

Best of Last Week: New state of matter, synthesizing a cyclocarbon and calcium connection to age-related memory loss

August 19 2019, by Bob Yirka

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It was a good week for physics as a team with members from New York University, the University of Buffalo and Wayne State University announced that they had discovered [a new state of matter](#)—topological

superconductivity.

A team with [members](#) from several institutions in the U.S. developed a quantum simulation method that allows for showing [a quantum system virtually cooled to half of its actual temperature](#).

And a team at the University of Luxembourg reported on [a counterintuitive physics property they found to be widespread in living organisms](#)—negative resistance.

A team at the U.S.'s National Institute of Standards and Technology suggested [a newfound superconductor material could be the 'silicon of quantum computers'](#)—noting that properties of the compound uranium ditelluride might be used to allow qubits to exist longer.

A team with members from Oxford University and IBM Research found [a way to synthesize a ring-shaped, multi-carbon compound cyclocarbon](#)—using an atomic force microscope.

In space news, a team with members from the University of Tasmania, Monash University, McGill University and the ARC Centre of Excellence for Gravitational Wave Discovery found [a glitch in a neutron star that revealed some of its hidden secrets](#)—for instance, sometimes it spun even faster than a normal glitch.

A team with members from Rice University and Sun Yat-sen University reported on evidence that [young Jupiter was smacked head-on by a massive newborn planet](#)—its core appeared to be less dense and more extended than was expected.

In other news, a team at Stanford University announced that they had built [a heat shield just 10 atoms thick to protect electronic devices](#)—by sandwiching sheets of three-atom-thick materials.

And a team with members from the Auckland University of Technology, the University of East Anglia and the University of Greenwich carried out a study that revealed [the emotional journey of a digital detox while traveling](#)—they found that people go through a multistep withdrawal process when suddenly deprived of their [electronic devices](#).

And finally, if you are among the millions the world over worried about losing your memory as you grow older, help may be as close as the refrigerator—a team of researchers at the University of Leicester found that [calcium is a key to age-related memory loss](#).

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