at Wat Phra Kaeo in Bangkok, Thailand, is actually beautiful green jadeite.

Jadeite jade is most treasured for its vivid greens, but it also comes in lavender, pink, yellow, and white. Nephrite is found in less intense dark spinach greens, white, browns, and black.

While jadeite is mined today primarily in Myanmar, small quantities can be found in Guatemala. Although neolithic jadeite axes were found in Europe, it is not known where this prehistoric jadeite was mined, although it is possible that the material came from a deposit in the Alps. Nephrite is mined in Canada, Australia, the United States, and Taiwan.

Jade is most often sold by the piece rather than per carat. Although the overall color is the most important value factor, attention is also paid to translucency, texture, and also to pattern. Certain patterns, including moss in snow, are highly valued.

Both jadeite and nephrite are very durable and tough, although jadeite is slightly harder than nephrite due to its microcrystalline structure. [top](#)



Zircon: Brilliant but Misunderstood

Hindu poets tell of the Kalpa Tree, the ultimate gift to the gods, which was a glowing tree covered with gemstone fruit with leaves of zircon. Zircon has long had a supporting role to more well-known gemstones, often stepping in as an understudy when they were unavailable.

In the middle ages, zircon was said to aid sleep, bring prosperity, and promote honor and wisdom in its owner. The name probably comes from the Persian word *zargun* which means "gold-colored," although zircon comes in a wide range of different colors.

Natural zircon today suffers for the similarity of its name to cubic zirconia, the laboratory-grown diamond imitation. Some don't realize that there is a beautiful natural gemstone called zircon.

Zircon occurs in a wide range of colors but for many years, the most popular was the colorless variety which looks more like diamond than any other natural stone due to its brilliance and dispersion.

Today the most popular color is blue zircon. Most blue zircon, which is considered an alternate birthstone for December, is a pastel blue, but some exceptional gems have a bright blue color. Zircon is also available in green, dark red, yellow, brown, and orange.

Zircon is mined in Cambodia, Sri Lanka, Thailand, Myanmar, Australia, and other countries.

Zircon is one of the heaviest gemstones, which means that it will look smaller than other varieties of the same weight. Zircon jewelry should be stored carefully because although zircon is relatively hard, it can abrade and facets can chip. Dealers often wrap zircons in individual twists of paper so that they will not knock against each other in a parcel.

The wide variety of colors of zircon, its rarity, and its relatively low cost make it a popular collector's stone. Collectors enjoy the search for all possible colors and variations. [top](#)



Iolite: Gem of the Vikings

When Leif Eriksson and the other legendary Viking explorers ventured far out into the Atlantic Ocean, away from any coastline that could help them determine position, they had a secret gem weapon: iolite. The Viking mariners used thin pieces of iolite as the world's first polarizing filter. Looking through an iolite lens, they could determine the exact position of the sun, and navigate safely to the new world and back.

The property that made iolite so valuable to the Vikings is extreme pleochroism. Iolite has different colors in different directions in the crystal. A cube cut from iolite will look a violetish blue almost like sapphire from one side, clear as water from the other, and a honey yellow from the top. This property led some people to call iolite "water sapphire" in the past, a name that is now obsolete.

Pleochroism may have been helpful in navigation but it makes things difficult for a gem cutter. If iolite is not cut from exactly the right direction, no matter the shape of the rough, its color will not show to its best advantage.

The name iolite comes from the Greek *ios*, which means violet. Iolite is usually a purplish blue when cut properly, with a softness to the color that can be quite attractive.

Iolite is readily available and surprisingly affordable. The better and richer the blue, the better. It is mined in India, Sri Lanka, Mozambique, Zimbabwe, and Brazil. The Vikings probably mined iolite from deposits in Norway and Greenland.

Iolite is relatively hard but should be protected from blows. With its attractive color and reasonable price, it may become a jewelry staple in the future. [top](#)



Spinel: Collector Favorite

Spinel is the great impostor of gemstone history: many famous rubies in crown jewels around the world are actually spinel. The most famous is the Black Prince's Ruby, a magnificent 170-carat red spinel that currently adorns the Imperial State Crown in the British Crown Jewels after a long history: Henry V even wore it on his battle helmet! The Timur Ruby, a 352-carat red spinel now owned by Queen Elizabeth, has the names of some of the Mughal emperors who previously owned it engraved on its face, an undeniable pedigree!

In Burma (Myanmar), where some of the most beautiful colors are mined, spinel was recognized as a separate gem species as early as 1587. In other countries the masquerade lasted for hundreds of years after that. Spinel were most often referred to as "balas rubies" which may have referred to color or to country of origin.

Now treasured for its own sake, spinel is a favorite of gem dealers and gem collectors due to its brilliance, hardness and wide range of spectacular colors. In addition to beautiful rich reds, spinel can be found in a range of beautiful pastel shades of pink and purple. Of particular interest is a vivid hot pink with a tinge of orange that is mined in Burma that is one of the most spectacular gemstone colors in any gem species. Spinel also comes in beautiful blues which are sometimes called cobalt spinel, but these are very rare.

Because spinels made in a laboratory are often used for imitation birthstone rings, many people think "synthetic" when they hear the name "spinel." They have often never even seen the real thing.

In fact, the main thing holding back greater recognition for spinel is rarity. Fine spinels are now more rare than the rubies they used to imitate. Strangely, they are also more affordable: in the gem world, too rare can be a drawback because so few people even get a chance to grow to love these gem varieties.

In addition to Burma, now known as Myanmar, spinel is mined in Sri Lanka, Tanzania, and Tajikistan, part of the former Soviet Union.

Spinel is a durable gemstone that is perfect for all jewelry uses. It is most often faceted in oval, round, or cushion shapes and is not currently found in calibrated sizes due to its rarity. [top](#)



Fire Opal

Fire Opals are something unique in the splendid world of Opals. Even in ancient times, in India and the Persian empire, in the empires of Central America and in Native American tribes they were cherished as symbols of deepest love. Such gemstones sparkling with utmost vividness like Fire Opals were believed to have originated in the waters of paradise. Mayas and Aztecs loved it for jewellery and used it also for mosaics and religious cults. It was named "Quetzalitzlipyllitli", which means "Stone of the Bird of Paradise". But there came a time when the gemstone knowledge handed down from generation to generation in Mexico was almost completely forgotten until sometime in the year 1835 when the fiery treasures hidden in the Mexican highlands were remembered, and a systematic mining was slowly beginning. Today Fire Opal is considered as the National Stone of the central American state.

