

Best of Last Week – Finding missing matter, strange music from the moon and how junk food primes the brain

February 29 2016, by Bob Yirka

A graphen nanoribbon was anchored at the tip of a atomic force microscope and dragged over a gold surface. The observed friction force was extremely low.

Credit: University of Basel, Department of Physics

It was another good week for physics as [a new fast radio burst discovery found 'missing matter' in the universe](#)—the international team of space

scientists used a combination of optical and radio telescopes to home in on the burst first heard in April of last year.

Also another international team of researchers found that [graphene slides smoothly across gold](#)—suggesting that the versatile substance also offers the potential to be used for coating machine components because it showed nearly zero energy loss. And a team at the Technion-Israel Institute of Technology in Israel announced that they had [achieved perfect efficiency for a water-splitting half-reaction](#), possibly paving the way for a cheaper way to obtain hydrogen. Also a team working on the DZero international collaboration at Fermilab announced that they had discovered [a new subatomic particle](#)—a tetraquark they have called X(5568).

In other news, a varied group of researchers in the U.S. found a [California gas well blowout caused the nation's largest methane release](#)—known as the Aliso Canyon disaster, the researchers found emissions from the natural gas well blowout released enough methane to fill a balloon the size of the Rose Bowl, every day for over a hundred days, sickening local residents and making headlines around the world. Also, NASA released [strange 'music' heard by 1969 astronauts](#)—recordings made during the Apollo 10 mission of strange and still unexplained whistling noises as their craft flew around the dark side of the moon. And a team with the Scripps Research Institute announced that they had [uncovered a potential target for treating autoimmune disease](#)—a molecule that appears to be the cause of diseases such as Lupus. Also, a team of researchers at the University of Washington announced that they had [achieved Wi-Fi at 10,000 times lower power](#)—a passive WiFi system that not only uses less power, but works with current WiFi hardware. And a team at the University of Texas unveiled [a proven one-step process to convert CO2 and water directly into liquid hydrocarbon fuel](#).

And finally, if you have ever felt that your desire for fast food might be tied to your ancestors need to survive, you might be interested in a study conducted by researchers in Canada—they described [how junk food primes the brain's food-seeking behavior](#)—causing us to want to eat more of it.

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