

SASCHA HERRMANN - PORTFOLIO 02/23

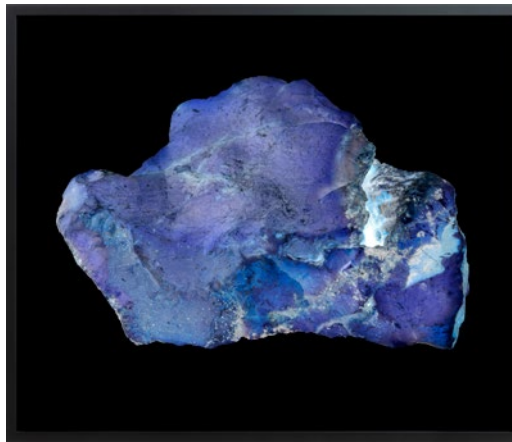
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GÖMBÖC, 2022, Photogram, 40 x 30 cm, wooden framed 63 x 53 cm

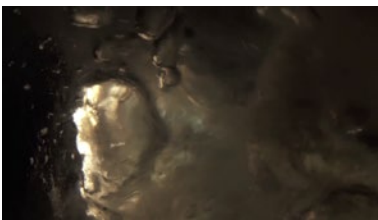
A series of photograms made in the laboratory with a transparent Gömböc as it finds its way to a stable equilibrium position.

The Gömböc is the first known physical example of a class of convex three-dimensional homogeneous bodies which, when at rest on a flat surface, have only one stable and one unstable equilibrium point. The existence of this class was conjectured by Russian mathematician Vladimir Arnold in 1995 and proved by Hungarian scientists Gábor Domokos and Péter Várkonyi in 2006 by first constructing a mathematical example and then a physical example. Copies of the Gömböc have been donated to institutions and museums, and the largest example was presented at the 2010 World Expo in Shanghai, China.



REGENBOGEN MONDSTEIN + SMARAGD-CALCIT + GRÜNER OPAL + KATZENSILBER,
2021, C-Prints, 62 × 51,8 cm, in aluminium frame 63 × 53 cm

A series of framed C-prints is the result of a spectral analysis in which different minerals were transmitted with different light sources. They all have a history of properties and attributions. There's muscovite, a silvery glowing stone also called cat's silver because it was sold as silver in the Middle Ages. Or double spar, which can polarize light and is used in numerous optical processes. Kyanite and opal, smaragd and a moonstone, they are all set in front of a black background, because actually these images are negatives. Often, the features of the stones only reveal themselves under light: they glow, they reflect and divide, they glimmer or are iridescent. Through a combination of microscopy techniques, photographic contact printing, and short and long wavelength UV light, the refractive properties of the rocks, such as opalescence or fluorescence, become visible.



GLIMMER, 2021

Video- und Soundinstallation, variable dimensions

Magnesium burns under water at 3000° Celsius in an exothermic reaction that succeeds in splitting the molecules into their components hydrogen and oxygen. If you were to look into this flame, you would go blind or at least suffer permanent damage. This reaction was filmed for the video work. Afterwards, nothing remains except a white powder called magnesia.