In Mexico there are the most important locations of Fire Opal in the world. The Mexican plateau with its many extinct volcanoes is threaded and veined with opaline rock. With only few exceptions the gemstone is hidden in niches and caves and is mined above the surface, so that in the areas of occurrence you will come across canyons with walls rising up to heights of up to 60 meters, and labyrinthine routes carved into the mountains. Sometimes the orange red gemstone is also found in other countries in the world., like in Honduras or Guatemala , in the USA, Canada, Australia or Turkey, but in fact most of these occurrences are without considerable economic value. But this is different for Brazil: in an agate mine near Campos Borges in the South Brazilian state of Rio Grande do Sul yellow to range coloured Fire Opals were discovered some years ago, and these stones are set apart by their beautiful colour, which often appears slightly dimmed, but is not opalescent. Their vivid and warm orange varies in all shades and hues between yellow and red, sometimes set against a brownish underground. Especially remarkable is the size of the rough stones. Some achieve a size of a fist and thus allow for completely new approaches of design. These Brazilian Fire Opals today provide afresh accent in the fascinating world of gemstones.

Powerful Gemstone with a Vivid Colour

The warm and fiery light of Fire Opal fascinates gemstone enthusiasts all over the world. This bright and brilliant orange is impossible to overlook! And the colour gave the gemstone its name, a stone which like all the other Opals is a silicate with a high percentage of water. The colour in turn is caused by traces of iron oxide, and with a hardness between 6 and 6.5 on the Mohs' scale it is counted among the more sensitive gemstones requiring protective setting, especially when worn as ring stones.

Fire Opal is not the same as Fire Opal. We differ between non-opalescent Fire Opal, which depending on its quality can be cut in facets or as cabochons, and the top quality opalescent Fire Opals which in addition to the vivid colour also display the colour firework which is typical for Opals. But even without this effect, Fire Opal plays an important role as a perfect top quality jewel.

Even if you do not really believe in the power and energy embedded in gemstones and in their mysterious effects, a Fire Opal will always create an impression evoking an idea of warmth and well-being. In the teachings of healing with gemstones, Opals are in general considered as gemstones to which one turns instinctively in order to augment or improve a special aspect of personality. And seen from this point, Fire Opal is an excellent assistant to make emotions flow and to ease blocks. Fire Opals endow you with courage, stamina, willpower and energy as experts will tell you. Their power will help you conquer petrified ways of thinking, thus preparing the ground for new developments. The warm and fiery orange red has a positive effect on the soul and gives a deep experience of warmth, peace and harmony. Fire Opals are the lucky stones for all of us born under the zodiac sign of Aries.

The Drier the Origin, the More Durable the Fire Opal

Fire Opal is either cut in facets – in so far as its transparency allows for this approach - or as cabochons, a shape which best brings out the powerful brilliance of this orange coloured jewel. The classical shape for valuable Fire Opals is the oval shape, but Brazilian rough stones are worked into many fancy shapes and cuts, since because of their size they offer designers and cutters almost unlimited range for experimenting with new ideas.

In spite of their relatively low hardness, Fire Opals are not easy to work with for the cutters. When executing the cut it must be considered carefully in which direction the stone best displays the firework of colours. Also, while preparing the rough stone and while setting the finished piece, excessive heat must be avoided under all conditions, as Fire Opal contains varying degrees of water and will simply break in case of artificially caused drying.

On being found, most Fire Opals are encrusted by a chalky white layer resulting from weathering, an indication of how some stone are aging due to loss of water, a process which will make them dull and cause fissures. Being subjected to this process, also to which extent: this does not only depend on how Fire Opal is treated, but also on its origin. An experienced gemstone expert will thus be able to determine from the place where the Fire Opal was found, whether it will be rather resistant and durable or not. Opal specialists know exactly where their stones are found, and can therefore give guarantees for the expected life cycle of stones. The rule of thumb is, the drier the place of origin, the higher the durability of the Opal.

Fire Opal reacts negatively to excessive heat as well as to contact with acids, dyes, and sharp objects. Extremely unfavourable conditions will force the stone to shed water, making it dull and resulting in fissures. Like all other Opals, Fire Opal should not be subjected to intensive light for too long. It does, however, appreciate being worn frequently: the humidity of air and skin thus available will help the stone maintain its balance of water. But keep it away from cosmetics! Should the stone, however, have become dull, then a Fire Opal can be polished up again.

Gemstone for People who Enjoy Life

Play of colour, body colour and transparency are the three criteria determining the price of Fire Opal. The more transparency and “fire” it shows, and the deeper the red of its body, the more valuable it is considered to be. As rarest and thus most coveted stones is deeply orange red Fire Opal from Mexico which shows a high degree of opalescence. Fine cabochons cut to display the highly coveted typical firework of colours of an Opal are more valuable than good quality Fire Opals cut in facets. The bright orange red to red gemstones are valuable treasures, which appeal mainly to people who are active and enjoy life. The fiery and warm colour encourages vivacity and joy of life and creates a yearning for the beauty of Nature, since Fire Opals themselves represent Nature at its most beautiful. [top](#)



Moonstone

Moonstone shows an almost magical play of light as its characteristic feature. It owes its name to this mysterious gleaming which appears different whenever the stone changes its position in movement. Experts call this the “adularescence”, and in earlier times the phases of waxing and waning moon were thought to be discerned in this phenomenon.

Moonstone from Sri Lanka, the classical country of origin for Moonstone, shimmers pale blue on almost transparent ground. Specimen from India show cloudlike plays of light and shade on beige brown, green, orange or simple brown background. These subdued colours in combination with the fine shine make Moonstone an ideal gemstone for jewellery with a sensuous and feminine character. This gemstone was once before extremely popular, about a hundred years ago in the times of Art Nouveau. It used to decorate a striking amount of pieces of jewellery created by the famous French Master Goldsmith René Lalique and by his contemporaries. These pieces are usually only found in a museum or in collections nowadays.

Many mystical and magical connotations surround this stone. In several cultures, like for example in India, it is considered a sacred and magical gemstone. In India Moonstone is also appreciated as a “dream stone”, as it is supposed to bring about sweet and beautiful dreams. In Arab countries women often wore Moonstone sewn into their garment, because there this gemstone is appreciated as a symbol of fertility.

Moonstone symbolises a holistic view of man and woman. Its soft shine will support the emotional and dreamy tendencies of a person. The associations thus involved make Moonstone of course the ideal stone for lovers, reputed to bring forth feelings of tenderness and to protect true love. It is also reported that wearing a Moonstone will further intuition and your sensitivity for others.

What are Moonstones and where do they come from?

The mystical stone belongs to the large mineral family of feldspars, which provide almost two thirds of all stones on our Earth. In the case of Moonstone, we are looking at the feldspar variety called “adularia” a silicate of potassium aluminium in gemstone quality, which is also found in the European Alps near the Adula-group – thus the name “adularia”. Another synonym for Moonstone is “Selenite”, according to the Greek goddess of the moon, Selene.



