## Photo Contest 2021

Congratulations to the winners of OPN's 16<sup>th</sup> annual After Image photo contest.

For this year's contest, OPN received 54 remarkable entries. We thank the panel of judges who provided insight on those images and helped select the winners: Kate Bechtel, Felipe Beltrán-Mejía, Jennifer Kruschwitz, Anne Matsuura and Joel Villatoro.

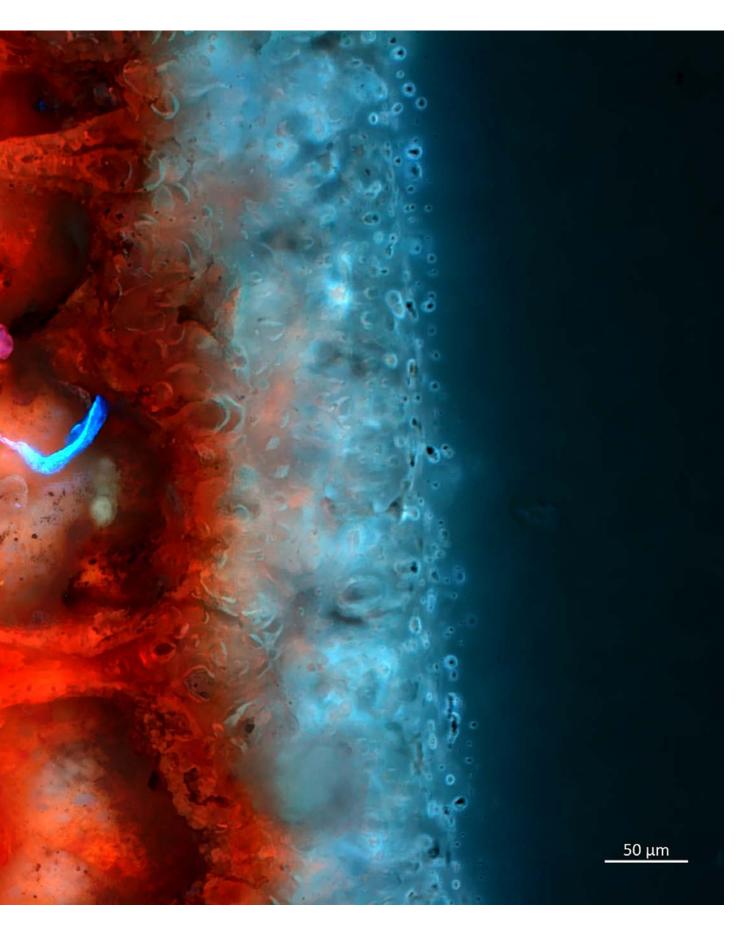
You can see all of this year's contest entries online at www.optica-opn.org/contest/2021.



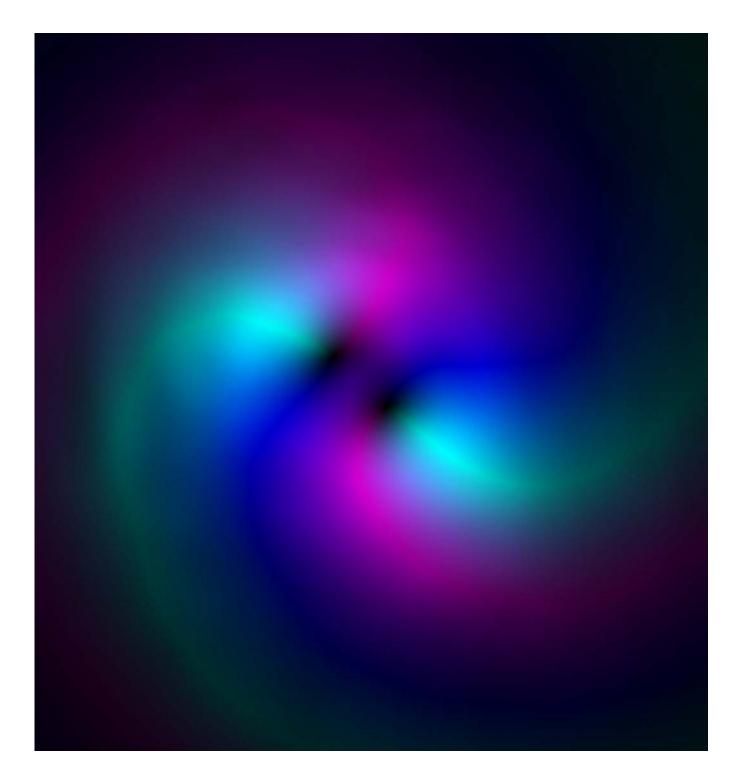
"Fluorescence of a laser engraving mark on a white plastic card shows how the laser modified the molecules to create a contrast in the zones of the laser mark. Image details: 20x/0.5 objective, 12V 100W Halogen Lamp and filter set Ex400-440 BS460 Em 470-900. The  $697\times526$ - $\mu$ m image is an extended focus from 45 Z-Slides  $(65.13~\mu m$  in total)."

