Super-thin carbon sheets poised to revolutionize electronics

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Super-thin films of carbon with exotic properties, now taking the scientific world by storm, may soon mean a new era of brighter, faster, and smaller computers, smart phones, and other consumer electronics. Brighter digital displays that flex like a sheet of paper. Faster computer chips. Smaller computers.

That's the word from an article scheduled for the March 2 issue of *Chemical & Engineering News*, ACS' weekly news magazine.

In the magazine's cover story, C&EN Senior Editor Mitch Jacoby notes that these so-called graphene sheets —50,000 times thinner than the width a single human hair — were first isolated by researchers just a few years ago. The nano-size sheets perform better than life-size carbon, with higher strength and the ability to conduct electricity faster. These properties make them attractive for developing new and improved electronic devices, the article notes.

Scientists in academia and industry have stepped up their efforts to improve the performance and manufacture of graphene sheets. At least one company plans to produce the sheets on an industrial scale in ton quantities. Scientists had predicted the existence of these unusual carbon sheets just a few years ago but had not produced actual thin-films until recently. "Graphene is one of the hottest topics in materials science these days," says one authority in the C&EN article.

More information: "Graphene: carbon thin as can be,"