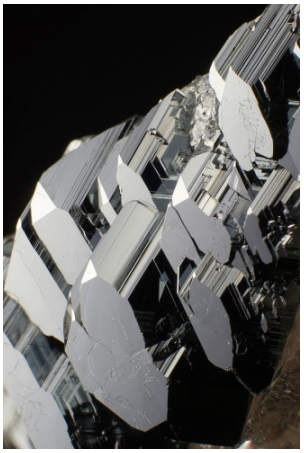
Stories and details behind the pictures of the exhibition "Design by Earth" in the Backstage Hotel, Zermatt 2019



1: "Array"

Picture Story: The Cavradi Gorge is one of the most famous places in the world for finding wonderful hematite crystals, but it is a place with vertical walls and hence accessible only to collectors being also good rock climbers. Knowing that these hematites might in closeup yield perfect graphical motives for my portfolio 'Geo Computer' I acquired this small but special piece demonstrating perfectly the patterns that form when hematite crystals grow in parallel.

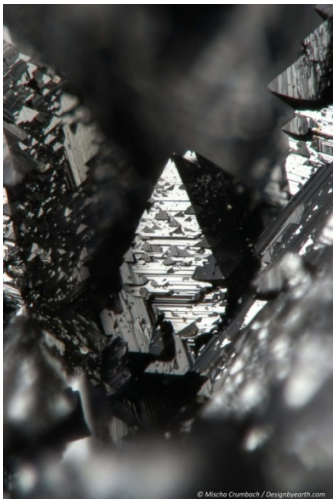
Description: Closeup of parallel hematite crystals sitting on smoky quartz. Field of view is 20 mm. It was found in an alpine fissure (a crack in the solid rock) in the Cavradi Gorge near Sedrun, Graubünden, Switzerland 🇨🇭.

2: Cloud

Story: A friend of mine and editor in chief of a well-known mineral magazine asked me to make a couple of pictures for an article about the rare mineral namibite. As a nice bycatch, one off the pieces sported nice deep yellow eulytine (a bismuth silicate) in both tris-tetrahedral crystals and also perfect spheres consisting of countless microcrystals. After the documentary job on the namibite was done I searched for more artistic motives.

I was immediately intrigued by an individual eulytine sphere, supported by a dark namibite sphere, and – best of all – floating on light blue clouds of chrysocolla.

Description: Closeup of yellow eulytine sphere next to black-green namibite sitting on light blue copper containing chrysocolla. Field of view is 2.7 mm. It was found in the Hechtsberg quarry in the Black Forest, Germany.

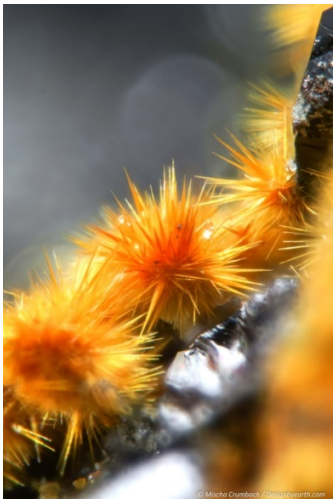


3: The Peak

Story: For this exhibition in Zermatt I wanted to create a couple of new, unpublished works. So I went into a part of my mineral collection that I didn't look at for more than 20 years – mixed micro minerals from all over the world that I acquired as a teenager.

This piece from the Kalahari manganese mines measures several centimetres in size and is full with zillions of highly reflecting, black hausmannite crystals with interesting surface structures. I knew there should be an interesting motive on it, but it took me hours and several attempts to finally find this tiny section suiting my purpose.

Description: Closeup of hausmannite crystals. Field of view is 0.9 mm. It was found in the N'Chwaning Mine, Kalahari, South Africa



4: Spores

Story: Another picture especially created for the exhibition in Zermatt and shown for the first time.

When screening the old part of my mineral collection I only looked at this piece because the mineral on picture is very rare and I was curious how good the piece was. When I saw this little group of tiny spiky balls they immediately reminded me on spores of some mould fungi.

Description: Closeup of orange karibibite crystals. Field of view is 1.3 mm. It was found in the Boca Rica claim, Sapucaia do Norte, Minas Gerais, Brazil

5: Viral

Picture Story: The surface of an asteroid? Virus bodies floating through an artery? Such thoughts came to my mind when realizing this surface detail of a hematite crystal. Normally hematite does not excite me too much as a collector of rare minerals. But when examining material from a several square kilometres large rare earth element mineralization which my friends and me discovered in the past years in the Swiss and Italian Alps, I got positively distracted by this surface features. Choosing the right section to be put on photo and create this otherworldly impression proved to be the biggest challenge, since the crystal was full of those.

