

# Vitamin C:

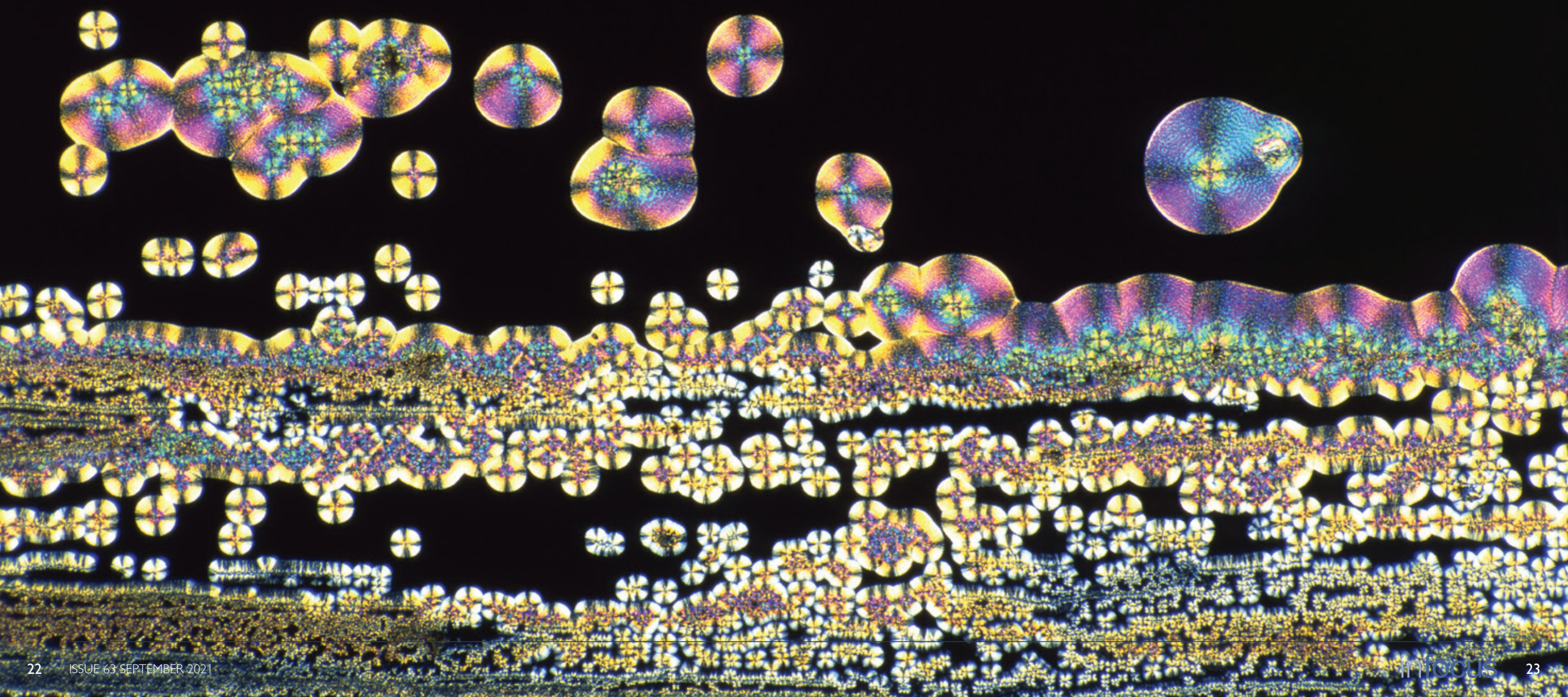
## Shapes and colours

Karl Deckart

**Vitamin C** – otherwise known as ascorbic acid – is an essential nutrient involved in the repair of tissue and effective immune system function.

Perhaps most famous for its role in staving off scurvy among 18th Century sailors, it is still taken as a crucial dietary supplement across the world. And while it might not be effective in preventing the common cold, some researchers have claimed it can at least help reduce the severity and longevity of symptoms.

Dissolved in water, it also looks pretty amazing under the microscope, as micro-photographer Karl Deckart shows here.





### Karl says:

"I buy Vitamin C in crystalline form at the pharmacy and dissolve it in distilled water. The dissolution takes place relatively quickly but is temperature dependent.

