

The Eye of Sauron?

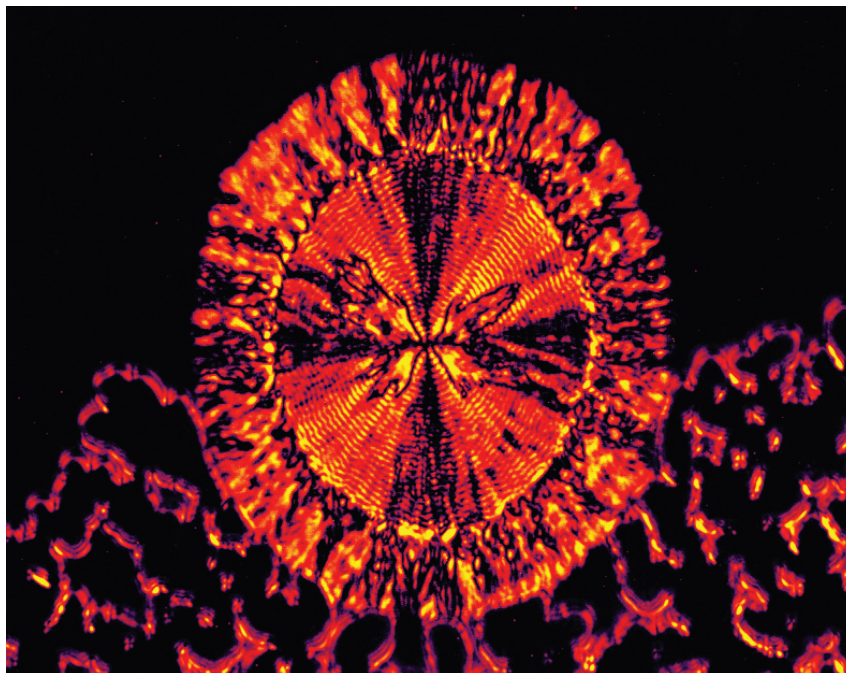
Figures appearing in IMAGE GALLERY arise from materials research. Often, they are aesthetically appealing and eye-catching, particularly in this month's feature, which the submitters call "Eye of Sauron," from the recent, popular film trilogy *Lord of the Rings*. Unlike the Dark Lord Sauron, a doer of evil, the liquid crystalline structure here actually does some good.

Christopher Viney, Founding Professor of Engineering at the University of California, Merced, and Amber Zielinski, his summer intern from Merced High School (Merced, Calif.), spent several weeks performing polarized light microscopy on the red "sweat" of a hippopotamus. Their interest in this material stems from its ability to act as a sunscreen, an antiseptic, and an insect repellent that provides an effective skin coating and barrier despite the hippo spending much of the day in a watery environment.

Regarding their (unpublished) research, Viney said, "We found that the 'sweat' forms a rich variety of spherulitic and other liquid-crystalline textures, some of which are among the most attractive that I have seen in 25 years of looking through microscopes at liquid-crystalline materials."

The researchers doctored this image with false coloring and aspect-ratio distortion.

Viney said, "Given the somewhat unattractive source of this material, it is especially delightful to find such beauty hidden within."



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