

Using DNA to store information: All of YouTube's data could be held 'in a single teaspoon'

Researchers at the Technion-Israel Institute of Technology in Haifa and the Interdisciplinary Center (IDC) in Herzliya have significantly optimized the process needed to store digital information on DNA, the Technion reported on [September 9].

According to the press release, in a paper published in the journal Nature Biotechnology, the group demonstrated storage of information in a density of more than 10 petabytes, or ten million gigabytes, in a single gram, while significantly improving the writing process. This, theoretically, allows for storing all the information stored on YouTube in a single teaspoon.

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As server farms are responsible for about 2% of global carbon emission, similar to the emission if global air traffic, and for 3% of global electricity consumption – a rate higher than the entire electricity consumption of the UK – DNA-based information storage may also help reduce our carbon footprint.

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According to the researchers, "the technology we presented in the paper has the potential to streamline further processes in synthetic biology and biotechnology.

"We believe that in the coming years, we will see a significant increase in the use of synthetic DNA in research and industry," they said.

Read full, original post: Israeli scientists store digital information in DNA