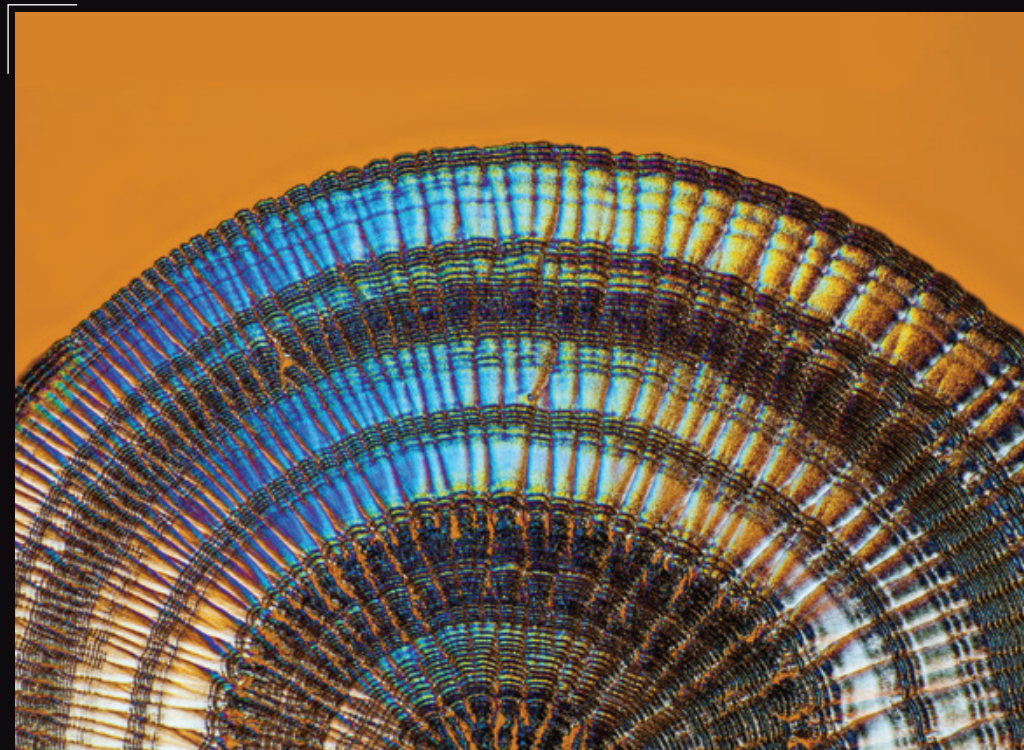
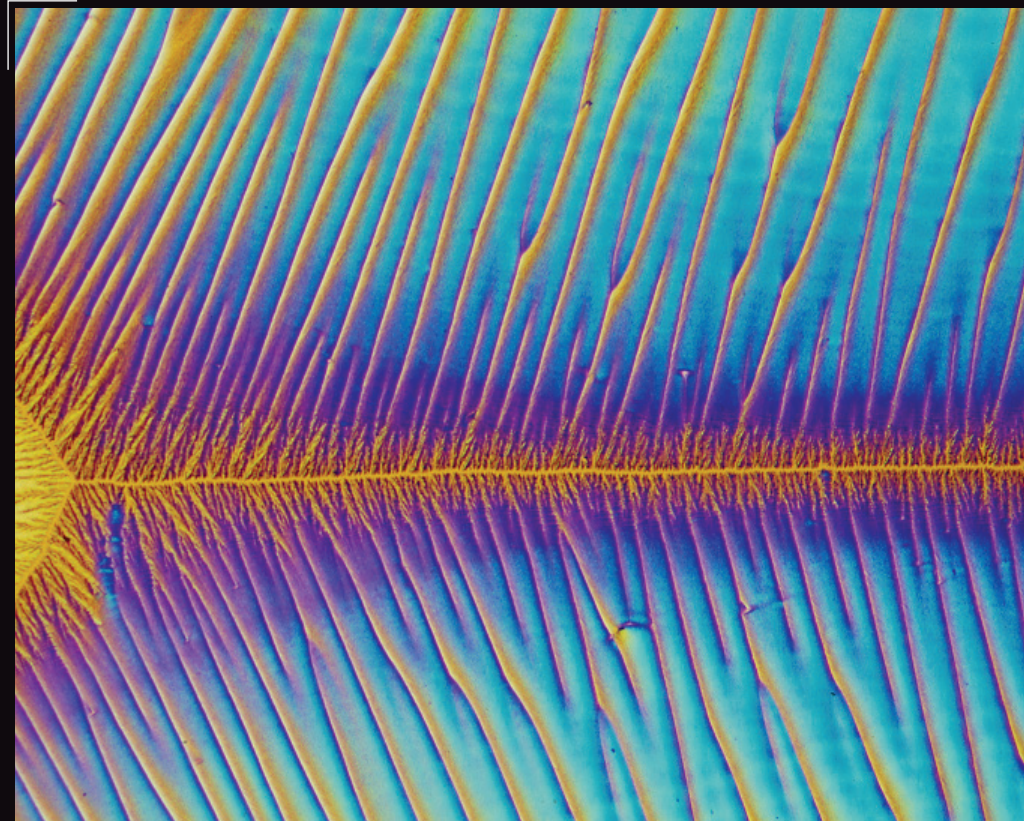
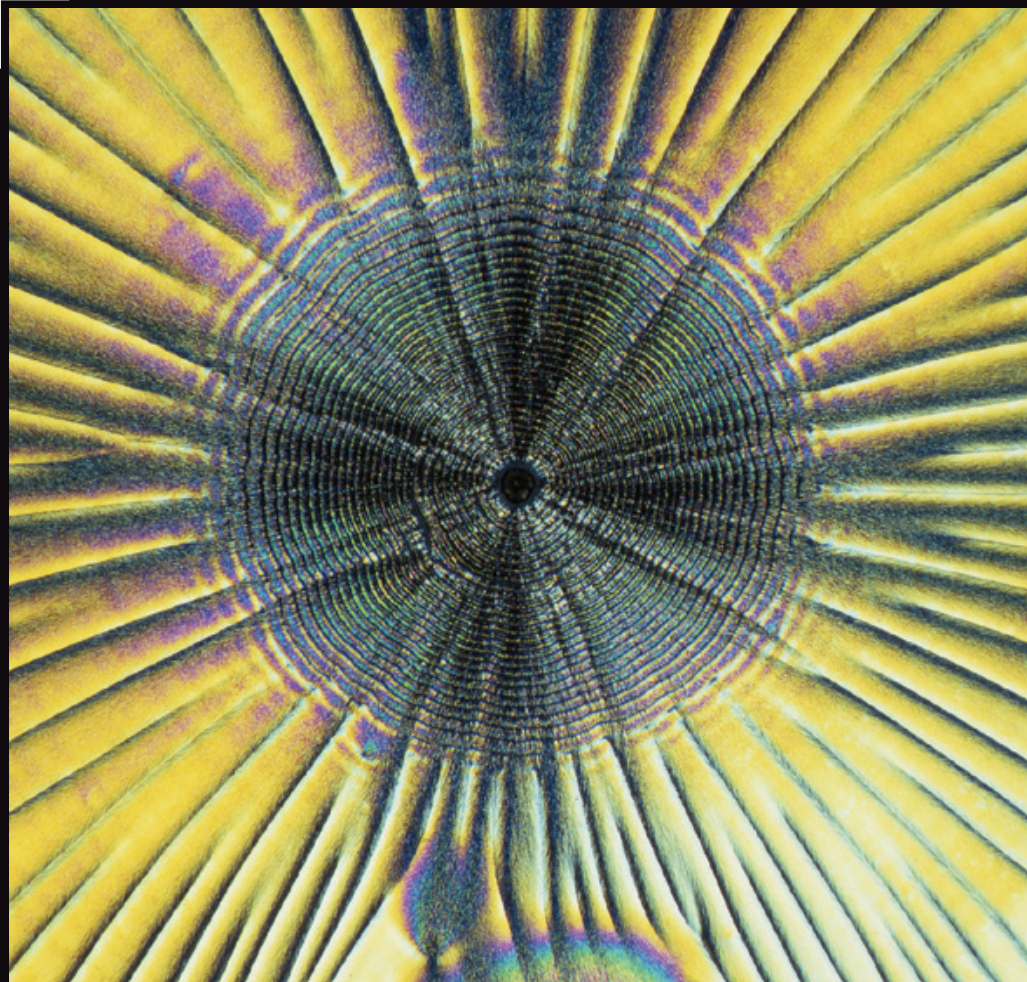
"I then take a carrier glass - previously cleaned with simple detergent - and pour some liquefied Vitamin C onto it. The finest remnants of dishwashing detergent distribute the liquefied vitamin C evenly on the carrier glass. Carrier glass is used because it is a transmitted light object.

"Prepared in this way, it can be viewed under the microscope. At first, however, with little success, as the preparation simply looks watery. Only through transmitted light illumination with polarised light,

