

# Science as Art

## Images created for scientific purposes also inspire for their extraordinary beauty

January 15, 2024

Many groups at ICFO work diligently to create precise, miniscule , and accurate devices to take very detailed images of samples which are often imaged with extremely high-resolution techniques as a means of characterization or in order to visualize and understand details which go beyond what can be explained by words alone. Even though most of these images are created for a scientific purpose, their beauty and eye-catching features amplify the wonders of nature and its complexities.?

While working on her PhD studies in the Single Molecule Biophotonics Group led by ICREA Prof. at ICFO Maria Garcia Parajo, Sarah Keary, now a postdoctoral researcher at ICFO, was often struck by the beauty of the images she and her colleagues were seeing under the microscopes. At the same time, she was frustrated that, while of high value scientifically their esthetic beauty was rarely appreciated. i¿½Unfortunately, most of the time scientis s need to shrink down their images to fit small panels of a journal publication or to inclu e them in the supplementary information of an article. In this format, so many of their exquisi

e details and features are lost¿½, explains Sarah. Her imagination ran to an exhibit where a wide range of images could be displayed in a visual format and at a grand scale to allow a l their details to be seen, observed, and admired. ¿½Since first impressions of a piece of art are caught with the eye, the idea was that we would first seek to captivate the audience with beautiful imagery, and then provide a scientific explanation of what exactly they are viewing, in this way showcasing the innovative research preformed at ICFO.¿½ This idea gave rise to the **Science as Art** exhibit which can now be viewed throughout the corridors of ICFO's central buildings.

Calling out to all ICFOnians, Sarah sought to collect images from as many groups at ICFO as possible: photos of the technology and setups created by groups, microscopic images collected of samples, or interesting looking data plots that resemble artistic illustrations. The only real requirement was that the image be visually attractive and or engaging and in high resolution. Over 50 images were submitted, of which 27 were eventually converted int 80x80 works of art and displayed in shared spaces around the institute

¿½The main goals for me with this project were to make science more accessible both within our scientific community and for the general public, and to show the beauty in what many might think is mundane,¿½ comments Sarah. ¿½Even though we work in close proximity, we seldomly have opportunities to share our research in a casual yet informative, and beautiful way. It would make me really happy if this exhibit helps to create more synergies and collaborations between groups.¿

? The Science as Art exhibit was inaugurated on ICFO Day 2023 with contestants in the annual ¿½**Gymkhana¿½** competing to find all the images and identify the subject matter- both artistically and scientifically

** To see the entire exhibit, take a break and explore the halls and walls of ICFO!

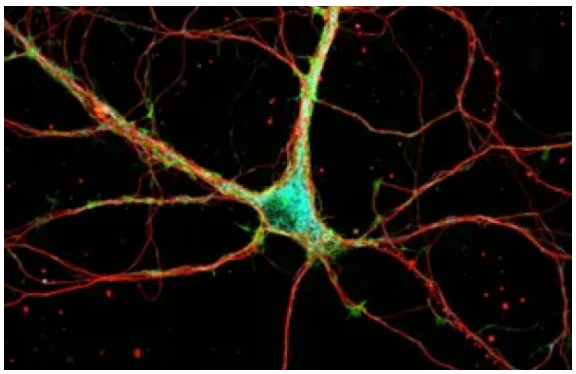


Image by Maria Marsal: Microtubules, actin and mytochondria in fixed hippocampus neurons (Artistic title: "Roadmap")

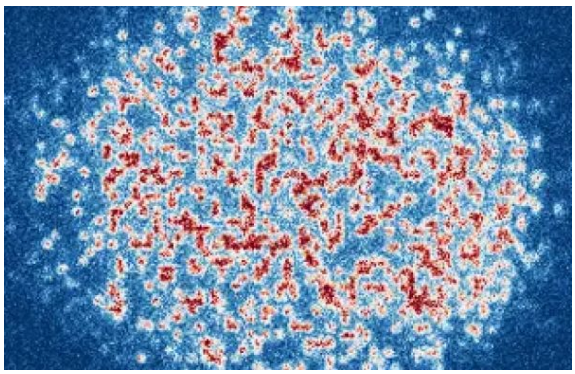


Image by Jonatan Hoschele, Sandra Buob, Antonio Rubio-Abadal: fluorescence of single atoms. Taken by loading micro-Kelvin cold atoms into interfering far-off-resonant laser beams, forming a crystal of light, or optical lattice (Artistic title: "Tetris)