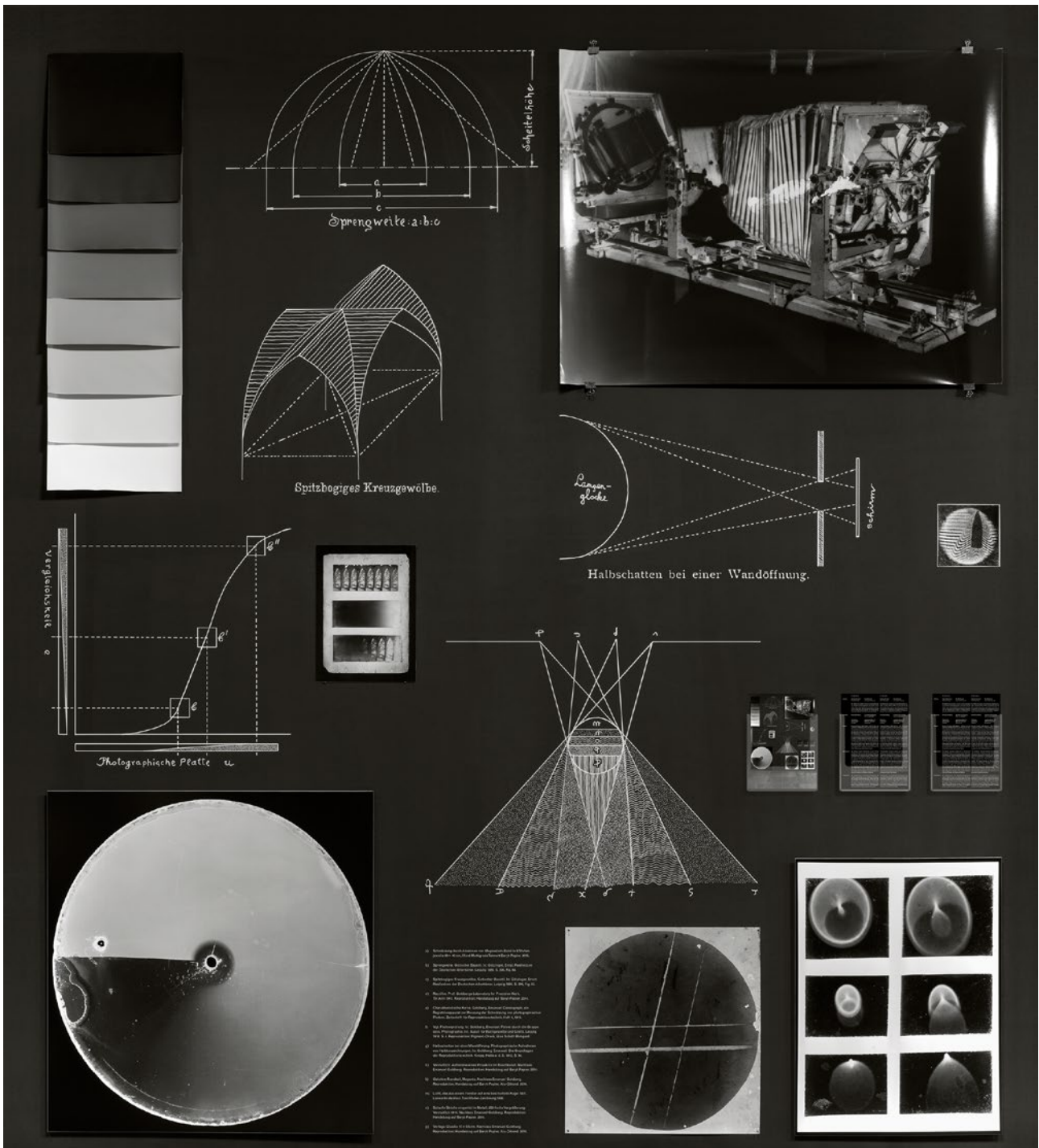
The screen of the work rests on a pile of white cement, which is also produced with the help of burning. Rivers are dredged, quartz sand is transported a long way, finally burned at extremely high temperatures and processed into concrete, screed, mortar, plaster and cement.

If one moves around the video work through the room, a deep sound can be heard. One immediately thinks of constructed music with a minimalist range of tension, but what at first seems like a melody swelling on and off is actually a constant sound. The changes are contingent and depend solely on the movements of the viewer: Sound, not music. In some places there is silence, while in other corners it is almost unbearably loud. The sound is a 63 hertz sine wave, which causes a phase cancellation to occur between the two speakers. The sound - which travels in wave form - comes out of the speakers offset, and in some places the valley and crest coincide. They cancel each other out, creating a zero point. The result is silence.