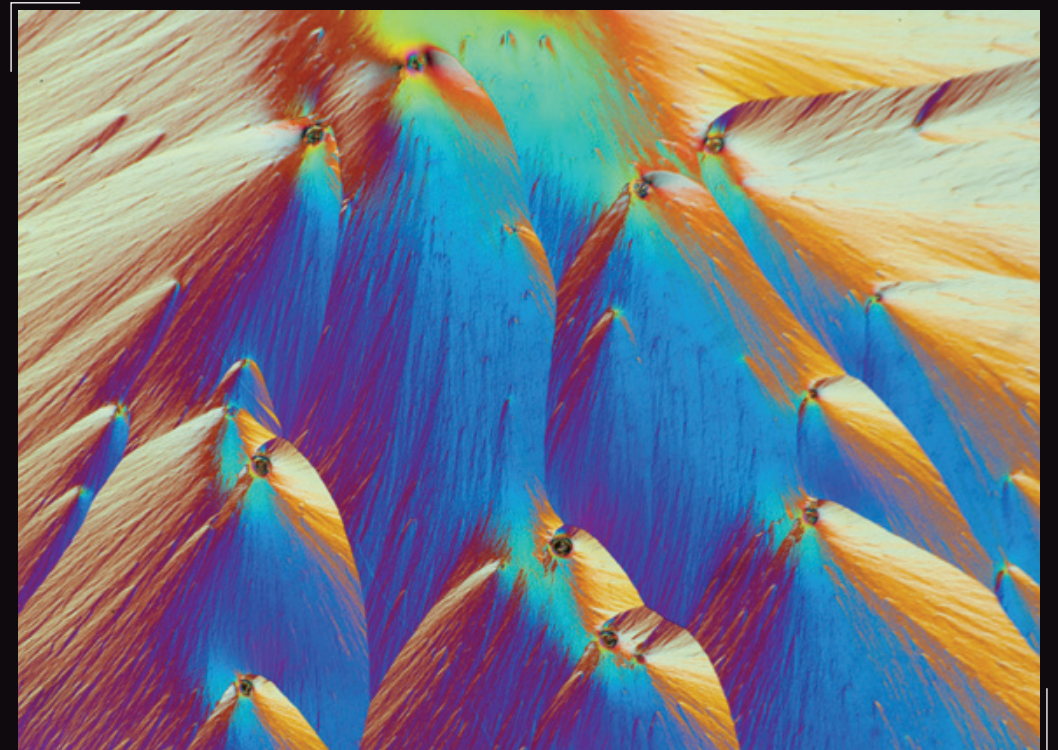
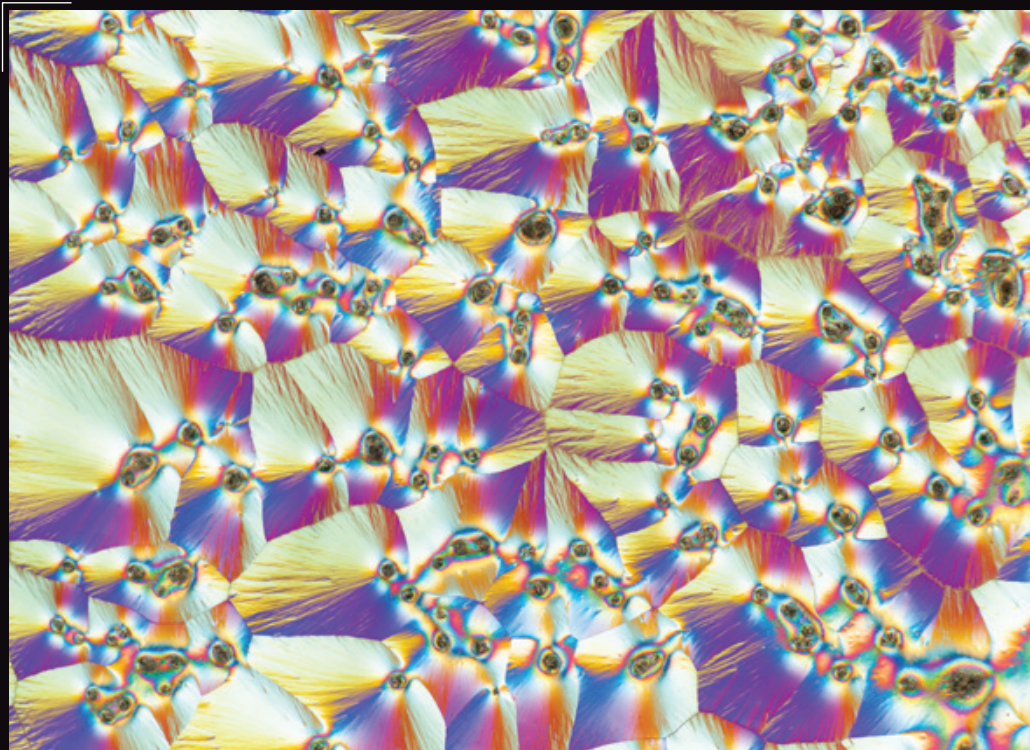
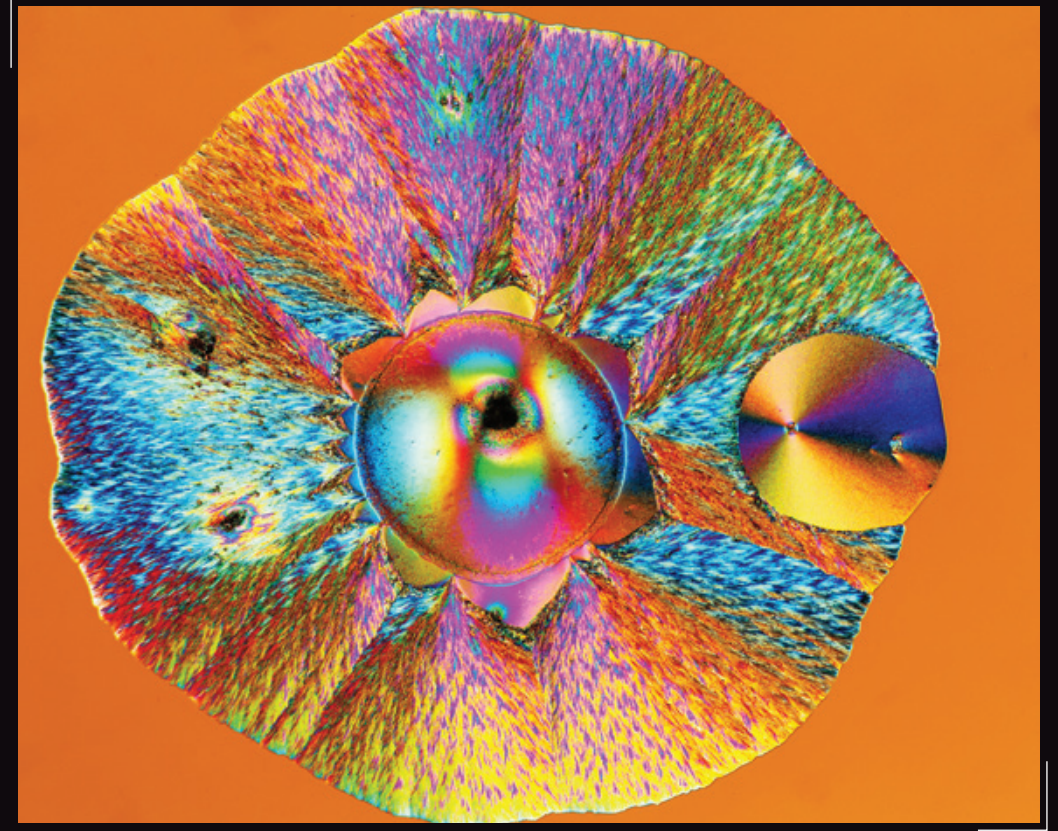
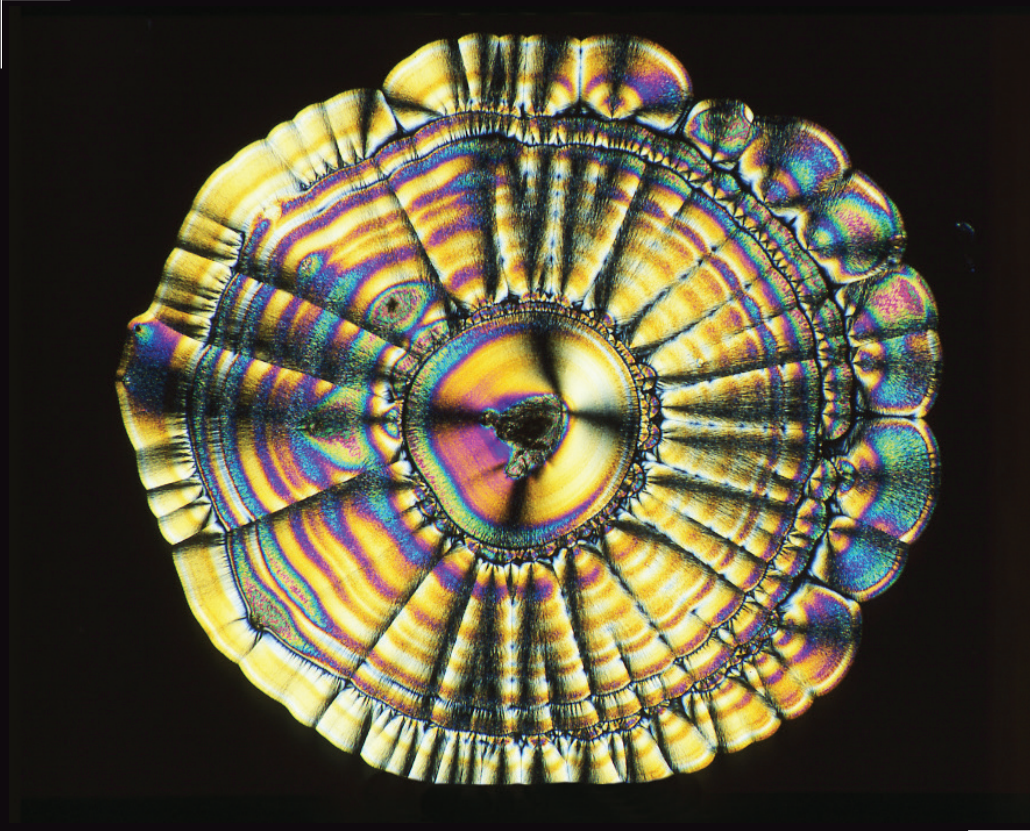
and with the interaction with the analyser do the colours emerge.

