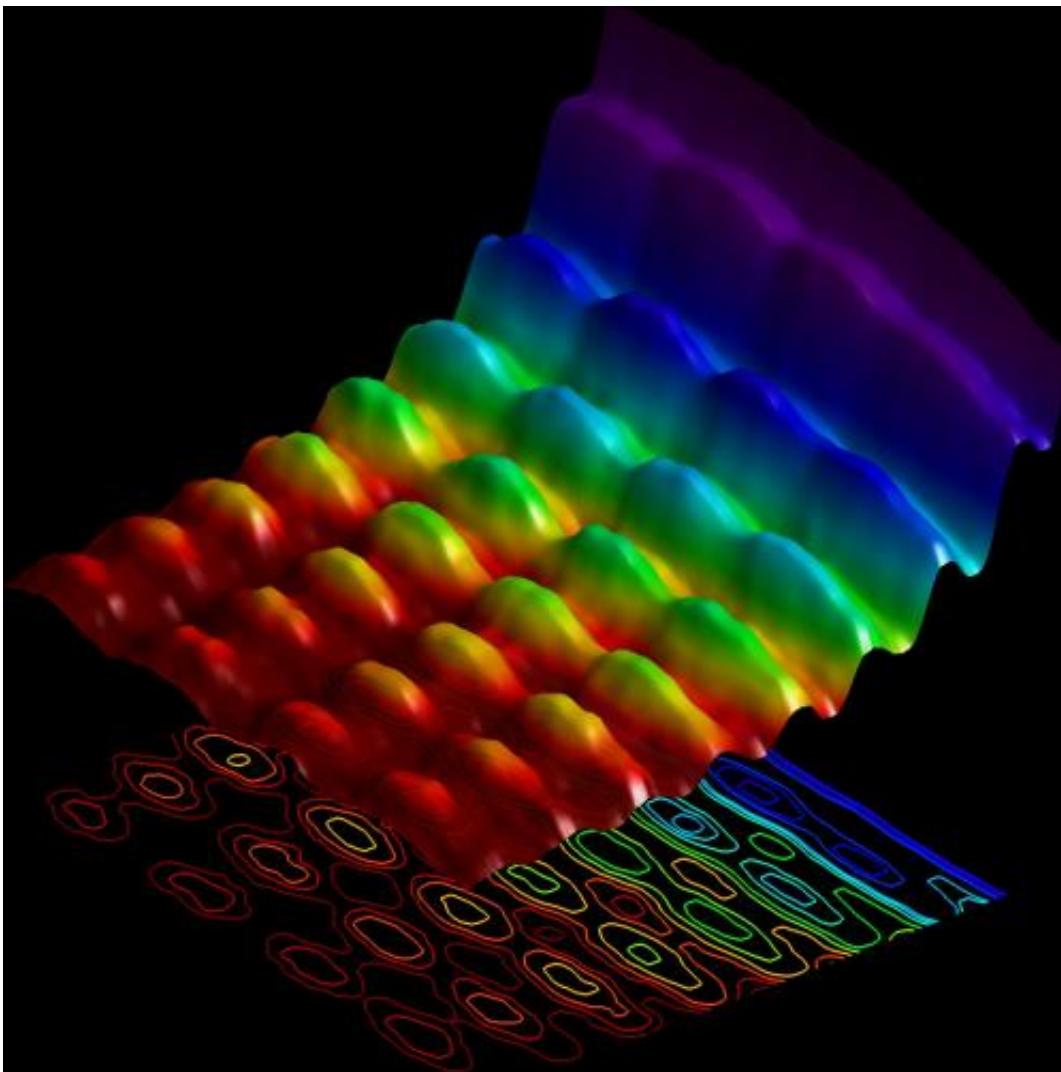


Best of Last Week – First photo of light as particle/wave, the dark side of cosmology and a hormone that mimics exercise

March 9 2015, by Bob Yirka



(Phys.org)—It was another interesting week for physics as a team working at École Polytechnique Fédérale de Lausanne found a way to take [the first ever photograph of light as both a particle and wave](#). Meanwhile, another team working at UC Santa Barbara announced that they had developed [the first-ever quantum device that detects and corrects its own errors](#)—a necessary precursor in developing a full quantum computer.

In space news, David Spergel, an astrophysicist at Princeton, offered a compelling look at [the dark side of cosmology](#)—and explained why scientists are so sure that [dark matter](#) and [dark energy](#) exist. Also, a team analyzing data from the Keck telescope discovered, all jokes aside, [a giant methane storm on Uranus](#), a surprise, as the planet's atmosphere was not known to be so energetic. And speaking of energy, researchers working at Northumbria University described [a breakthrough in energy harvesting that could someday power life on Mars](#)—it is a motor that runs on carbon dioxide and is based on the Leidenfrost effect.

It was also a good week for technology development as [a team of students launched a desktop recycler that turns pop bottles into 3D printer plastic](#)—a development that could greatly reduce the cost of printing 3D objects. Another team investigating bucky-balls developed [a buckybomb that shows the potential power of nanoscale explosives](#)—the reaction showed a huge increase in temperature and pressure in just a fraction of a second. And a combined team of researchers from the U.S. and Japan announced [a breakthrough in OLED technology](#)—their devices, they claim, can produce brilliant low-power light sources. A team at Rutgers University reported that they have found [a link between BPA exposure and autism spectrum disorder](#)—a finding that could have widespread implications for the widely used plastic. And researchers at the Technical University of Ilmenau announced that their research indicates that [Na-ion batteries are getting closer to replacing Li-ion batteries](#).

And finally, if you happen to be one of the millions who find it difficult to diet and exercise, a team of researchers at USC announced [a newly discovered hormone that mimics the effects of exercise](#)—perhaps someday soon, instead of getting out and doing stuff, people can just take a pill when they eat to keep themselves in shape.

© 2015 Phys.org

Citation: Best of Last Week – First photo of light as particle/wave, the dark side of cosmology and a hormone that mimics exercise (2015, March 9) retrieved 20 April 2024 from <https://phys.org/news/2015-03-week-photo-particlewave-dark-side.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.