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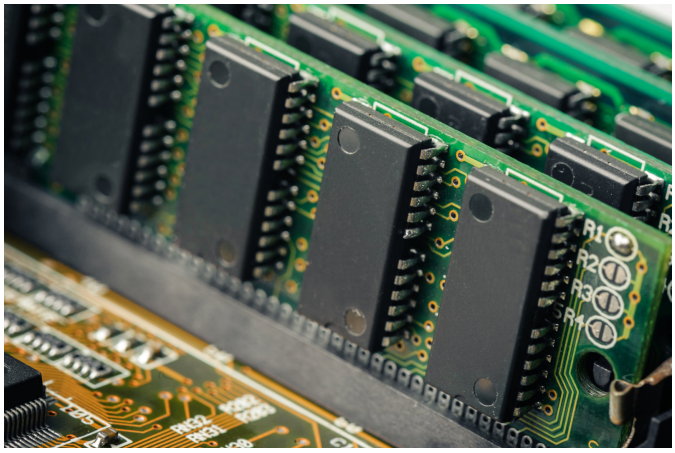
According to research by European and Russian scientists teraherz radiation, aka "T-rays," might be the key for faster computer memory by making the switching on and off of individual memory cells even faster.



T-rays consists of short electromagnetic pulses with a wavelength of around 0.1mm (or teraherz frequencies), which allows for the inspection of organic and mechanical materials. Such properties mean T-rays find use in airport body scanners, as well as in the inspection of microchips, fragile texts and airport luggage.

Now scientists say teraherz radiation can replace the external magnetic fields currently used by memory cells in order to boost the cell-resetting process by a factor of 1000.The concept was successfully demonstrated on a weak ferromagnet, thulium ortoferrite (TmFeO3), and showed the effect of the teraherz radiation was ten times greater than that of a traditional external magnet.

However this means research in the memory-boosting effects of teraherz radiation are still at a very early stage, since the scientists are still to publish the results of tests on memory boosted with such a method, if these even exists at the moment. Still, some time in the future we might have super-fast computers powered by T-rays.

Go Nonlinear Spin Control by Terahertz-Driven Anisotropy Fields (Nature)