Description: Surface detail of a hematite crystal with tiny skeletal hematite crystals sitting on top of it. Field of view is 1.9 mm. Found by me in a rare earth element mineralization in August 2015 at about 2,700 m sea level below Cima delle Piodelle on Alpe Veglia, Piedmont, Italy.

6: Liberty

Story: In 2016 a good friend of mine made the trip of his lifetime. He was able to help working the famous Adelaide Mine in Tasmania. This mine is known for its unbelievably beautiful crocoite crystals. A lead-chromate that forms orange-red needles and prisms that cover meter-sized cavities inside the rock. For a mineral collector walking those galleries is like being inside Ali Baba's cave. Well, one has to mention the hand sized, highly venomous Tasmanian cave spiders that love those galleries, too.

I was super happy that my friend made one of the pieces he found a present to me. Finding the most aesthetic arrangement amongst the hundreds of crystals needed some patience, but finally I saw this iconic combination.

Description: Closeup of orange crocoite crystals grown on grey gibbsite. Field of view is 4.9 mm. It was found in 2016 by a good friend of mine in the Adelaide Mine near Dundas, Tasmania.

7: Dark Flower

Story: Native silver is found in nature often in the form of wires. In the Lengenbach quarry in Binntal, Switzerland, it is pretty rare, and when this piece, which is exceptional for the locality, was found by a Swiss collector in 2013 I was directly asked to take a picture – time was of the essence! Why? Because like, e.g., silver cutlery, also silver found in nature can quickly react with sulphur that often is present in low amounts in the air (due to pollution) and blacken quickly. Luckily I was quick enough and I got a clean shot of the fresh piece. Only 5 months later the piece looked completely different, and I got it back again to take the 'after' picture. Both pictures are published in the latest book on minerals of the Binn valley. In addition, I took the present closeup, revealing that the 'black stuff' on Silver can actually be beautiful in itself: This silver sulfide is called acanthite and can form blade-like crystals when growing 'from the air'. Grown on this silver wire it looks like some thorny plant.

Description: Closeup of acanthite needles grown on a wire of native silver. Field of view is 1.6 mm. It was found in July 2013 at about 1,700 m sea level on the dump of the Lengenbach quarry in the Binn valley in Valais, Switzerland 🇨🇭.

8: Fluorescence

Story: For the latest mineralogical book on the Binn valley in Valais, Switzerland I contributed to a chapter about the Uranium minerals that are found there since they can be very beautiful but are little-known. Some of these minerals show spectacular fluorescence in ultra violet light, so I made one pair of pictures of this very nice metaautunite specimen (a calcium uranium phosphate) – one in visible light, one in UV. The latter could perfectly be a decoration in some psytrance club – mother earth can be so groovy ;-)

Description: Closeup of a group of metaautunite crystals under short-wave UV-light causing strong yellow fluorescence. Field of view is 10.4 mm. Found by a good friend of mine in September 2009 at about 2,800 m sea level in an alpine fissure (a crack in the rock) at Gischi glacier, Binn valley in Valais, Switzerland 🇨🇭.

9: Into the Unknown

Story: Yet another work created especially for the Zermatt exhibition.

When working with the present piece I realized that I had to do something special with it. Rather than putting an interesting structure or isolated crystal in the centre of the picture I chose to place basically nothing in there.

Are you, too, curious what is awaiting us behind these walls, in the dark background?

Description: Closeup of manganite crystals that grow on a larger stalactitic structure of another mineral. Field of view is 8.9 mm. It was found in the Marienberg mine, Westerwald, Germany

10: Deep Space

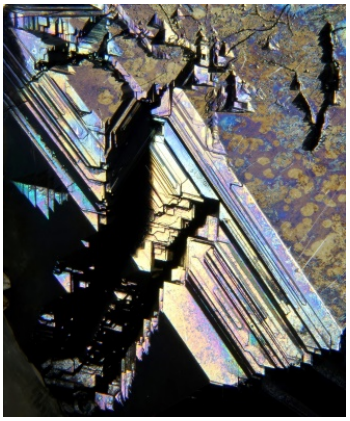
Story: Alpine fluorite is famous for its colours – the pink version is the most sought after. In the gneiss rocks of the southern parts of Binn valley in Switzerland also green, colourless or rarely blue fluorite can be found. Interestingly, the globally most frequent colour – violet – seems to be extremely rare there. This piece here is almost black when not lit from behind. The intense colour is caused by natural radioactivity of the host rock. To document this rare piece for a recent book on Binntal minerals I chose to use only backlighting, making it possible to look deep inside the crystal – or is it a nebula in deep space?