When uncut, Moonstones look quite boring and make it difficult to discern their attractiveness: the mysterious play of light. It will only be brought out by the cutter's expertise and skills. Classical Moonstones are always cut as cabochons. Here the appropriate height of the stone is essential. The cutter must also bear in mind to locate the crystal axis exactly in the zenith of the stone, because only then the desired effect of light play will be achieved.

The classical, bluish and almost transparent Moonstones traditionally came from Sri Lanka. But they are also found in the USA, in Brazil, Australia, Myanmar, and Madagascar. Since blue Moonstones in fine qualities have become more and more scarce in recent time, the prices have increased accordingly.

For some years now also green, blue and peach or smoke and champagne coloured, black and reddish specimen have been offered, which come mainly from India. Some of these show not only the typical the typical floating play of light, but also a cat's eye or a multi-rayed star. These stones, then, are not only cut as cabochons, but also cut as intricate cameos, sometimes engraved as children's -, moon - or gargoyle face. They also show the play of light which is so typical for Moonstone, just like the spheres and beads made from suitable raw material to be crafted

into fine necklaces.

Where does the striking play of light come from?

The light of a Moonstone is something special indeed in the fascinating world of gemstones. Experts call this phenomenon "adularescence". The origin of this phenomenon is the interior structure of the gemstone in scales or lamellas. Incoming rays of light are refracted inside the stone and scattered. In this way, then, there is created a unique play of light, which makes Moonstone so special and coveted.

This beautiful gemstone, however, has a considerable drawback: it only achieves a hardness of merely six on the Mohs' scale. Moonstones should thus be handled carefully, as they are very fragile. On the other hand, small damages which will arise after longer periods of being worn, can be corrected relatively easily. A jeweller can have a dulled Moonstone polished in such a way, that it will regain its mystical light like on the first day.



Three-dimensional colour and seductive charm

When purchasing Moonstone you will be astonished at the striking differences in price. The more intense the colour, the larger and more transparent the stone, the more valuable is the gem. Really top quality fine blue Moonstone show an incredible "three-dimensional" depth of colour, which you will see clearly only when playfully tilting the stone and moving it. Such specimen are very rare and thus highly coveted, and of course accordingly valuable. The brighter coloured Indian Moonstones are not only a fashion trend. They are usually a little less expensive than the classical blue variant, so that everybody today may pick his or her favourite Moonstone to meet exactly all requirements of taste and budget.

Moonstones are Nature's treasures with a sensuous and seductive charm. They do not only ask to be looked at and admired, they require to be worn and moved a lot. Because only then the soft veil of light which makes this gemstone so attractive will be able to display its beauty to the best effect. [top](#)



Alexandrite

This rare gemstone is named after Russian Tsar Alexander II (1818 - 1881), since the very first Alexandrite crystals were discovered almost exactly on his birthday in the year 1830 in the Emerald mines of the southern Urals. Alexandrite, quite a young gemstone compared to others, thus has nevertheless got a grandiose past. Because it shows the two colours red and green, the main colours of the Russian national banner in those

days, it inevitably became the national stone of Tsaristic Russia.

Beautiful Alexandrite in top quality, however, is very rare indeed and is hardly ever used in modern jewellery. In antique Russian pieces you may come across them with a little luck, because the Russian master jewellers loved this stone. Also Tiffany's master gemmologist Georg Kunz was so fascinated by Alexandrite that the jeweller's firm produced some beautiful series of rings and platinum ensembles at the end of the nineteenth and the beginning of the twentieth century. Smaller Alexandrites are occasionally also used for Victorian jewellery from England. [top](#)

The Magic of Changing Colours



The most sensational feature about this stone, however, is its surprising capability of changing its colour. Green in daylight, Alexandrite changes its colour to a soft shade of red, purplish-red or purple-grey in candle light or artificial light. Thus it displays a unique optical characteristic making it one of the most valuable gemstones of all, especially in fine qualities.

Alexandrite is very scarce: this is due to its chemical composition. It is basically a Chrysoberyl, a family consisting of the colourless or yellow Chrysoberyl, Chrysoberyl Cat's Eye and colour-changing Alexandrite. It differs from the other Chrysoberyls insofar as it does not only contain iron and titanium, but also chrome. And it is this very element which accounts for the spectacular colour-change. According to CIBJO nomenclature only Chrysoberyls displaying a distinct change of colour may be termed Alexandrite.

Its rarity is obviously caused by its formation. Like all other gemstones, Alexandrite emerged millions of years ago when the earth was still a fiery mass. It required two kinds of stone in order to create Alexandrite: one of these

contributed the elements aluminium and beryllium, the other chrome. However, these conditions occurred only rarely. The result: Alexandrite crystals are very scarce indeed.

Nowadays not only from Russia

Russia is still the number one from the mines of the Urals was available on the market. Since the Russian occurrence were thought to be exhausted for some time, the interest in the unique colour miracle decreased – especially since Alexandrites from other mines hardly ever displayed the coveted colour change. But the situation changed dramatically when in the year 1987 Alexandrites were discovered in a place called Hematita in Brazil. The Brazilian Alexandrite convinced both in a distinctive colour change and in good clarity and colour. Thus the somewhat dulled image of the miraculous stone received another boost. The colour is admittedly not as strong a green as that of Russian Alexandrite, but the colour change is clearly discernible. Today Hematita is one of the economically most important occurrences for Alexandrite. Now and then even an Alexandrite with chatoyance effect is discovered there, something which has not happened with Russian Alexandrites so far. Alexandrites do also exist in Sri Lanka, but these stones differ from the highly estimated Russian ones by a slightly different shade of colour: in daylight they appear blue-green, and in artificial light they will change to reddish purple or deep purple. In Tunduru as well as in India, Burma, Tasmania and Zimbabwe Alexandrite is also found. Thus this stone still is considered a rarity, but specialised gemstone dealers do in fact carry it – especially since the improved trade relationships between Russia and the rest of the world have brought about also a better supply of Russian Alexandrites to the market.

Gemstone for Experts and Gemstone Lovers

With its good hardness of 8.5, Alexandrite is an uncomplicated stone to wear. The more intensive the change of colour, the more valuable the stone. Fine Alexandrite, especially in qualities of over one carat, thus belongs to the most expensive gemstones in the world. It is rarer than fine Ruby, Sapphire or Emerald. Its value does mainly depend on the depth of the colour change: a really fine Alexandrite should show a vivid green in daylight, and change to purple-red or deep purple in artificial light, without any trace of undesired brown. And if its origin is indisputably Russia, then we are talking about a real rarity of enormous value.