SAMMLUNG MATHEMATISCHER LEHRMODELLE, 2020
C-Print in metal frame, each 60 x 60 cm

Photogrammetric reproduction of the collection of mathematical teaching models at the Institute of Mathematics of MLU Halle-Wittenberg. The collection consists of more than 500 very finely crafted plaster, paper and metal objects, which function as didactic illustrations of the teaching of ideas of pure mathematics. These teaching objects were made more than 100 years ago by the family business of the artist Martin Schilling in Leipzig. They represent ideal, fictitious surfaces, forms and bodies, which without those models would only exist as written down ideas. The photographic work examines the matter of the objects, only through them the underlying formula is proven and finds its place in the real world.



DIE FRAU MIT DER KINAMO, 2019
 Barytpaper and chalk on MDF, 330 x 300 cm

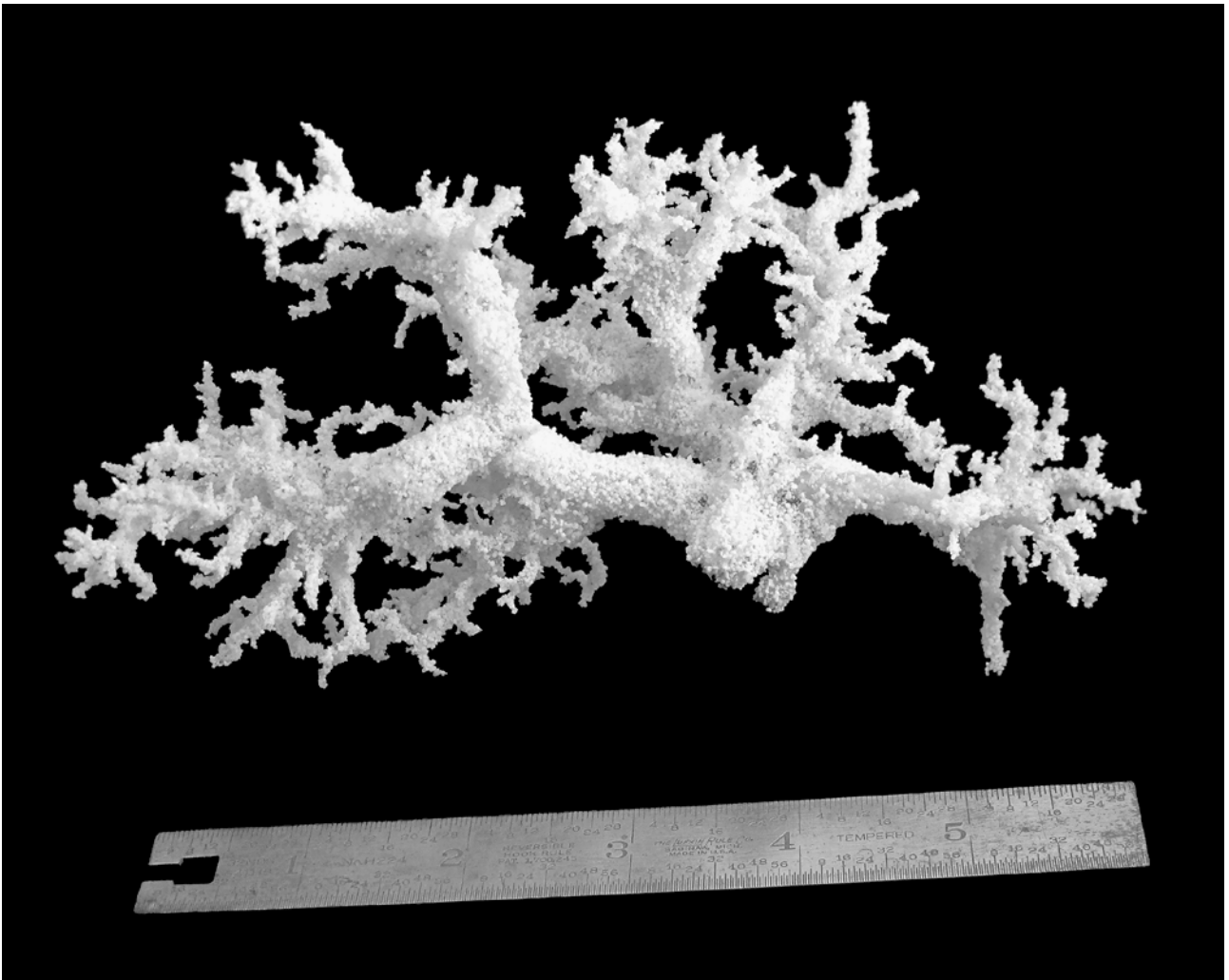
As part of the artist group Weltformat, I came across Emanuel Goldberg's estate in Tel Aviv in 2013 and have since been working to artistically explore his scholarly achievements. KG Weltformat understands its own artistic production as part of and a critical extension of the Goldberg archive. For the exhibition in the foyer of the German Historical Museum, the panel shown above was created with a dialogue between laborative reproductions of photographic originals from Goldberg's estate and schematic-drawing representations of the technical conditions of photography. The findings were placed in relation to questions of statics in the Gothic period and the earliest research on the subject of light.