Description: Closeup of a fluorite crystal. Field of view is 32 mm. Found by a good friend of mine in September 2006 at about 2,800 m sea level in an alpine fissure (crack in the rock) at Gischi glacier in the Binn valley in Valais, Switzerland 🇨🇭.

11: Wonderland

Story: These frail and somehow airy deep blue crystal tufts made me think of some fairy tale. I would not be surprised if an elf peered out behind one of them, trying to see who is disturbing his dreamscape. The scientific description is much drier – the mineral is a copper aluminium carbonate sulfate hydroxide, with the enormous name of carbonatecyanotrichite, one of the longer ones I am aware of.

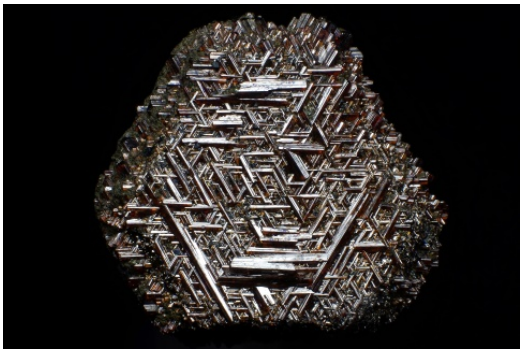
Description: Closeup of carbonatecyanotrichite crystal balls. Field of view is 2.5 mm. It was found in the Salsigne Mine, Dept. Aude in France.



12: Science Fiction

Picture Story: Shooting pictures for a mineralogical book on the Binn valley in Switzerland I also made a full view of a nice 8 mm magnetite crystal I once found. When rotating the crystal away from the right light for the optimal full view shot, suddenly one face started to shine in rainbow colours and the fine graphical surface structures came into reflection. So I started to make another picture, completely abstract and not for mineral documentation, trying to make as much use of the natural graphics as possible.

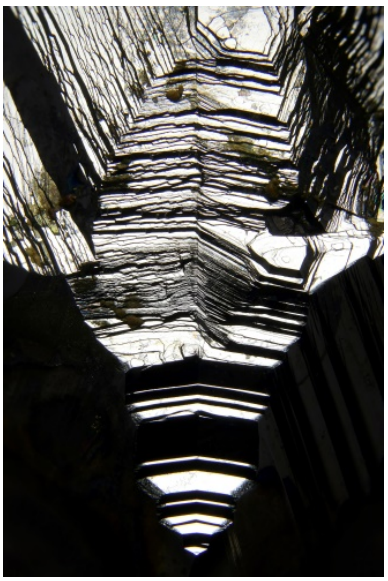
Description: Surface detail of a magnetite crystal with skeletal edge growth and possibly also dissolution patterns, combined with an iridescent surface. Field of view is 4.0 mm. Found by me in an alpine fissure (a crack in the solid rock) in June 2000 at about 2,200 m sea level at the locality Riggi in the Binn valley in Valais, Switzerland .



13: The Matrix

Picture Story: One perfect example of the computer graphics like patterns that nature generated with some mineral formations. With the lighting used I want to stress the rigor of the crystallographic laws the structure had to follow while growing. There is no option to escape this pattern. I found the piece lying in the sand in front of an alpine fissure I had been working on on a previous day. The rain had washed it clean from the dirt and it was strongly reflecting the bright sunlight.

Description: Full view of a previous ilmenite crystal of 14 mm that has been replaced by rutile needles – a so called pseudomorphosis. The rutile needles themselves are twinned at a 120° angle forming a regular 3-fold lattice. Found by me in an alpine fissure (a crack in the solid rock) in June 2000 at about 2,100 m sea level at the locality Gorb in the Binn valley in Valais, Switzerland .



14: Tron

Picture Story: Formed about 15-20 million years ago as a consequence of Africa colliding with Europe, this hematite crystal reminds me very much of the computer-generated patterns that were used in the 'Tron' movies. I aimed at creating a dark and powerful atmosphere to reflect that seemingly hopeless situation of being captured in digital space.

Description: Surface detail of a twinned hematite crystal with alternating crystal faces caused by edge-dominated growth. The twin plane is visible as the vertical line in the middle. Field of view is 8.7 mm. Found by me in an alpine fissure (a crack in the solid rock) in August 1994 at about 2,600 m sea level in Mättital, a side valley of the Binn valley in Valais, Switzerland .