"Depending on the mixing ratio of water and the vitamin, the coloured crystals form quite quickly and continue to grow just as quickly. A motif then also quickly grows out over the edge of the image. Only after the carrier glass is completely covered with coloured patterns, can one start to rotate the polarising filter and analyser in order to take advantage of their colour spectrum.

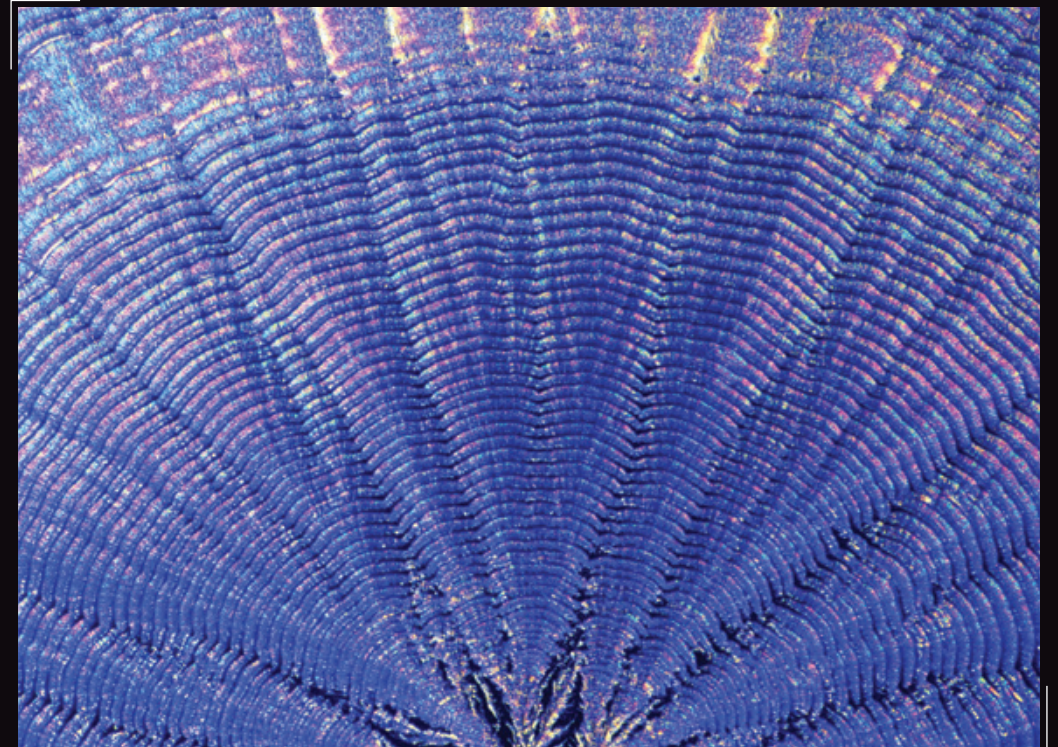
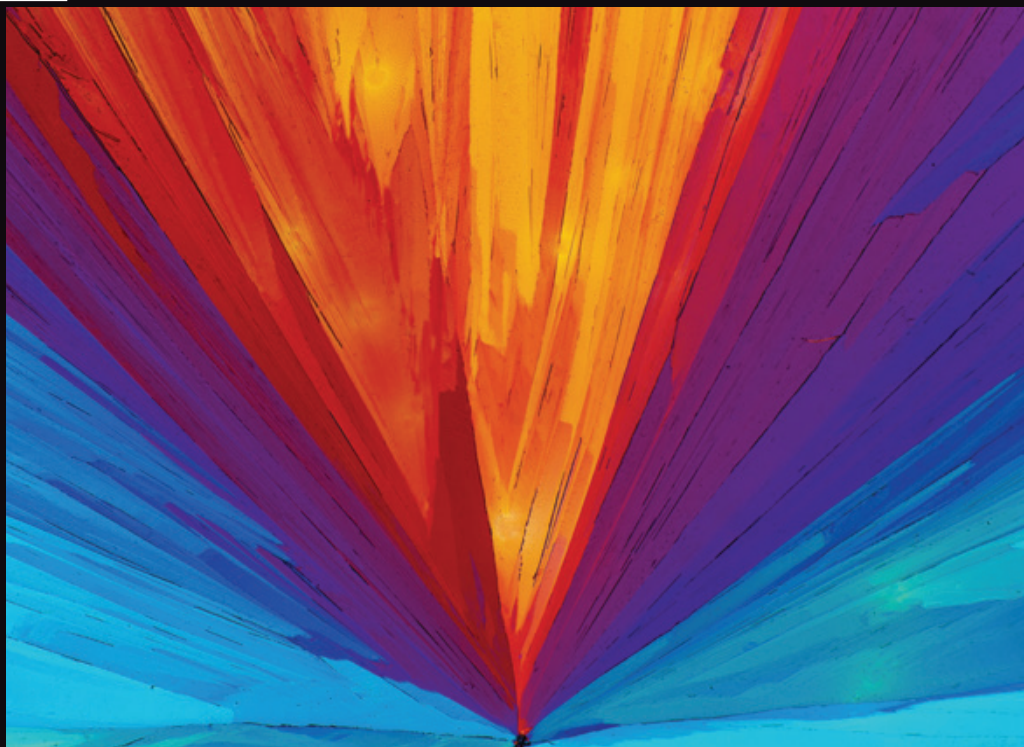
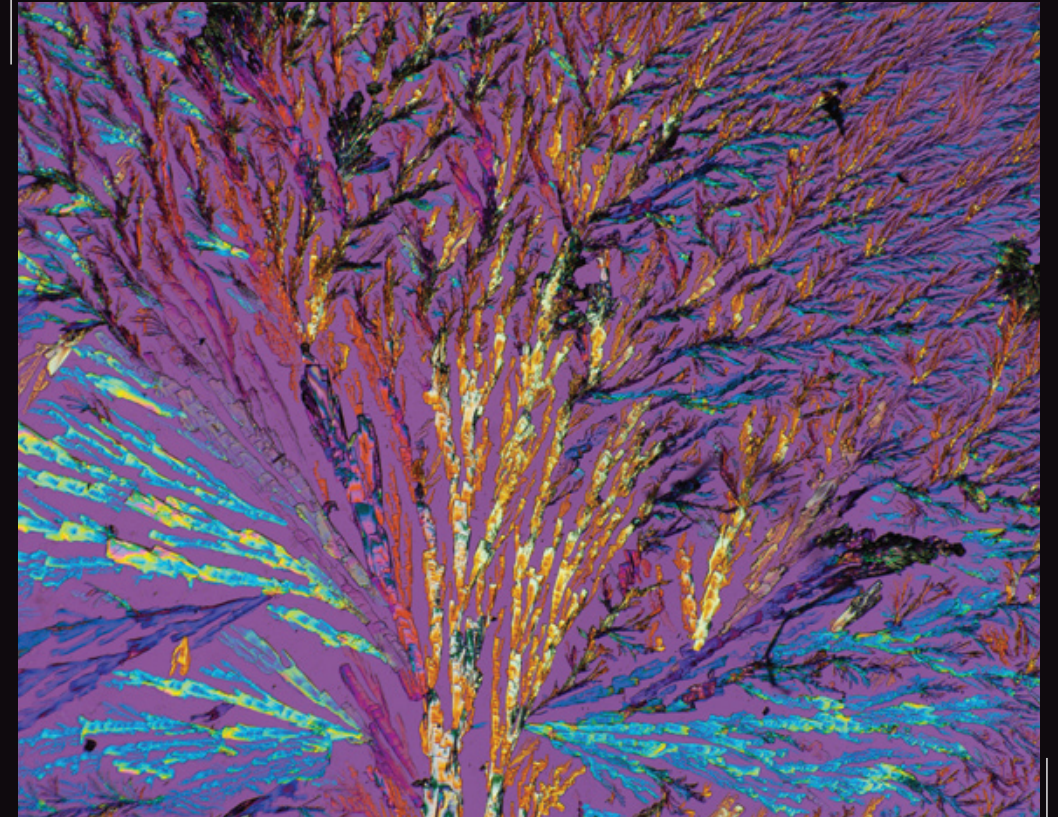
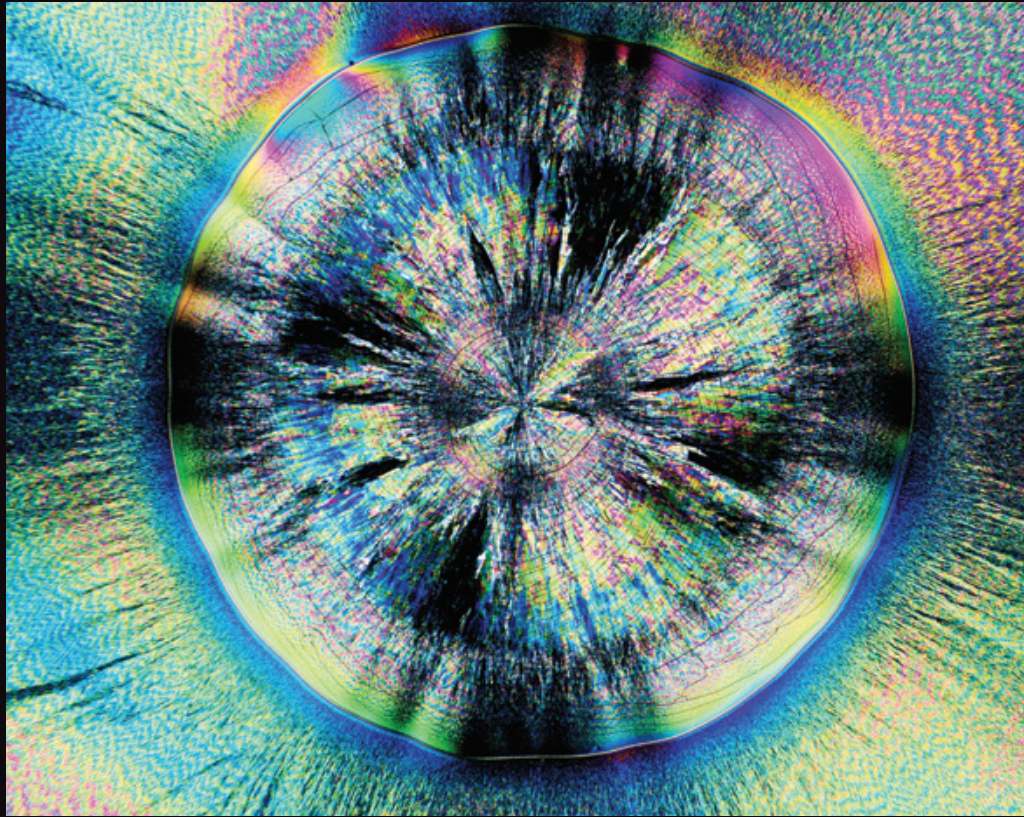
"The amount of water and the amount of vitamin C always vary, so it is impossible to predict which mixing ratio will produce the most beautiful images."