—Jose Manuel Martinez Lopez, Quimica Tech, Chihuahua, Mexico





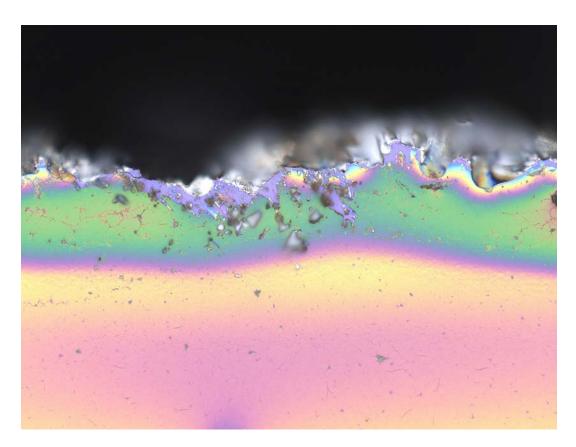
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### **SECOND PLACE**

"An orbital angular momentum (OAM) beam with charge L=2, reconstructed using the extended Gerchberg Saxton phase retrieval technique. In the image, brightness corresponds to intensity and hue to phase."

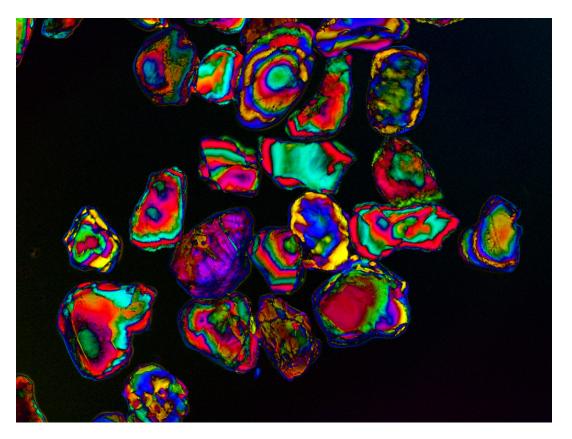
-Matthew N. Jacobs, The University of Colorado Boulder, CO, USA



### THIRD PLACE (Tie)

"Vivid snow summit with a blizzard in dark night sky. Actually, it is the irregular border of a graphene oxide (GO) film (~140 nm) spin-coated on a silicon substrate (300-nm SiO<sub>2</sub>/Si) and captured by the KEYENCE VK-X1000 Laser Microscope."

—Zhijun Xu, College of Science, Zhejiang University of Technology, Zhejiang, China



## THIRD PLACE (Tie)

"White sand from Chapoquoit Beach (Falmouth, MA, USA) in transmitted light under polychromatic polarization microscope, 4× objective lens (nature.com/ articles/srep17340)."

-Michael Shribak, Marine Biological Laboratory, University of Chicago, IL, USA

## Photo Contest 2021



### HONORABLE MENTION

"A snifter and a splash of cognac make a splendid liquid lens that captures summer solstice boating on the Foster City, CA, USA, lagoon with warmth and fascination. Spectral filtering was the intended purpose, but the variable Lagrange invariant across the field with the use of a Nikon D7100 now seems obvious in retrospect."

-Dennis M. Hancock, Woodside, CA, USA

### HONORABLE MENTION

"Sunlight diffracted and reflected by CDs over the white leaves of a *Breynia distichia* plant. Image taken with an iPhone 6s Plus without retouching."

-Natalith Palacios-Ortega, Centro de Investigaciones en Optica, Mexico



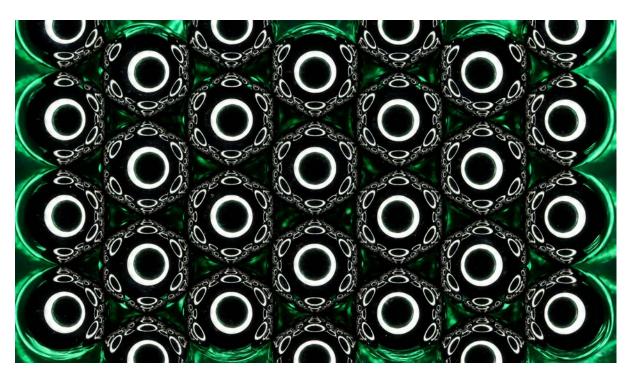
Visit www.optica-opn.org/contest/2021 for a look at all the submissions to this year's After Image photo contest.



#### **HONORABLE MENTION**

"Composite image of a pre-cancerous colon section acquired on an infrared (IR) microscope reveals intricate structures that highlight underlying chemical composition. IR imaging enables label-free disease diagnostics using the intrinsic molecular contrast. The image was taken in the Chemical Imaging and Structures Laboratory headed by Prof. Rohit Bhargava at the Beckman Institute."

> —Yamuna Phal, University of Illinois at Urbana-Champaign, IL, USA



#### **HONORABLE MENTION**

"An array of 5-mm-diameter chrome steel ball bearings on a green foil is illuminated by, and photographed through, a single LED ring light placed a few centimeters above the array. Each ball bearing (acting as a convex mirror) forms a demagnified, virtual image of the 70-mm diameter ring light. This image is re-imaged by all the neighbouring ball bearings that can "see" it, and that image is re-imaged again, and again, ... "

-Aongus McCarthy, Heriot-Watt University, Edinburgh, Scotland