15: Passion

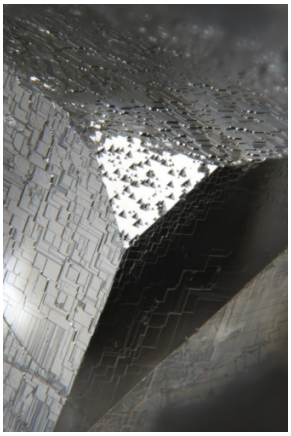
Story: Red is the colour of passion. Embedded in this is a silvery star – representing hope? This inspired me to create a photograph which almost looks like a painting. I deliberately chose the light in a way that it appears almost 2D. The silverish star is lengenbachite, a very rare silver copper lead arsenic sulfosalt occurring only in two regions of the world. I found this piece at the so-called type locality – the Lengenbach quarry in the Binn valley, Switzerland, where the mineral was discovered for the first time. It is sitting on a blood red realgar crystal (arsenic sulfide), a combination that is very rare.

Description: Closeup of a lengenbachite crystal on a realgar crystal. Field of view is 2.4 mm. Found by me in July 1997 at about 1,700 m sea level on the dump of the Lengenbach quarry in the Binn valley in Valais, Switzerland .

16: Elves' Fern

Story: For the Munich Show 2018 – the second most important mineral show world wide – I was asked to include pictures of mine in the concept of the special mineral exhibition. The 2017 topic was 'elements'. So gold had to be of course part of the pictures. It was immediately clear to me that I wanted to do some pictures extra for the show – namely of the nicest so called 'fern-gold' that is known. And those pieces come from a tiny, rocky peninsula nearby Torquay in Devon, UK. The name of the place is Hopes Nose. The gold occurs there in small calcite veins in the limestone, directly at the sea shore. Not only the fern-leave like shape of the gold crystals is unique. It also can contain high amounts of the rare element palladium. Collecting there is meanwhile strictly prohibited, but I was happy to get a few samples for my shooting from a good friend of mine. I especially liked this assembly. One can see the grey limestone at the base and some white calcite in the upper part of the picture.

Description: Section of a sample with fern leave like gold crystals on limestone. Field of view is 9.3 mm. It was found at Hopes Nose, Torquay, Devon, UK.



17: Trinity

Picture Story: Dolomite is one of the most common minerals on earth. It forms whole series of rock. For example, it's the host rock of the world famous Lengenbach quarry in Binntal, Switzerland. In small cavities of the dolomite rock the mineral forms little transparent crystals that are often overlooked. But their beauty lies in their surfaces – when brought into reflection the interplay of rectangular and triangular structures is just stunning.

Description: Surface detail of a twinned dolomite crystal, being structured by growth or etch figures. Field of view is 1.4 mm. Found by me in August 1996 at about 1,700 m sea level on the dump of the Lengenbach quarry in the Binn valley in Valais, Switzerland .

18: Space City

Story: That's another picture created especially for the Zermatt exhibition.

The tiny box around this piece had written on it "ideal for picture". 25 years back when I acquired the piece I was far from being able to manage such a picture, but now I think I was right to mark the piece already then …

This is a perfect example of so called dendritic growth. These bindheimite crystals build a 3D lattice, like a micro antenna system. This mineral was not formed 100% by mother earth alone. It formed on a dump of an industrial product: slags from zinc smelting reacted with rain and ground water and several interesting minerals developed within a couple of years. Extremely fast compared to the millions of years that it took to form, e.g., a quartz crystal in the alps.

Description: Closeup of bindheimite crystals. Field of view is 2.1 mm. It was found on the dump of the Genna zinc smelter, Letmathe, Germany.

19: Secret Cave

Story: Also this picture was created especially for the Zermatt exhibition. When scanning my old material I realized some samples from the famous Laurion silver/copper/lead mines in Attica, Greece. Mining there started more than 5000 years ago! Little caves were dug just below the surface to extract the ore.

For this picture I aimed at reproducing the impression of a cave in which some organism existed for ages in the dark, and now for the first time light is shining on them.

Description: Closeup of plush balls of agardite-(Y) needles. Field of view is 3.4 mm. It was found in Laurion, Greece

20: Diamond

Story: A Mandala coming from triangular heaven? No, just a natural un-cut diamond crystal. Diamonds crystallize in the cubic system, but I aimed at showing the threefold symmetry along the so called 111-axis. That is like putting a cube onto one of its corners and then looking at it from the top. This crystal is not a cube but forms an octahedron, so in the described orientation one does look down onto one of the octahedron's faces which is lying flat in the picture plane.

Each octahedron face is a perfectly symmetric triangle. In this case the threefold symmetry along this crystal axis is nicely underlined by the little triangles on the octahedron's surface that have developed during the growth of the crystal.

Description: View onto an octahedron face of a 4 mm natural diamond crystal from South Africa.