DEVILS HILL, 2018

Emulsified baryte mineral under polarized plexiglass, 41 x 41 x 111 cm

The sculpture is made of a baryte mineral that is coated with a photographic emulsion. Exposed on the stone is a depiction of a historical listening station on the Teufelsberg in Berlin. The mineral lies under a Plexiglas hood with polarizing properties that enable, depending on the angle, diverse opaque and opal views.



LIGHT WHITE VITRIFIED, 2018

Silkscreen on Chromolux in a wooden frame, 30 x 24 cm

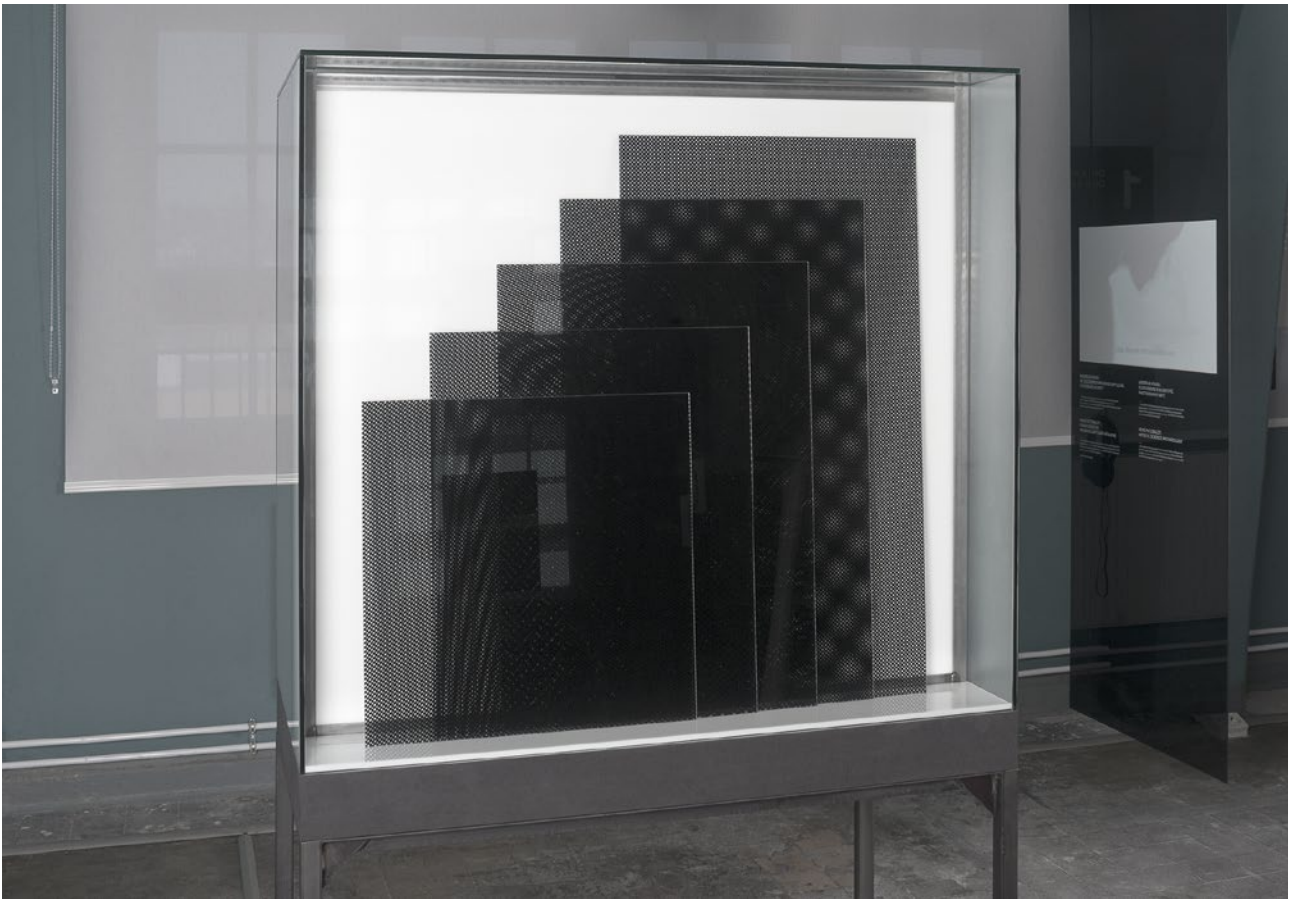
The depiction shows a synthetic fulgurite, a petrification of electricity produced in a laboratory. Natural fulgurites are often found on beaches and appear when the finest grains of glass in sand melt into one another as a result of a lightning strike, petrifying and preserving the path of the light. The silkscreen is printed on a highly reflective paper, resulting in different contrast ratios depending on how it is viewed.



