

Best of Last Week—Record ocean temp set, new way to 3D print hydrogel electronics, nasal spray to ward off all viruses

January 16 2023, by Bob Yirka

Graphical Abstract. Credit: Matter (2022). DOI: 10.1016/j.matt.2022.11.027

A team of researchers from China, the U.S., Italy and New Zealand reported that [ocean temperatures hit a new record high last year](#)—the 10 zettajoule increase marked the hottest year ever recorded in the world's

oceans. Also, an international team of earth scientists were surprised when they found [a magma chamber growing under a Mediterranean volcano](#). The chamber was found under Kolumbo using a new imaging technique that can produce high-resolution pictures of the properties of seismic waves. And another international team of researchers found via the development of a new model that [mineral processes miles below the surface of the Earth are different than what has been theorized](#).

In technology news, a team with members from Université Paris-Saclay-CNRS, Sorbonne Université, Université Grenoble-Alpes-CEA-LETI, HawAI.tech, and Aix-Marseille Université-CNRS developed [a Bayesian machine based on memristors](#)—the new design is expected to allow machine-learning algorithms to run using less energy. Also a team with members from Lund University and Ecole Polytechnique Fédérale de Lausanne designed and built [a working feathered robotic wing](#), which they claim paves the way to flapping wing drones. And a combined team from the University of Chicago and Northwestern University found that the chatbot ChatGPT is capable of [writing fake study abstracts that were convincing enough to fool scientists](#). And a team at Westlake University, in China, working with a colleague at the National University of Singapore, developed [a 3D-printing technique for fabricating hydrogel-based electronics](#), which they say is significantly cheaper than conventional methods.

In other news, a team with members affiliated with several institutions in Spain found evidence showing that [COVID-19 vaccines also prevent the SARS-CoV-2 virus from infecting the brain](#). The finding suggests the vaccines should prevent symptoms such as impaired taste and smell, cognitive loss and malaise associated with long COVID. Also, a team at QingDao University of Science and Technology in China demonstrated [an optical tractor beam capable of pulling larger macroscopic objects than existing tractor beams](#). And finally, a team at Johns Hopkins University announced that they were making progress toward the development of [a](#)

[nasal spray that could be used to ward off virtually all respiratory illnesses](#), including COVID-19.

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