Best of Last Week—Higgs particle instability; solar energy without panels; the downside of a keto diet

August 12 2024, by Bob Yirka

The multi-junction approach to stacking thin-film perovskite captures more of the light spectrum, increasing the amount of solar electricity that can be generated. Credit: Oxford University Physics

It was an interesting week for physics research as a small team of physicists at King's College London and the Astronomical Center of the Polish Academy of Sciences found evidence that <u>the Higgs particle</u> could have ended the universe by now; they then explained why we are still here. And a pair of physicists at Lehigh University in the U.S. dug deeper into the stability challenges confronting researchers attempting to use <u>nuclear fusion</u> as a power source, and they explained how they used mayonnaise as a helpful research tool.

In technology news, a team of physicists at Oxford University developed a new approach to <u>capturing energy from the sun</u>, which they claim could generate increasing amounts of solar electricity without the need for silicon-based solar panels. It suggests a way to take advantage of solar energy without using solar farms. And a combined team of engineers from Donghua University and the National University of Singapore demonstrated a <u>droplet-sensing bionic e-skin</u> that could further enhance robotic perception. Also, a team of AI researchers at the Biotechnology Center of Dresden University of Technology developed a new large language model trained on human DNA—called <u>GROVER</u>, the system could help scientists understand how information is stored and organized in the genome. And a team of engineers at Google's DeepMind Project demonstrated a robot capable of <u>playing amateurlevel table tennis</u>.

In other news, a team of medical researchers at Northwestern University developed a bioactive material to <u>regenerate high-quality cartilage</u> in the knee joints of a large animal model. And a team of environmental scientists in the U.S. and Denmark found evidence that the center of Greenland's ice sheet <u>completely melted</u> in the recent past. Also, a multi-institutional team of health and nutrition specialists found that people on a <u>ketogenic diet</u> may experience an increase in LDL cholesterol levels, higher apolipoprotein B levels and reductions in certain gut bacteria. And finally, a team of sociologists at the University of California, Santa Cruz, found that an overlooked side-effect of the housing crisis may be putting <u>Californians at increased risk</u> from climate disasters.

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