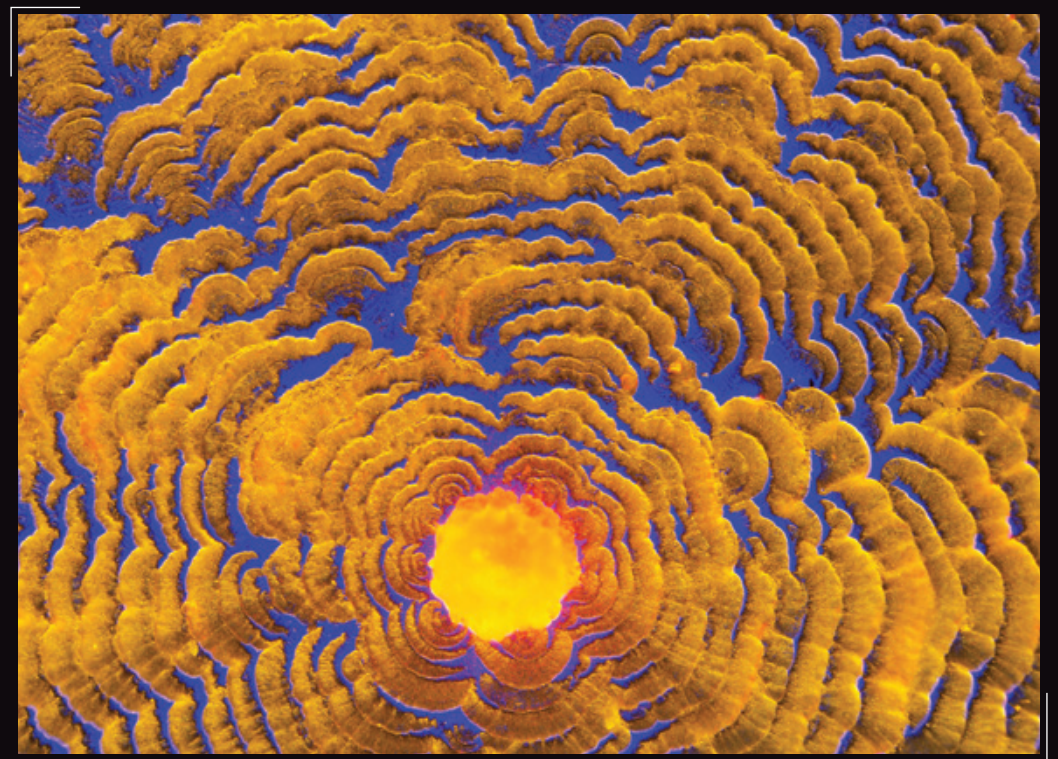
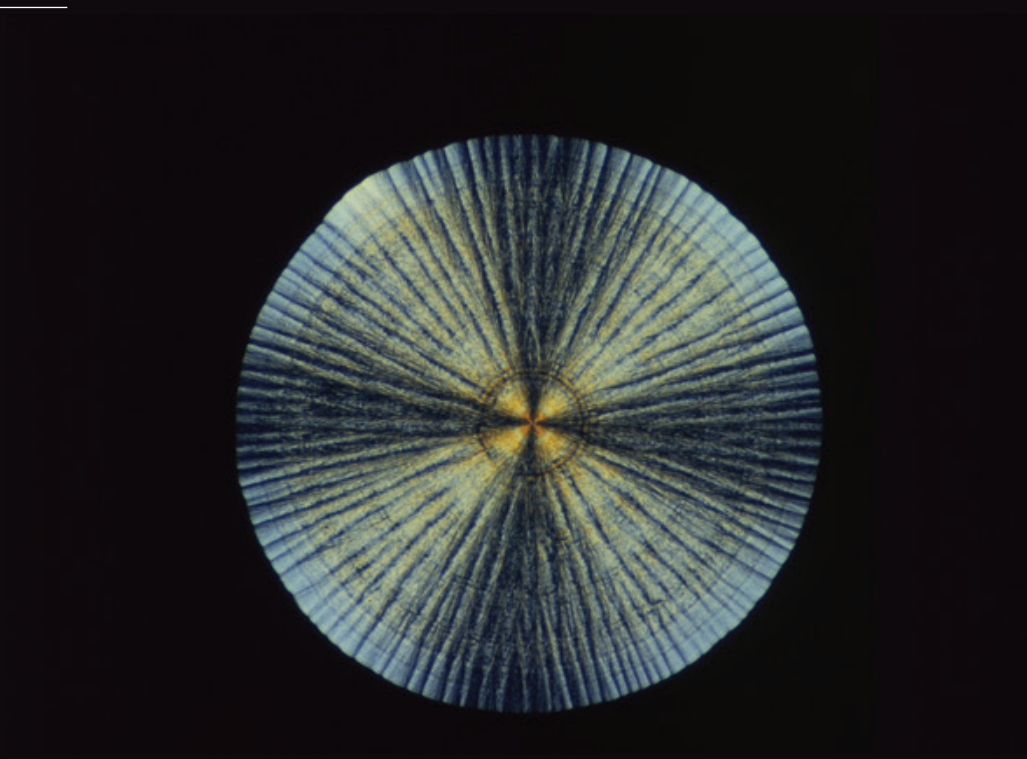
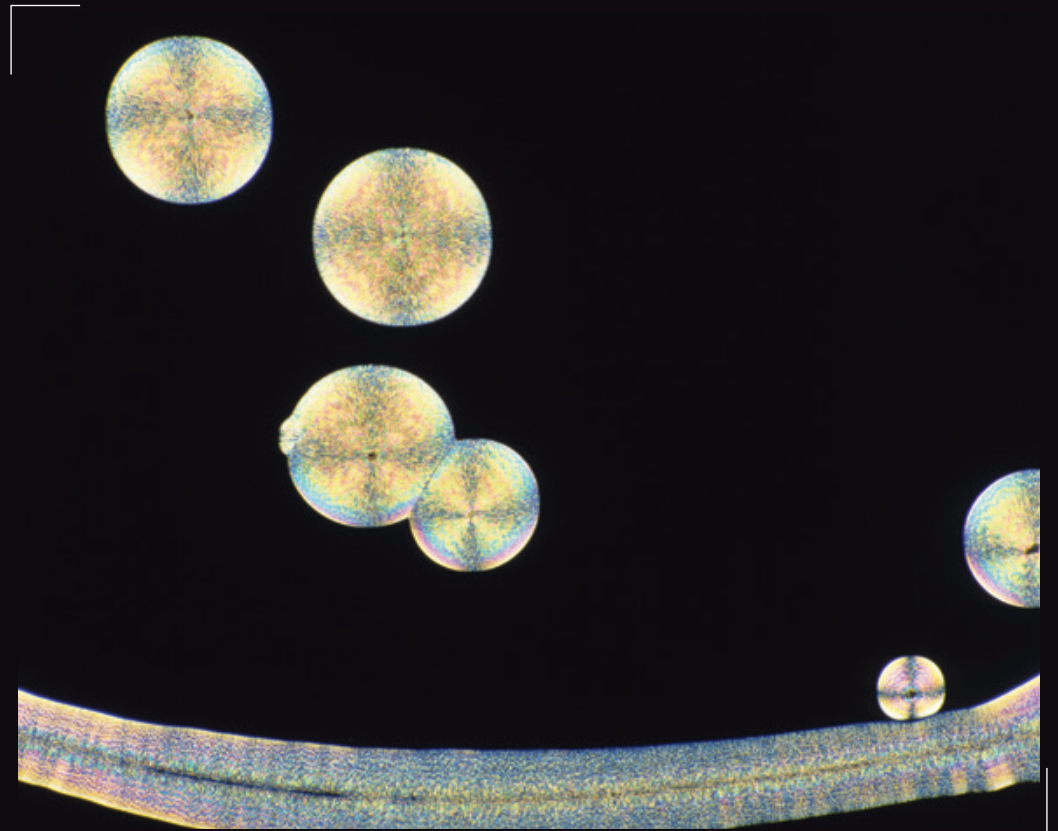
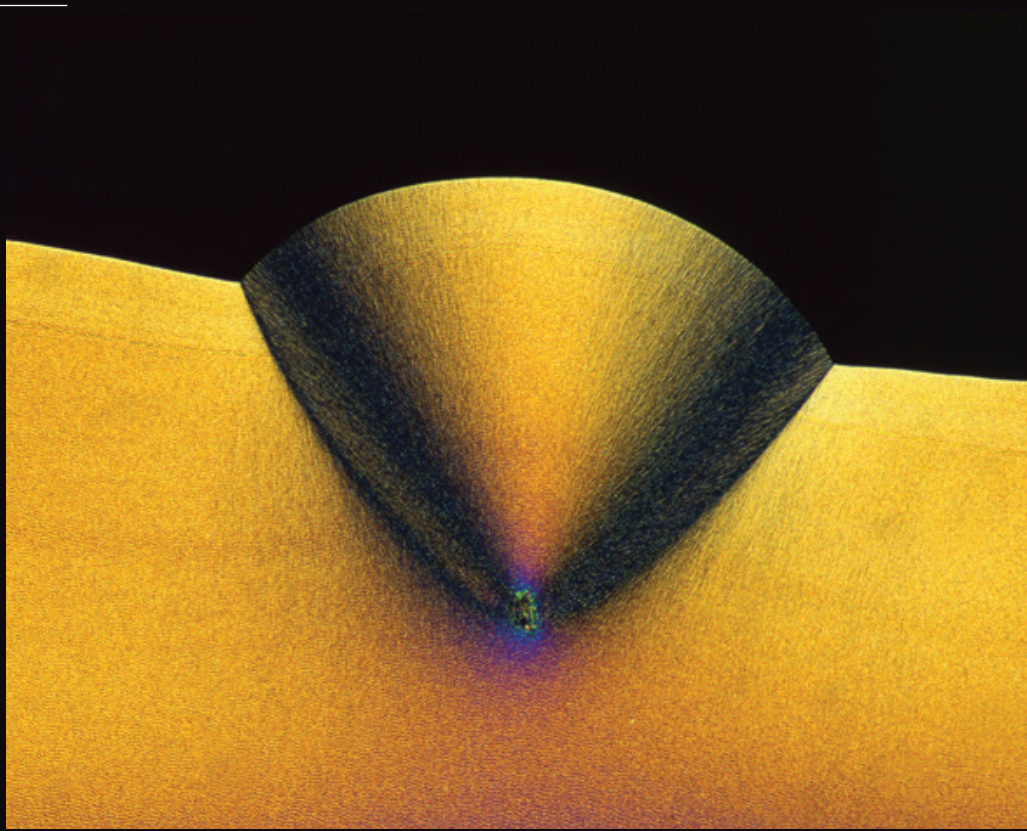




