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Internet Could Run Ten Times Faster With Graphene

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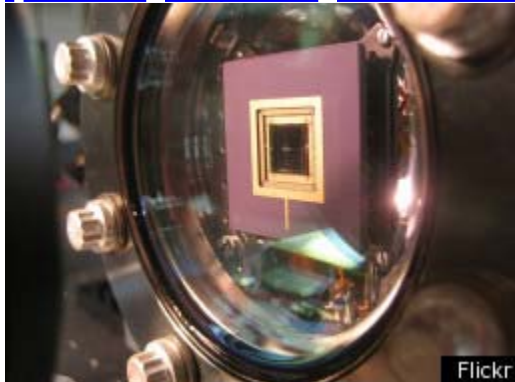
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Internet connections could run ten times faster than current speeds, according to research published in the journal Nature Communication.

University of Manchester and Cambridge scientists have discovered a key step in improving characteristics of graphene for use as photodetectors in high-speed optical communications. Graphene is a form of carbon just one atom thick and yet 100 times stronger than steel.

The UK team, including 2010 Nobel Prize-winning scientists Andre Geim and Kostya Novoselov, found that there was a 20-fold enhancement in the amount of light the graphene could harvest and convert into electrical power by combining graphene with metallic nanostructures.

Earlier this year, researchers from the University of California at Berkeley discovered the new use for graphene. They suggested that a one-atom-thick layer of crystallised carbon could be used as a possible replacement for traditional transistors in the next generation of computer chips.

Engineering professor Ziang Zhang said: "Graphene enables us to make modulators that are incredibly compact and that potentially perform at speeds up to ten times faster than current technology allows. This new technology will significantly enhance our capabilities in ultrafast optical communication and computing."

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