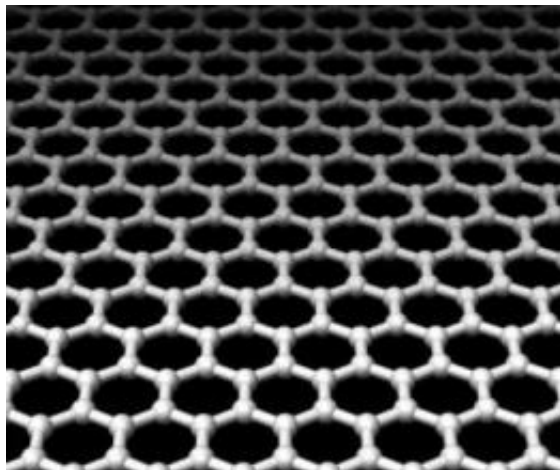


A 'huge step' toward mass production of graphene

9 June 2010



Scientists have developed a simple, inexpensive manufacturing method that could allow mass production of graphene (illustrated above) for electronics applications. Credit: Wikimedia Commons

Scientists have leaped over a major hurdle in efforts to begin commercial production of a form of carbon that could rival silicon in its potential for revolutionizing electronics devices ranging from supercomputers to cell phones.

Called graphene, the material consists of a layer of [graphite](#) 50,000 times thinner than a human hair with unique electronic properties. Their study appears in ACS' *Nano Letters*.

Victor Aristov and colleagues indicate that graphene has the potential to replace silicon in high-speed computer processors and other devices. Standing in the way, however, are today's cumbersome, expensive production methods, which result in poor-quality graphene and are not practical for industrial scale applications.

Aristov and colleagues report that they have developed "a very simple procedure for making graphene on the cheap." They describe growing

high-quality [graphene](#) on the surface of commercially available silicon carbide wafers to produce material with excellent [electronic properties](#). It "represents a huge step toward technological application of this material as the synthesis is compatible with industrial mass production," their report notes.

More information: "Graphene Synthesis on Cubic SiC/Si Wafers. Perspectives for Mass Production of Graphene-Based Electronic Devices",

Provided by American Chemical Society

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