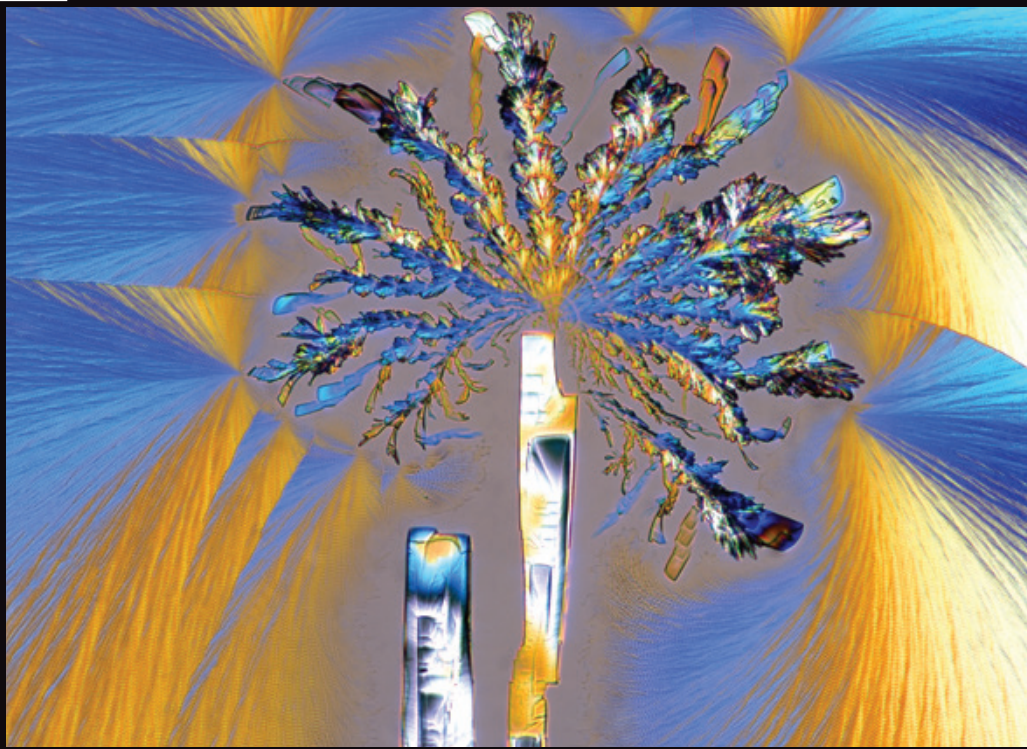
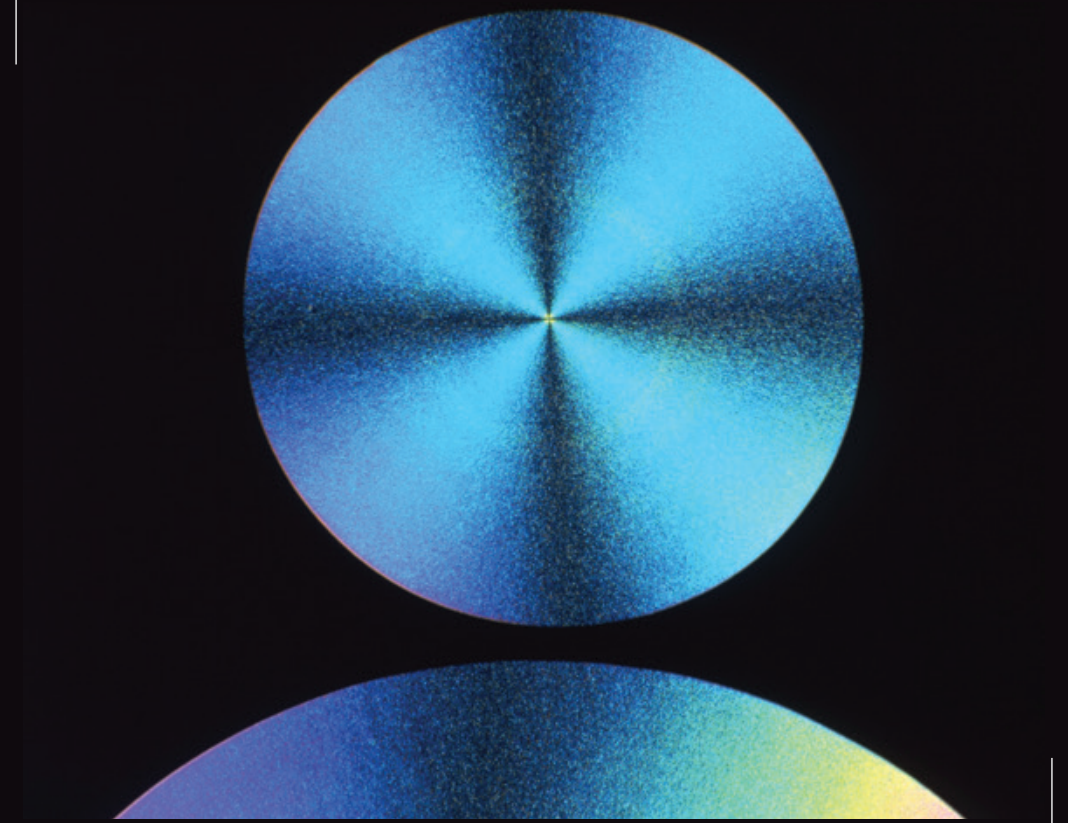
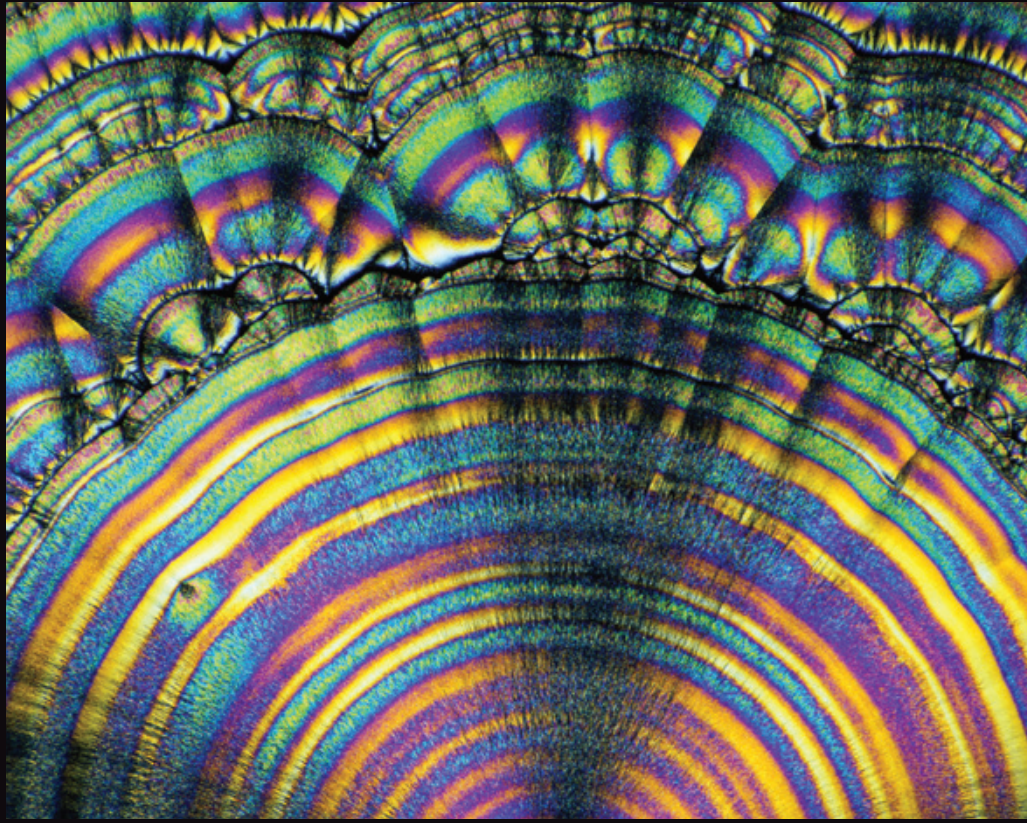