Alexandrite is a stone for experts and enthusiasts, a true understatement stone. Its uniqueness and high value are not evident at first sight. The mysterious colour change will only occur when exposed to different light sources. But if you really get involved in Alexandrite, you will be utterly fascinated by this gemstone. Maybe you will also feel some of the mysterious magic ascribed to Alexandrite: in critical situations it is supposed to strengthen its wearer's intuition to help him or her find new ways whenever logic will not provide an answer. Alexandrite is also reputed to support creativity and inspire imagination. [top](#)

All Eyes on Chrysoberyl



Like the eye of a panther, cat's-eye chrysoberyl seems almost supernatural in origin. How could something so feline be mineral and not animal? Cat's-eye chrysoberyl, a cousin of color-changing **alexandrite**, is a variety of chrysoberyl which has a distinct band of light across its face which sweeps from side to side.

The color ranges from a honey-brown to an apple green with rich gold colors generally the most valued. The most important value factor is the strength and sharpness of the eye. Fine cat's-eye chrysoberyl often also shows the "milk and honey" effect. When a bright light source is directed at the side of the stone, one side of the eye will be milky white and the other remains gold. When the stone is rotated, the colors switch. Cat's-eyes are especially popular in men's jewelry.

Cat's-eye chrysoberyl has the presence of a familiar, a powerful talisman that can direct fortune. Put it to work for you!

Chrysoberyl can also be seen in a faceted variety, which has a honey-gold color. It may remind you of yellow sapphire, topaz, or citrine. [top](#)



Kunzite: In the Pink

Kunzite, the pale pink to lilac gem variety of the mineral spodumene, is named as a tribute to George Kunz, the legendary gem scholar, gemologist, and gem buyer for Tiffany & Co at the turn of the century. The author of *The Curious Lore of Precious Stones*, Kunz searched the globe for old stories and legends about gems as he searched for new varieties and new deposits.

Kunzite was first found in Connecticut, USA. But the first commercially significant deposit was discovered in 1902 in the Pala region of California, where morganite beryl was also first discovered. Kunzite is often found in association with morganite and pink tourmaline, the other popular pink gemstones. Today most kunzite is mined in Brazil, Afghanistan, and Madagascar.

The largest faceted kunzite is an 880-specimen on display at the Smithsonian Institute in Washington D.C. Although kunzite for jewelry use is several levels of magnitude smaller, kunzite shows the best color in larger sizes. Stones should be at least ten carats to be really in the pink.

Kunzite is relatively hard, with a hardness of seven just like quartz. However, kunzite should be handled with care because, like diamond, it has a distinct cleavage which means a sharp blow, if it lands in the wrong place, can break it in two. Kunzite should also be protected from heat and continued exposure to strong light which can gradually fade its color. **top**



Beryls

Magic of Colours

Colour immediately appeals to our emotions and stimulates them, making us feel happy, vivacious or calm, making us experience magic and freedom. And where would colour be more permanently or beautifully presented than in a gemstone? In the fascinating realm of gemstones Emeralds shine in the most burning green imaginable. Aquamarines sparkle in all shades of blue – from light pale sky-blue to the deep blue of the sea. And charming pink Morganite enthralls women all over the world. And only few people will realise that all these different gemstones belong to one and the same family. **Aquamarine, Emerald and Morganite** are all Beryls – just like Golden Beryl, gold-green Heliodor and colourless Goshenite. No matter whether blue, green, yellow, colourless or pink, their chemical and physical consistence is basically identical, they only differ in colour.

What are the reasons for this? The story is ancient and fascinating, it happened millions of years ago, when in the core of our Earth fine crystals were created at high pressure and enormous heat. Beryls are in fact Beryllium aluminium silicates. Colourless as pure Beryl (see Goshenite), their structure allows for the integration of various other substances, which will in turn cause the different colours to appear and turn an unexciting colourless gemstone into a green, yellow, pink or blue precious beauty.



Iron is responsible for making Beryl appear sea blue and turning it into one of the most popular and well-known gemstones, Aquamarine. This stone not only sparkles in all the colours of the water – colours which complement almost any colour of eyes and complexion. Often it seems sea-green, a typical characteristic of the stone. It is the favourite stone of many creative designers and is set apart by quite a number of positive features: the distribution of colour is even throughout the stone, there are only little inclusions so that it is almost flawless, it has a good hardness and a beautiful lustre.

It is closely related to Emerald. This most valuable of all Beryls owes its colour to chromium and/ or vanadium, which make it show the maybe most beautiful and brightest green of all respective gemstones coining a class all by itself, emerald-green. Fine crystal inclusions, fissures and flaws are not only tolerated in this valuable gemstone, they are even considered as identifying features stating its authenticity. Experts have lovingly called them the Emerald's "jardin" (= garden).

Beryl reacts completely different, however, when manganese comes into the picture. This element lends a fine feminine pink, rose or peach colour to the stone, which is then called Morganite, besides Emerald and Aquamarine probably the best-known representative of the beryl group. Formerly it was simply known as "pink beryl". Only since 1911 it has been called "Morganite" in honour of New York banker and gemstone lover John Pierpont Morgan. This gemstone loves large-scale generosity, since only from a certain size on the beauty of its colour, usually a pale pink to pale violet, can be really appreciated.

Small traces of uranium are sufficient to lend colourless Beryl a more or less satiated golden colour – typical characteristic of Golden Beryl. This gemstone also shows the same good qualities as its blue brother Aquamarine. Usually it is also mined in the same occurrences alongside Aquamarine. Golden beryl fascinates us by its fine range of yellows, from palest lemon shade to warm gold. Contrary to Emerald, however, it shows only few inclusions.



Iron and uranium in combination are responsible for the fresh and invigorating green-yellow of another Beryl variety, of Heliodor. The stone has been aptly named, for "helios" is the Greek word for "sun" and "doron" denotes a gift. Heliodor is thus a gift from the sun to all mankind. **top**

From time to time there are Beryls without such traces of elements lending colour to the stone. In these cases we end up with "simply" colourless Beryl, which is named Goshenite in the trade according to its occurrence in Goshen in Massachusetts/USA. Colourless Beryl is rare and of little importance as gemstone. However, its history is quite important, for it is considered to be responsible for the German word "Brille", denoting spectacles. Even in antiquity it was originally used for the lenses of spectacles.

The name Beryl as such originally is rooted in India. Based on the Sanskrit word "veruliyam" – an old term for the gemstone Chrysoberyl – from these roots there later developed the Greek word "beryllos".