RECEIVE RECORD, 2018

Installation, full HD video, 16-bit sound, variable dimensions

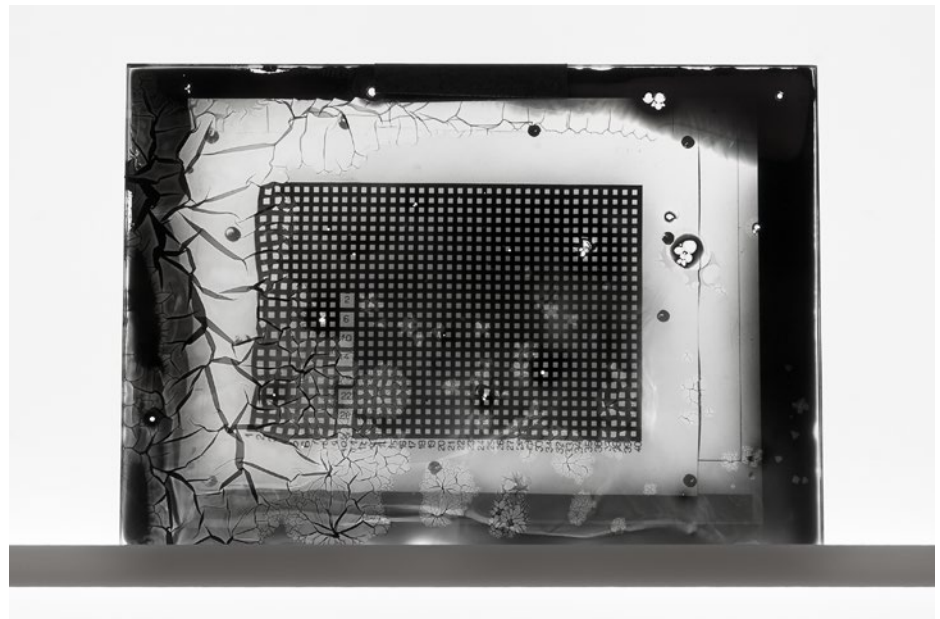
The installation attempts to set auroras to sound with a theremin. The three features – luminosity, colour and form – are converted into tones and sounds. The volume of the theremin was matched to the measured Kp value, to the luminosity of the auroras, so that a weak light sounds quiet. The individual wave lengths of the spectral colours was transferred to Hertz frequencies, thereby generating different pitches. The diverse forms were differentiated by means of tremolo and vibrato. In this way, one of the most tremendous visual natural phenomena is translated numerically into music.



