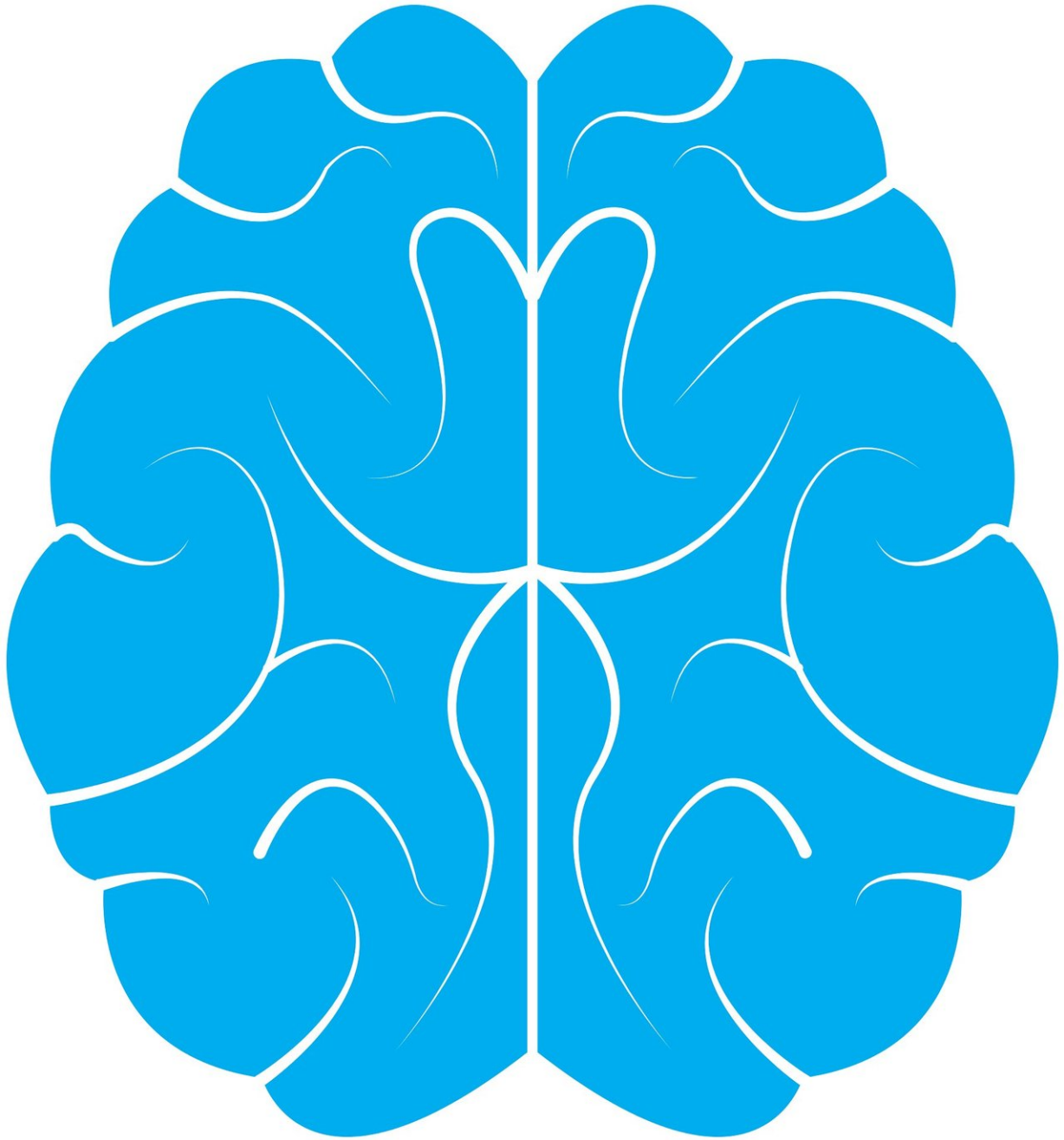


Best of Last Week – Translating brain waves into speech, the changing universe and alcohol's impact on DNA

February 4 2019, by Bob Yirka



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It was a big week for technology science as a team of engineers at Columbia University [translated brain signals directly into speech](#). The

group was able to reconstruct words and run them through a speech synthesizer—a scientific first. Also, Saule Technologies, headed by Olga Malinkiewicz, announced that ["inkjet" solar panels are poised to revolutionize green energy](#)—they developed a novel inkjet processing method for perovskites that makes it possible to manufacture solar panels at lower temperatures. And a combined team of researchers from the University of Pennsylvania, the University of Illinois and the University of Cambridge announced that they had created ["metallic wood" with the strength of titanium and the density of water](#).

It's a sheet made of nickel with nanopores that is just as strong as regular titanium, but five times lighter. Also, a team of engineers at Columbia University reported that they came [a step closer to building self-aware machines](#). They built a robot that could imagine itself. It learns from scratch, and over time, develops a self-simulation. And a team at MIT reported that they were [converting Wi-Fi signals to electricity with new 2-D materials](#) to build new kinds of "rectennas." The team has a goal of freeing smartphone users from constantly recharging their equipment. Also, a team at Berkeley announced the development of [a new 3-D printer that shapes objects with rays of light](#). They have named it the "replicator" after the device on Star Trek, and claim it can produce objects that are smoother and more complex than those made with standard 3-D printers.

In other news, The Ohio State University's Jennifer Johnson made headlines when she published a paper claiming that [the "stuff" of the universe keeps changing](#)—offering a nucleosynthesis of the elements over the course of billions of years. Also, a team at the University of Birmingham found that [more people die after surgery than from HIV, TB and malaria combined](#). And a team from the University of Wisconsin and Washington University uncovered [the genes behind lager yeast's cold and sugar-loving success](#)—a hybrid of domesticated baker's yeast and a wild species.

And finally, if you have bouts of [heavy drinking](#), you may want to rethink how you imbibe, as a team led by a group at Rutgers University found that [heavy drinking may change DNA, leading to increased cravings for alcohol](#).

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