Beryls are popular gemstones, and not only because of their gorgeous colours. They also convince because of their high brilliance and their excellent hardness of 7.5 making them very suited for everyday wear. The typical hexagonal crystal structure of Beryls with usually vertically striped surfaces are mainly mined in the South American occurrences and in Middle and Western Africa. However, they are also found on Madagascar, in Russia and the Ukraine and in the USA. The skilled hands of expert gemstone cutters turn them into a wide range of many-faceted shapes. Especially popular cuts for Beryls are rectangular or square step cuts, since a clear design will succeed in best bringing out the transparent beauty of this multi-coloured gemstone family. [top](#)



Morganite

Besides **Emerald** and **Aquamarine**, Morganite is probably the best-known member from the fabulous multi-coloured **Beryl-group**. Women all over the world love it because of its very fine pink colour which emanates charm, esprit and tenderness.

Also Gemstones Change their Names: Pink Beryl, aka Morganite

Although it came into existence millions of years ago, Morganite found its name less than a hundred years ago. To be precise, only in 1911, for before this the gemmologists considered "Pink Beryl" simply a variety of Beryl in general, and not as an individual stone. However, it is not only people but also stones who sometimes change their names. Thus in the year 1911 New York gemstone expert G.F. Kunz suggested to give Pink Beryl the status and standing of an individual kind of gemstone, and it was named in honour of banker and minerals collector John Pierpont Morgan, thus receiving its current name: Morganite.

Beryls are hard minerals consisting of beryllium aluminium silicate. Pure Beryl is colourless. However, due to its hexagonal structure it is able to integrate other elements such as, e.g., iron, manganese, chromium or vanadium. If manganese is embedded in Beryl, the plain and unexciting gemstone is turned into a pink and precious beauty: Morganite. Today this gemstone is mainly mined in Brazil, Madagascar, Afghanistan and California. Its excellent hardness of 7.5 to 8 on the Mohs' scale is the reason why it is so ideally suited to being worn.

La vie en rose....

Morganite comes in many fine shades of pink. Some are clearly pink, others tend more towards purple. Even a slight orange hue may be sometimes discerned – after all, Mother Nature created the ideal gemstone colour to complement any shade of complexion. But no matter which shade and hue, Morganite always radiates charm, esprit and a certain tenderness. This gemstone is endowed with a wonderful gift: even in times of high stress it will manage to let you focus on the bright side of life. Just give it a try and see for yourself. The sight of a Morganite cannot fail to cheer you up. A person who decides for this stone, will be able to see "la vie en rose" even in the grey monotony of everyday routines. Therefore, then, it is easy to understand that for the stone healers, Morganite is considered the typical stone to be used as the antidote to cure the problems caused by hectic modern life: to relieve stress and provide clarity. It will provide a pleasant feeling of relaxation, peace and joy of life.

Colour and Cut Determine the Quality

When determining the quality, colour is the most important criterion. Please note: This gemstone should be selected as large as possible, for it requires a certain size to best bring out the beauty of the stone. The rule that a higher clearness equals a higher value can only be applied with restrictions, since a Morganite showing fine inclusions like pure silk is also quite coveted by gemstone lovers. The main decisive factor, then, is definitely the quality of the cut, because it needs an expert's cut to enhance the fine beauty and bring out the brightness of Morganite. [top](#)

Chrome Diopside: Beautiful Gem, Ugly Name



Chrome diopside won't win any contests for the most beautiful name. To most people, it sounds more like a car polish rather than a gemstone. But don't jump to any conclusions! Chrome diopside has a beautiful rich green color and an amazingly low price. It is the most affordable gemstone with a pure rich green color.

There are a few drawbacks. The chrome diopside is most available in small sizes: in the rare large sizes, the color becomes so rich it is too dark. But for bright green accent stones, chrome diopside is ideal. However, it is relatively soft, with a hardness of 5.5, so it is a better choice for earrings or a pendant than for a ring which will receive a lot of wear. Chrome diopside is mostly mined in Yakutia and Siberia and the liberalization of the economy of the former Soviet Union has made it more available than even before. [top](#)



Andalusite: Cognac Cocktail

Andalusite is named after Andalusia, the province of Spain where it was first discovered.

Andalusite is pleochroic, different colors in different directions. When cutting most pleochroic gemstones, such as iolite and tanzanite, the trick is to minimize the pleochroism and maximize the single best color. Andalusite is the opposite: cutters try to orient the gem to get a pleasing mix of colors: orangey brown and a yellowish green

or gold.

When they succeed, andalusite looks unlike any other gemstones, with patterns of color dancing around the facets. The best color play is seen in fancy shapes, particularly rectangular cushion shapes: in round cuts, the colors blend together.

Andalusite is mined in Brazil and Sri Lanka.

In the past andalusite was sometimes called "poor man's alexandrite" because it offers color play at a low price. But andalusite really doesn't look much like alexandrite, which changes from green to red in different light. It is not really a color change stone at all because the colors are there at the same time.

That should not diminish its appeal, especially for those who like earth tones. Andalusite offers a lot of impact for a relatively low price. Because of its color and its durability, it is especially appropriate for men's jewelry. [top](#)



Amber: the Jurassic Gem

Dinosaurs have been more popular than ever since their starring role in the movie Jurassic Park. A more surprising result of the movie's popularity has been a worldwide surge in demand for amber jewelry. Although amber's use in adornment is probably as old as mankind, in recent history it has had a limited market. Of course, that was before millions of people saw dinosaur DNA extracted from a mosquito trapped in amber in the movie.

Millions of people learned from the movie that amber, which is fossilized pine tree sap, is ancient and valuable, like an antique from previous history.

Demand is especially strong for amber with insects inside. "Amber is like a time capsule made and placed in the earth by nature herself," said David Federman, author of Consumer Guide to Colored Gemstones. "It has helped palaeontologists reconstruct life on earth in its primal phases. More than 1,000 extinct species of insects have been identified in amber."

The two main sources of amber on the market today are the Baltic states and the Dominican Republic. Amber from the Baltic states is older, and therefore preferred on the market, but amber from the Dominican Republic is more likely to have insect inclusions. Prices of amber can range from \$20 to \$40,000 or more.

Fortunately for new amber enthusiasts, amber from the Baltic states is more available on the market than in previous years due to the liberalization of the economies of eastern Europe and the former Soviet Union. The largest mine in the Baltic region is in Russia, west of Kaliningrad. Baltic amber is found in Lithuania, Latvia, Estonia, Poland, Russia, and occasionally washed up on the shores of the Baltic Sea as far away as Denmark, Norway, and England. Other amber sources include Myanmar (formerly Burma), Lebanon, Sicily, Mexico, Romania, Germany, and Canada.

Desire for amber is nothing new. Amber artifacts dating to the Stone Age were found in what is now Germany and Denmark.