DIORAMA (MOIRÉ), 2017

Vitrine, 5 Screen prints on white glass in different formats, 110 x 195 x 60 cm

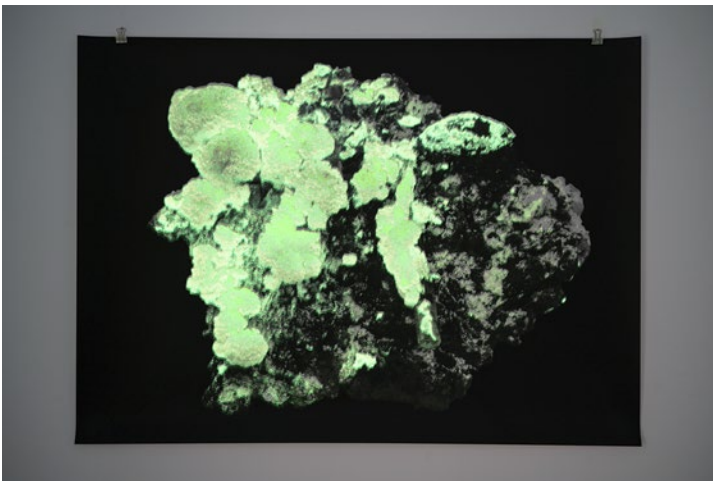
The showcase as a diorama in which a cognitive as well as ontological perspective on Emanuel Goldberg's research can be taken. Original artifacts and reproductions are arranged with comparative aesthetic studies in light boxes. Goldberg's research on the moiré effect in halftone printing is examined here. Questions about the nature of an image, the metaphysical conditions of seeing, or the indexicality of technical images shine forth. The sides of the vitrines are treated with epoxy resin and interference pigments. A visual reflection on the principles of object and medium.



PRÄPOSITION, 2017

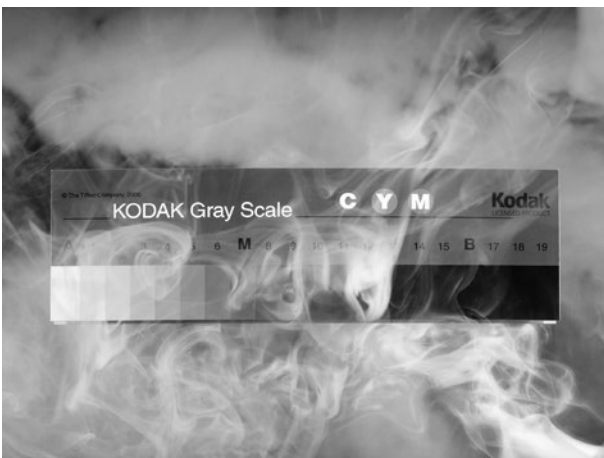
84 Reproductions enlarged on emulsified white glass in the formats 12,7 × 17,8 and 15 × 15 cm, LED-Lightbox with RGB control in 3.000 – 5.000 Kelvin, 300 × 164 × 15 cm

From the extensive stock of photographic images of Emanuel Goldberg, as well as his bequeathed glass slides and paper prints, reproductions were made according to technical and content-related criteria. The order and arrangement followed the principles of chronology and coherence. Thus the motifs offer both an overview of the scientific work and the aesthetic, optogrammatic memory of Goldberg. The self-emulsified glass slides were presented on a light box that barely noticeably alternated between the Kelvin values of artificial light and daylight.



