Best of Last Week: Controlled transport of light, 'walking inside of cells,' and one COVID-19 vaccine found to be safe

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Credit: Petr Kratochvil/public domain

It was another good week for physics as a combined team from Beihang University and Johannes Gutenberg-Universität Mainz successfully carried out controlled transport of stored light by holding it in a cloud of

cold atoms—they carried it a distance of 1.2 millimeters and found doing so had little impact on the stored light. Also, a team at the University of Rochester synthesized a room temperature superconducting material by compressing molecular solids with hydrogen at high pressures—the first time that a superconducting material has been observed at room temperatures. And a team at the Institute of Industrial Science at the University of Tokyo found that a tetrahedra may explain water's uniqueness.

In technology news, an international team of researchers found that simpler, smaller neural networks could be used to solve certain tasks better than conventional AI systems. Also, a combined team from the University of Cambridge and Lume VR Ltd. created new virtual reality software that allows scientists to "walk" inside of cells. And a team at the University of Southern California created a virtual agent that can negotiate with humans in three-round negotiation tasks. Also, Google engineer Andy Nguyen reported via Twitter that he had found a Bluetooth flaw in the Linux kernel that allowed nearby hackers to execute code.

In other news, a team with members from Italy, Brazil and the U.K. found evidence during a modeling study that suggested climate change likely drove early human species to extinction—and also found some clues to explain why Homo sapiens were the only human species to survive. Also, a team from Regeneron Pharmaceuticals, Inc., working with the Texas Biomedical Research Institute, reported that the experimental COVID-19 antibody cocktail treatment given to President Trump relieves symptoms in macaques and hamsters.

And finally, if you are like billions around the world anxiously awaiting a vaccine against COVID-19 but are also worried about whether it will be safe, you might want to check out the results of work done by a team with members affiliated with multiple institutions in China—they

reported preliminary results showing that the COVID-19 vaccine candidate based on inactivated SARS-CoV-2 virus is safe.