Made by the Sun

"Stone Age man imbued amber with supernatural properties and used it to wear and to worship," Mr Federman said. "Amber took on great value and significance to, among others, the Assyrians, Egyptians, Etruscans, Phoenicians, and Greeks. It never completely went out of vogue since the Stone Age. Between 1895 and 1900, one million kilograms of Baltic amber were produced for jewelry."



Many myths surround the origin of amber. Ovid writes that when Phaeton, a son of Phoebus, the sun, convinced his father to allow him to drive the chariot of the sun across the sky for a day, he drove too close to the earth, setting it on fire. To save the earth, Jupiter struck Phaeton out of the sky with his thunderbolts and he died, plunging out of the sky. His mother and sister turned into trees in their grief but still cried mourning him. Their tears, dried by the sun, are amber.

The Greeks called amber electron, or sun-made, perhaps because of this story, or perhaps because it becomes electrically charged when rubbed with a cloth and can attract small particles. Homer mentions amber jewelry - earrings and a necklace of amber beads - as a princely gift in the Odyssey.

Another ancient writer, Nicias, said that amber was the juice or essence of the setting sun congealed in the sea and cast up on the shore.

The Romans sent armies to conquer and control amber producing areas. Emperor Nero was a great connoisseur of amber. During his time, wrote Roman historian Pliny, the price of an amber figurine, no matter how small, exceeded the price of a living healthy slave.

The ancient Germans burned amber as incense, so they called it bernstein, or "burn stone." Clear colorless amber was considered the best material for rosary beads in the Middle Ages due to its smooth silky feel. Certain orders of knights controlled the trade and unauthorized possession of raw amber was illegal in most of Europe by the year 1400.

What Secrets Might Amber Hold?

Could a mosquito trapped in amber hold dinosaur DNA? Most amber just isn't old enough, celebrating maybe 25 to 50 million birthdays at most. The dinosaurs died out 65 million years ago at the end of the Cretaceous period. The Jurassic period was 144 million years ago. But in 1994, Dr Raul Cano of California Polytechnic state University at San Luis Obispo, a molecular biologist, reported in the British journal Nature that he and his colleagues had extracted DNA from a weevil that was trapped in amber 120 to 135 million years ago, when dinosaurs roamed the earth.

The amber, which was from the Lower Cretaceous period, was mined in the mountains of Lebanon south of Beirut by Aftim Acra, who has a collection of amber pieces containing 700 insects, including termites, moths, caterpillars, spiders, pseudoscorpions, and midges, which do suck blood. **top**

Turquoise



Ancient and yet always at the height of current fashion: that is Turquoise for you. Its brilliant sky-blue belongs to the all-time favourite trend colours in the world of fashion and jewellery.

In many cultures of the Old and New World this gemstone has for thousands of years been appreciated as a holy stone, a good-luck-charm or a talisman. It is a virtual "peoples' gemstone". The oldest proof for this lies in Egypt, where in tombs from the period around 3000 B.C. there were found artefacts set with Turquoise. In the ancient Persian Kingdom the sky-blue gemstones were originally worn around the neck or on the hand as protection to ward off unnatural death. If the stones changed their colour, there was an imminent danger for the wearer. However, in the meantime it has been uncovered that Turquoises may in fact change their colour, but this reaction is not necessarily an indication of

danger impending. The reason for the colour change is rather the influence of light, cosmetic products, dust or even the ph-value of the skin, which may all trigger off chemical responses.

Turquoise will protect and let you enjoy life

In earlier times Turquoises were sometimes thought responsible for the material wealth of their bearers. For example, Persian philosopher Al Kazwini wrote: "The hand wearing a Turquoise and using it as a sealing stone, will never be poor." Turquoises were loved as ornaments decorating turbans, often set in a border of pearls, in order to protect the wearer from the "evil eye".

They were used as talismans decorating daggers, scimitars or the horses' bridles. Turquoise came to Europe only during the time of the crusades. And from this period comes the name "Turquoise", meaning simply "Turkish stone".

Also in South, Middle and North America Turquoise has always been enjoying a special position among gemstones. For example, the ancient Aztecs in Northern Peru used to decorate their ceremonial masks with this stone, a "holy stone" in their belief. The North American Indians, who are still producing quite a few pieces of traditional silver jewellery set with Turquoises today, believed that the gemstone the colour of the sky would establish a direct connection between the sky and the lakes.

At all times in history Turquoise was worn as protection to ward off the influence of dark and evil powers. In former times thought to protect riders and horses from accidental falls, they are nowadays considered the ideal good-luck stones for aviators, flight staff and other professions which need special assistance to ward off accidents.

In the contemporary teachings of the Healing Power of Stones, wearing Turquoise is recommended to solve the problems caused by a depressed outlook on life. The bright and happy colour is supposed to lend self-confidence to subdued personalities, and it is also very popular as a token of friendship, since Turquoise is reputed to be responsible for faithfulness and reliable relationships.

The blue from copper, the green from iron

Turquoise is a copper aluminium phosphate achieving hardness six, thus considerably softer than quartz. It occurs naturally in all shades ranging from sky-blue to grey-green, usually in such locations where copper is hidden in the soil in high concentrations. However, only the best quality Turquoises show the real turquoise colour, which in ordinary stones is normally rather pale, blue-green or greenish. The blue colour is caused by copper, while the green colour is caused by iron or chromium. Often the material is veined or shows spots, which depending on the respective occurrence are brown, light grey or even black. These vivid, more or less regular patterns are called the spider web. The micro-crystals are really tiny and almost not discernible with the bare eye. Usually turquoise occurs as encrustation, in veins or as nodules or nuggets. The most famous occurrences are situated in the USA, Mexico, Israel, Iran, Afghanistan and China. The most beautiful of Turquoises in wonderful light blue are found in Northern Iran.

Turquoise is only rarely faceted. Usually it is shaped as cabochons or as beads, or even given a fancy cut.

Wax will lend Turquoise resistance

Turquoises are relatively soft gemstones and thus quite sensitive. Since the colour may also fade out in the course of wearing, today even the top qualities receive a waxing and subsequent hardening treatment. This procedure will make the sensitive gemstone sturdier. Turquoises which have been sealed with artificial resin are also available in large amounts and at competitive prices. Their colour appears fresh, and they show a high resistance. But one should be careful, because many of these stones have been additionally dipped in colour before being sealed, and this colouring is a kind of treatment which according to the rules set down by ICA must be indicated. In addition, there are also so-called "reconstructed" Turquoises, which have been assembled from pulverised Turquoise.