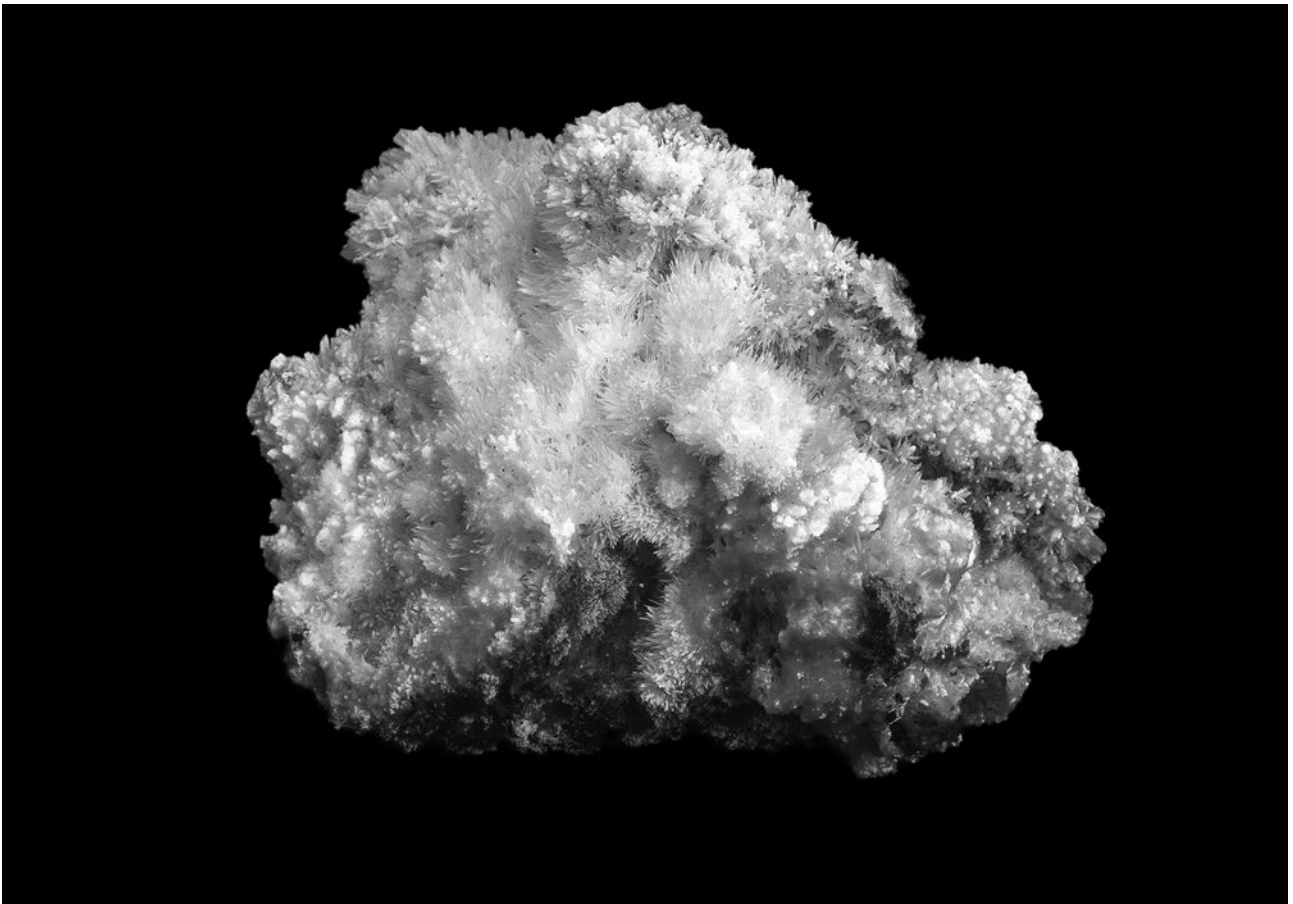
FLUORIT COLOR (254 + 365 NM), 2018
3-color screen print on Chromolux, 70 × 97 cm