## About the Author

Karl Deckart acquired a powerful microscope around 35 years ago, and his microphotography soon became a success. His pictures hang - or have hung - in New York, Tokyo, the National Museum of Taipei, and the Museum of Art & Science at Ben-Gurion University of the Negev.

In the field of microtechnology, Deckart masters transmitted light as well as reflected light photography, be it with bright or dark field, in polarisation technique or with Differential Interference Contrast (DIC). For the microphotographs, he uses a Nikon research microscope of the Optiphot series, which is already designed for use as a microcamera by the manufacturer.

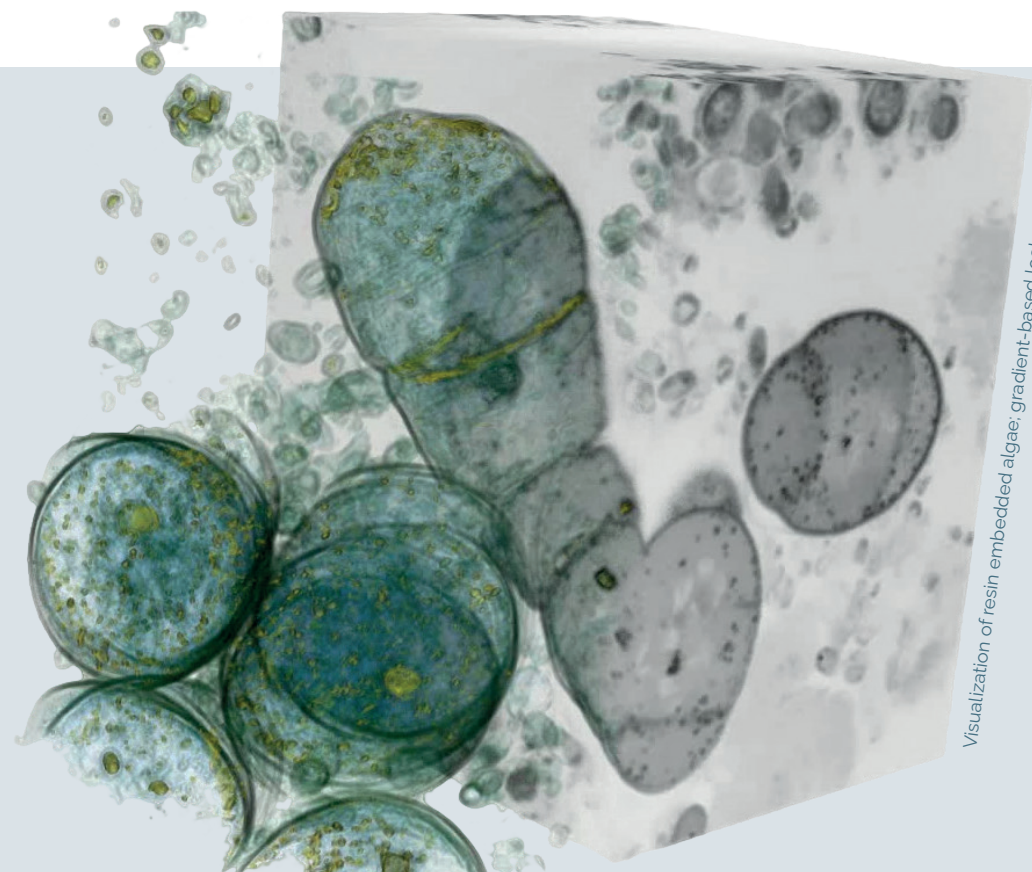
Deckart is a self-taught photographer who worked in electrical engineering for many years until 1998, when he became able to fully pursue his passion. He seeks to arrange the colour and composition of his motifs to reach a visual optimum which catches the viewer's eye.

He markets his pictures through international picture agencies, either pursuing his own creative ideas or working to the specifications of his clients. His pictures have appeared in magazines such as Geo, Spektrum der Wissenschaft, HighTech and almost all photo magazines of the German market as well as in Greece and Japan.

Entire advertising concepts have been realised with his motifs, and several television programmes have been filmed about his work. In addition, his images adorn picture books, posters and advertising brochures, as well as phone cards, LP and CD covers.

Deckart has participated in more than 28 exhibitions and has received many prizes and awards, including at Nikon "Small World Competitions", and three first-prizes at RMS competitions.

In 1984 he was appointed to the German Society for Photography (DGPh), and since 1998 he has been a member of the RMS.



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