Due to their high sensitivity, then, almost all Turquoises have been treated to preserve their beauty, however, the kind of treatment differs considerably. It makes sense, then, that naturally beautiful stones which have simply been waxed or hardened with artificial resin achieve higher prices and are more valuable than such stones, which have received colour-enhancement. Valuable Turquoise jewellery should therefore best be purchased from a jeweller you can trust.

A piece of sky in your hands

The best Turquoise quality shows a clear and light sky-blue. The colour is highly appreciated, with or without the fine regular spider web lines. The quality decreases with the increase of green in colour, and the increase of spots and irregularities in the spider web.

Turquoise should be protected from cosmetics, heat and bright daylight. The gemstone does not really appreciate

sunbathing. It is recommended to clean it from time to time after wearing with a soft cloth. The colour of a Turquoise will make you feel happy and relaxed, for it combines the light blue of the sky with the invigorating green of the seas. It is so unique that the language took the stones' very name to describe it: Turquoise. So if you decide on a Turquoise, you will hold a piece of the sky in your hands. [top](#)

Coral



Coral makes jewellery of a very special fascinating charm: the perfect embodiment of mankind's yearning for summer, sun and faraway seas.

The name as such, however, is still puzzling to linguists. Some are convinced that the Greek word „korailon“ is the root, as this signifies the hard and calcareous skeleton of the Coral animal. Another possible source is “kura-halos”, meaning “mermaid”, and after all, the fine Coral branches sometimes remind us of the shape of people. Other experts favour the theory that the word comes from Hebrew, “goral”, the name for the stones used to cast an oracle, and in fact the Coral branches were used for casting oracles in former times in Palestine, Asia Minor and

the around the Mediterranean.

Corals live in depths between three to three thousand metres in the seas around Japan, Taiwan and the Malayan Archipelago, in the Red Sea, the Biscayan Gulf and around the Canary Islands, but also in north-eastern Australia and off the Midway Islands. In the Mediterranean there are Coral reefs all around the Tyrrhenian Sea, along the coastline of Sardinia and also off the shores of Tunisia and Algeria, Yugoslavia and Turkey.

When talking about Coral, the Coral reefs of the Pacific Ocean or of Australia are the first images which come to mind – reefs, banks, atolls which are some of Nature's most impressive miracles of beauty. But it is not these protected kinds of Coral which we are taking a closer look at here. For jewellery purposes, only Corals of the species e.g. “Corallium rubrum“ or “Corallium japonicum“ are being used.

Like pearls, Corals also belong to the organic jewellery material. It is an interesting phenomenon indeed that both are products of the element water, and are in fact chemically related. Both consist of over 90% carbonic lime. It is a virtual miracle that Nature manages use the same dull material to create fiery red Coral and to let grow beautiful pearls.

What are Corals?

Corals are produced by tiniest life forms, which settled in the depths of warm seas in vast colonies, long before our time. The Coral cnidarian is covered by a fleshy skin and secretes a calcareous substance, from which there are built the branchlike structures of the of the Coral stems. They can grow up to 40 cm in height, the thickness of the branches, however, hardly ever amounts to more than four cm. Only at the forks the structures are a little thicker. And from these parts the valuable raw material is gained which will then be turned into pieces of jewellery, large Coral balls or carved objects.

The fragile Coral trees are traditionally brought to the light of day from the depths of seas by means of dragnets. Since first class Coral, however, has become rather rare, today a more environment conscious approach is generally applied and divers will collect the fragile Coral branches. In the next step, the pieces are cleaned, sorted, and treated with saws, files and drills. Coral is hardly ever cut like other gemstones.

When unfinished, Coral appears dull and matted. Only after polishing it receives its beautiful gloss. Often Coral is porous, sometimes with fissures and thus of lower quality. To some extent, such qualities can be improved by application of coloured wax, which enhances the optical impression. Good quality Coral shows an even colouring and has no fissures, spots, bands or cavities. Since genuine untreated Coral is rare, the price it achieves is quite high. Therefore any bargain should be met with distrust. Top quality Coral jewellery is best bought in a well-reputed shop.

Colourful and sensitive world of Coral

Corals need not necessarily be red, although the name „Coral“ denotes a pinkish-red colour. Nature creates Coral in a wide range of shades and hues from red and white and blue to brown and black. Most coveted are the red shades, ranging from palest petal pink via salmon to deep velvety red. The height of fashion are currently black Coral and golden Coral, and extremely rare the blue variant. Especially valuable is also the white Coral with a slight blush of pink, the so-called “Angelskin Coral”. Other famous specimen are the deeply satiated red Japanese “Moro Coral”, pale pink “Boke” and the red “Sardena”.

Corals are not too sensitive, but with their hardness of only 3.5 they are considerably softer than any other gemstone material. Their beauty will suffer from inappropriate treatment. Cosmetic products, hot water and bright daylight are detrimental to their beauty. Coral jewellery should be carefully stored and be cleaned from time to time with a soft, wet cloth. Should the surface be scratched in spite of all care, a jeweller will be able to polish it up.

Attractive lightweights: Root and Foam Coral

Lighter in weight and less expensive than the Fine Coral are Root and Foam Coral. Root Corals are in fact a special Coral species – no root as such, but rather a special Coral bush. It is sometimes mixed up with Foam Coral. The latter, however, are those parts of Japanese Moro Coral which are embedded in sand or mud, and which are that part in-between the Coral foot and the Coral stem. This Foam Coral has been in the market for a long time, has a higher weight than Root Coral and is also somewhat higher priced. Both kinds are supplied in large quantities by China and Japan. Because of their size and relatively low weight they are popular wherever colour and volume are in demand at low prices.

Coral on the bare skin – irresistible

For ages now Coral has been used as jewellery and worshipped as a protective charm. Nowadays Coral is still used as a talisman in many cultures in order to ward off evil spirits. The modern teachings of healing with gemstones appreciate Coral for its positive effects. Coral is reported to soothe fears and tensions, and to encourage positive ways of living together.

The ancient belief in the protective and invigorating powers of Coral lives on in the traditional present of red Coral necklaces for small children. For young girls, Coral is also a popular choice as first piece of jewellery. But Coral is more than this: In a miraculous way it reflects the complexion of its wearer, and best displays its irresistible beauty when worn on the bare skin. Coral belongs to the most attractive of jewellery materials that can be imagined, and keeps on inspiring international jewellery designers to develop charming and unique designs.

[top](#)

Agate: Stripe up the Bands



No gemstone is more creatively striped by nature than agate, chalcedony quartz that forms in concentric layers in a wide variety of colors and textures. Each individual agate forms by filling a cavity in host rock. As a result, agate often is found as a round nodule, with concentric bands like the rings of a tree trunk. The bands sometimes look like eyes, sometimes fanciful scallops, or even a landscape with dendrite trees.