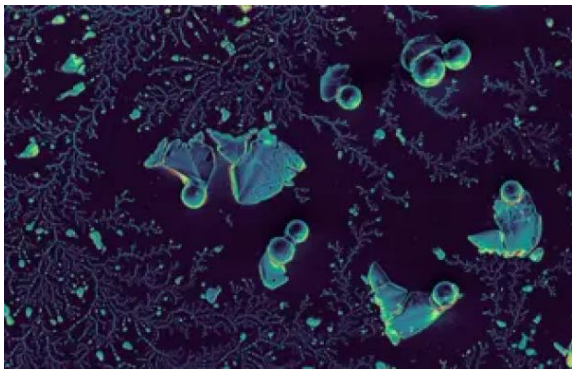


Image by Rubaiya Hussain: Silicon beads in a salty buffer solution (Artistic title: "Frost")

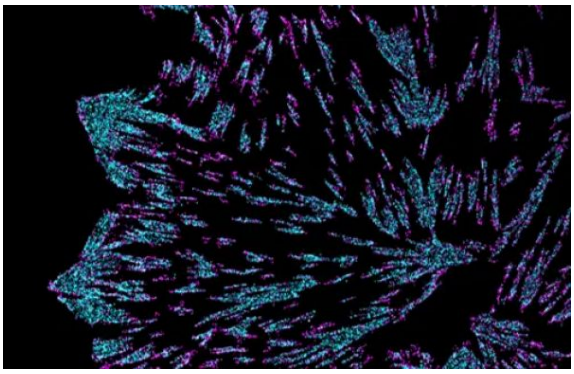


Image by Sarah Keary: Cell adhesion proteins, paxillin (Cyan) and integrin alpha 5 (Magenta), in HFF1 cells sedded for 90mins and imaged using STORM (Artistic title: "Snowflake")

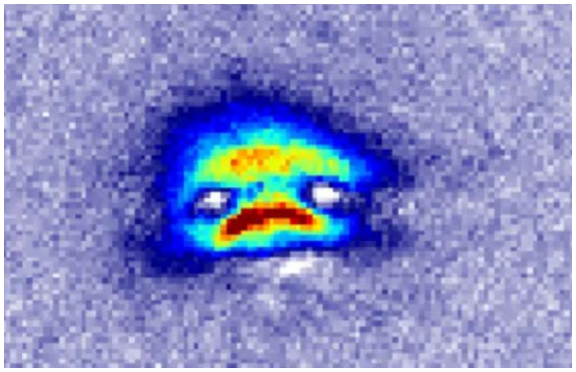


Image by Craig Chisholm: This is a Bose-Einstein condensate of potassium-41 but the imaging light is off-resonant which created some lensing. (Artistic title: "Dave")

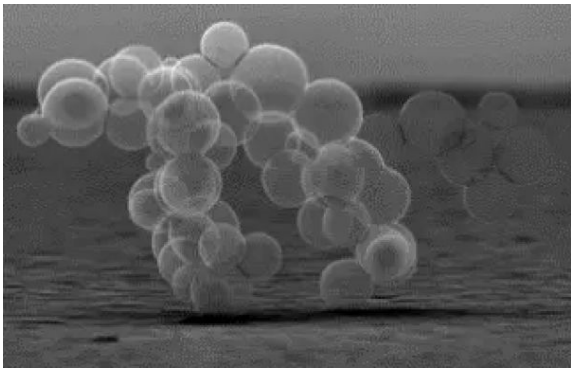


Image by Christofer Moller: Self-assembled, hollow nanoscale balls of unknown material balancing precariously on top of a smooth platinum surface. (Artistic title "Globoflexia")