

Best of Last Week—Complexity of 1,314 languages, ChatGPT beats Stack Overflow, trapping light inside a magnet

August 21 2023, by Bob Yirka

Light trapped inside a magnetic crystal can strongly enhance its magneto-optical interactions. Credit: Rezlind Bushati

It was a good week for human historical research, as a team of archaeologists from several institutions in China found evidence that

China's ancient water pipe networks were [a communal effort accomplished without a centralized state authority](#) and were maintained as part of a local community effort as well. Also, an international team of anthropologists [measured the grammatical complexity of 1,314 languages](#) and in so doing were able to outline the evolution of complex grammars. And an international team of anthropologists, archaeologists and geneticists has learned more about [the migration patterns of people living around the Mediterranean Sea during the Iron and Bronze ages](#) by sequencing the genes of people who lived there.

In technology news, a team of mechanical engineers from Chung-Ang University, Massachusetts General Hospital, LS Materials and Yonsei University has found that shaking a hand-held cylinder containing crumpled aluminum foil balls [produces enough electricity to light a small LED grid](#). And a team of computer scientists at Purdue University pitted Stack Overflow against ChatGPT and found that that test subjects comparing the two [preferred answers given by ChatGPT](#)—many suggested its answers to queries were more insightful. Also, a team of engineers at ETH Zurich created [a program that allows robots to perform activities without prerecorded expert demonstrations](#). They describe it as moving one step closer to autonomous robots. And a team at Lawrence Berkeley National Laboratory developed [a supramolecular organo-ionic electrolyte that can be liquidated for recycling](#), making it easier to recycle car batteries.

In other news, an international team of physicists found a way to [trap light inside of a magnet](#)—it could enhance the intrinsic properties of magnetic materials. Also, a team of neuroscientists at Trinity College of Dublin tested a theory that [forgetting is actually a form of learning](#). They found it allows the brain to interact dynamically with a dynamic environment. And finally, the Task Force on Postovulatory Methods of Fertility Regulation found that taking piroxicam, an anti-inflammatory medication commonly used for arthritis pain, along with the emergency

contraceptive pill levonorgestrel following unprotected sex prevents significantly more pregnancies compared to taking levonorgestrel alone.

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