

Best of Last Week—New way to make photons, rising ocean acidification and a neural link between depression and bad sleep

July 30 2018, by Bob Yirka

Credit: Leiden Institute of Physics

It was a good week for physics as an international team of physicists [demonstrated a new method to make single photons](#)—they named it "the unconventional photon blockade," and it involves exciting a quantum

dot. Also, another international team conducted [the first successful test of Einstein's general relativity theory near a supermassive black hole](#) using observational data from the European Southern Observatory. And yet another international team proposed the idea [of creating a holographic image of a black hole in a graphene flake](#) by applying a magnetic field to it.

In geological news, a team of researchers led by Miles Bodmer of the University of Oregon, discovered [pieces of the mantle rising under the north and south ends of the Cascadia fault](#)—they studied four years of data from 268 seismometers and found data that may help offer new information regarding the likelihood of earthquakes. And Ying Zhou with Virginia Tech found evidence suggesting that [the Yellowstone super-volcano has a different history than previously thought](#).

In other news, a team with members from the Brain Research Institute of the University of Zurich and the Swiss Federal Institute of Technology announced that they had developed [a brain atlas using a deep learning algorithm](#) that they believe can be used to advance research into segmenting brain regions in mice. And a team at the Stanford University School of Medicine found that [diabetic-level glucose spikes can occur even in healthy people](#)—perhaps leading to an increased risk of developing cardiovascular disease. Also, a team led by a group at Cardiff University found that [ocean acidification is to hit levels not seen in 14 million years](#), by 2100—if we continue emitting as much carbon dioxide into the atmosphere as we are now. Also, a team at the University of California found evidence suggesting that [fertilizer destroys plant microbiome's ability to protect against disease](#).

And finally, if you are one of the millions of people who have trouble sleeping, you might also have another problem—depression. A combined team of researchers from the University of Warwick in the U.K. and Fudan University in China identified [a neural link between](#)

[depression and bad sleep.](#)

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