A photographic reproduction of fluorite rock. The stone is part of the mineralogical collection of the Technical University Bergakademie Freiberg and is presented in Freudenstein Castle under short- and long-wave UV light. Fluorite phosphorizes and fluoresces under the influence of ultra-violet light. Fluorescence and phosphorescence cannot be reproduced photographically, so monochrome images of the specific brightness of each state were taken and printed as three images on top of each other, in black, neon pink and phosphor green. The print is presented with an interval-switched UV lamp that makes the individual states visible again.



GREYCARD (DANES PICTA, KODAK, PROSPEC), 2016
 Offset-Prints, each 34 x 25,5 cm

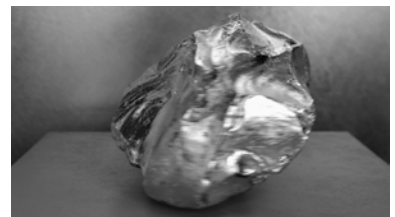
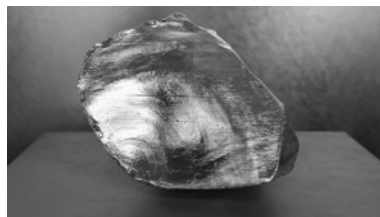
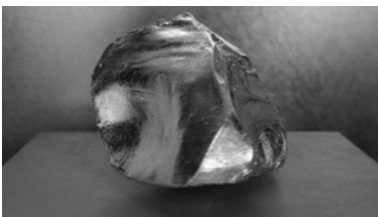
The paper deals with the idea of the gray card, usually used to determine the average gray of a photograph. To produce these gray cards, one must print on a non-reflective paper support, a gray precisely measured in RGB values from 119 point in each channel. This procedure can also be applied to the photography of, for example, a sky. The work refers to the fact that on average 60% of the earth's surface is covered by clouds.



NOVACEKIT (SW-UV), 2016

Duplex Offset-Print on Chromolux Silver, ca. 100 x 70 cm

The photographic reproduction of a fluorescent Novacekite rock was produced under UV light in the mineral exhibition at Freudenstein Castle in Freiberg. Later, the very finely screened image was printed on a silver-coated paper, resulting in mirroring effects in the half-tones of the motif and the ambient light significantly influencing the perception.



OBSIDIAN MIRRORED (AFTER CARL BRAUN), 2015
Levitating, silver-plated 3D print, ca. 22 x 22 x 25 cm

The so-called mirror nephoscope, an instrument for viewing and measuring the heavens, was made from obsidian stone. The sculpture is a replica of an original obsidian that was scanned and printed with photographic techniques. The silver plating points to the history of the material. The stone hovering in midair makes the sculpture into a hybrid between cloud and stone.



SOLARIZED CYANOTYPES, 2015

Cyanotypes on handmade paper in wooden frame, each 127,5 × 90,5 cm

Solarization is an old photographic error in which the so-called nucleation of the silver decreases again due to strong overexposure of photographic material and the tonal values of the photograph are reversed. By double copying in the cyanotypic process, it is possible to make the image of a sky appear tonally correct again, although on closer inspection all the clouds are imaged negatively.