Agate was highly valued as a talisman or amulet in ancient times. It was said to quench thirst and protect from fevers. Persian magicians used agate to divert storms. A famous collection of two to four thousand agate bowls which was accumulated by Mithradates, king of Pontus, shows the enthusiasm with which agate was regarded. Agate bowls were also popular in the Byzantine Empire. Collecting agate bowls became common among European royalty during the Renaissance and many museums in Europe, including the Louvre, have spectacular examples.

The mining of agate in the Nahe River valley in Germany which was already documented in 1497 gave rise to the cutting center of Idar-Oberstein, Germany. Originally, the river was used to power the grinding wheels. When the Nahe agate deposit was exhausted in the nineteenth century, Idar cutters started to develop the agate deposits of Brazil, which also sparked exploration and discovery of Brazil's rich deposits of amethyst, citrine, tourmaline, topaz, and other gemstones.

Although the small town of Idar-Oberstein is still known for the finest agate carving in the world, today Idar imports a huge range of other gem materials from around the world for cutting and carving in Germany and Asia. Cameo master carvers and modern lapidary artists flourish along with rough dealers who scour the world for the latest gem discoveries for export. And the entire industry sprung from the taste for agate bowls and ornaments during the Renaissance! Maybe agate is also a powerful talisman for success in international trade!

[top](#)



Onyx: Black Magic

In jewelry design as in fashion, colors look crisper against a background of black and black and white always looks right. In fine jewelry, the black backdrop is often supplied by onyx, a chalcedony **quartz** with a fine texture and black color. Some onyx also displays white bands or ribbons against a black background. If the layers are even, this type of onyx can be carved into cameos.

Onyx was very popular with the ancient Greeks and Romans. The name comes from the Greek word *onux*, which means fingernail. The story is that one day frisky Cupid cut the divine fingernails of Venus with an arrowhead while she was sleeping. He left the clippings scattered on the sand and the fates turned them into stone so that no part of the heavenly body would ever perish. True, black isn't normally the color one associates with fingernails. (Did

Venus wear Vamp?) But in Greek times, almost all colors of chalcedony from fingernail white to dark brown and black were called onyx. Later, the Romans narrowed the term to refer to black and dark brown colors only.

Onyx which is reddish brown and white is known as sardonyx. Sardonyx was highly valued in Rome, especially for seals, because it was said to never stick to the wax. Roman General Publius Cornelius Scipio was known for wearing lots of sardonyx.

Black onyx especially shines when used a backdrop for color play. Its fine texture also makes it ideal for carving, making it a favored material for today's lapidary artists. In the pin by designer Susan Helmich above, a carved piece of onyx with threads of white provides a stunning backdrop for a flash of color. Onyx was often used as the perfect foil for carved rock crystal or the drop dead red of rubies in Art deco designs. It is also popular in marcasite jewelry. So if you would like to add a little black magic to your jewelry design, consider onyx. [top](#)



Bloodstone: the Martyr's Gem

Bloodstone, green jasper dotted with bright red spots of iron oxide, was treasured in ancient times and long served as the birthstone for March. This attractive chalcedony quartz is also known as Heliotrope because in ancient times polished stones were described as reflecting the sun: perhaps the appearance of the gem reminded the ancients of the red setting sun reflected in the ocean.

Medieval Christians often used bloodstone to carve scenes of the crucifixion and martyrs, leading it to also be dubbed martyr's stone. The legend of the origin of bloodstone says that it was first formed when some drops of Christ's blood fell and stained some jasper at the foot of the cross. A beautiful example of carved bloodstone with the seal of the German Emperor Rudolf II can be seen at the Louvre museum in Paris.

Even today, finely powdered bloodstone is used as a medicine and aphrodisiac in India. Perhaps that explains why today it is difficult to find fine specimens of bloodstone on the market. Bloodstone is mined in India, Australia, and the United States. [top](#)



Jasper: Landscape in Stone

Jasper is an ornamental rock composed mostly of chalcedony, microcrystalline quartz, in association with other minerals, which give it colorful bands and patterns. Jasper was a favorite gem in the ancient world, and the name jasper can be traced back in Hebrew, Assyrian, Persian, Greek, and Latin.



Jasper is often named according to its pattern: landscape jaspers, the most popular, offer a small worldscape in stone. Ribbon jasper, picture jasper, and orbicular jasper describe other designs. Jasper is found in many countries. It is sometimes used to create bowls and other objects and to adorn buildings, such as the Saint Wenceslas Chapel in Prague. [top](#)

Pearls: Very Cultured



Pearls are an organic gem, created when an oyster covers a foreign object with beautiful layers of nacre. Long ago, pearls were important financial assets, comparable in price to real estate, as thousands of oysters had to be searched for only one pearl. They were rare because they were created only by chance.

Today pearls are cultured by man: shell beads are placed inside an oyster and the oyster is returned to the water. When the pearls are later harvested, the oyster has covered the bead with layers of nacre. Most cultured pearls are produced in Japan. In the warmer waters of the South Pacific, larger oysters produce South Sea cultured pearls and Tahitian black cultured pearls, which are larger in size. Freshwater pearls are cultured in freshwater mussels, mostly in China.

The quality of pearls is judged by the orient, which is the soft iridescence caused by the



refraction of light by the layers of nacre, and luster, the reflectivity and shine of the surface. Fine pearls do not have any flaws or spots in the nacre: it has an even smooth texture. Other factors which affect value are the regularity of the shape, size, and color: rose tints are the most favored.

Cultured pearls and natural pearls can be distinguished from imitation pearls by a very simple test. Take the pearl and rub it (gently!) against the edge of a tooth. Cultured and natural pearls will feel slightly rough, like fine sandpaper, because of the texture of natural nacre. Imitations will feel as smooth as glass because the surface is molded or painted on a smooth bead. [top](#)



Diamond: Not Necessarily Colorless

It really is not our job here at the International Colored Gemstone Association to tell you all about diamonds. However, diamond *is* the modern birthstone for April, so we would like to take this opportunity to say a few words about fancy colored diamonds, which are more to our taste than the colorless type: more rare, more valuable, and way more colorful (although the colors can tend to be a little pale).

Fancy colored diamonds are not a mass-market product that are advertised everywhere and sold by the numbers. They have more personality than that. Fancy colored diamonds are almost as much fun as colored gemstones! Like colored gemstones, each one is different. They come in fabulously expensive pale pinks and blues, pale to bright yellows, oranges, greens, and all those brown colors that are now being called names like cognac and champagne. So, buy a diamond instead of a colored gemstone if you must, but at least consider a fancy colored diamond which will give your jewelry more character, more individuality, more color!



[top](#)

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