Best of Last Week – Camera sees around corners, cold traps on the moon, how vitamin D reduces inflammation

November 22 2021, by Bob Yirka



A setup of one of the camera prototypes in the laboratory. Credit: Florian Willomitzer/Northwestern University

It was a good week for technology development as a team at

Northwestern University announced a new high-resolution camera that can see the unseen-including around corners-using scattered coherent light. Also, a team with members from Rice University and University of Toronto Engineering reported the first measurements of the ultra-lowfriction behavior of magnetene— a 2D iron oxide material with unusual properties. And the first electric autonomous cargo ship was launched in Norway. The zero-emission and eventually crewless ship will soon embark on a two-year working trial. And a team with members from several institutions in the U.S. and one in Japan developed <u>a deep</u> learning technique for global field reconstruction with sparse sensors. Also, a team at ETH Zurich announced that they had discovered major vulnerabilities in DRAM memory devices. And a team at the Chinese Academy of Sciences demonstrated a soft magnetic pixel robot that can <u>be programmed to change shape</u>, perhaps setting the stage for robots that can be used to monitor the environment or perform biomedical procedures remotely.

In other news, a team of researchers affiliated with a host of institutions across the U.S. conducted <u>lung autopsies of COVID-19 patients that</u> revealed treatment clues. They also learned more about how the virus spreads and damages lung tissue. Also, a team of researchers from China, Japan and the U.S. <u>solved a 50-year-old mystery behind plant</u> growth—how the molecule auxin sets growth in motion. And a team with members from several institutions in the U.S. <u>confirmed the</u> existence of cold traps on the moon for the first time, possibly providing a means for producing fuel for a future moon base.

And finally, if you are one of the millions of people around the world adversely impacted by inflammation related to a COVID-19 infection, you may want to check out the work of a joint effort by Purdue University and the National Institutes of Health. They gained new insights into how vitamin D functions to reduce inflammation caused by immune cells that might be relevant to responses during severe COVID-19 infections.

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