

University of Houston spin-off company hits commercial milestone

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A company formed to commercialize graphene research conducted at the University of Houston's Center for Advanced Materials has been listed on the Chinese stock exchange, an important step in the company's capitalization and growth.

2D Carbon was created in 2011 by Peng Peng, a former research scientist at the Center for Advanced Materials. It is listed on China's stock market for high-tech startups.

Based in Changzhou, China, the company focuses on mass-production of large-scale graphene transparent conductive film, as well as research, development and technical support for applied graphene technology. 2D Carbon's technology is based on research with graphene - a thin layer of pure carbon atoms, bonded together in a hexagonal honeycomb lattice - done at UH.

Peng was part of a team led by Stephen Pei, professor of electrical and computer engineering at UH and deputy director of the Center for Advanced Materials, which discovered a way to synthesize graphene film on metal substrates by [chemical vapor deposition](#) (CVD), transferring the film to other substrates. That opened the door to commercial uses for CVD graphene film. Qingkai Yu, who remains on the faculty at UH, also was a member of the team.

Peng left UH after completing his Ph.D. and started 2D Carbon, one of seven spin-off companies established from the Center's work. Two are

listed on major stock exchanges.

Pei's group published a seminal paper on CVD graphene work in July 2008 in the journal *Applied Physics Letters*, and Pei noted that Russian-British physicist Konstantin Novoselov recognized UH's contribution to the field in his Nobel lecture after he and Andre Geim shared the 2010 Nobel Prize in physics for their work with graphene.

Peng said his company's work is an outgrowth of the research done in Pei's lab.

"Based on the basic principles we established in Dr. Pei's group, we have continued to develop a new growth system and transfer technique in China, with focus on industrial mass production and application," he said.

A special 2014 edition of the journal *Nature Nanotechnology* featured articles about graphene capacitive touch panel technology and the world's first commercial graphene touchscreen smartphone, both developed by Peng after he formed 2D Carbon.

CAM focuses on the discovery and development of energy materials, including photovoltaics, fuel cells, supercapacitors; in nanoelectronics materials: graphene and resistive memory; and in materials at the physical-biological interface, with a goal of ultimately working with industry to commercialize the advances as part of the University's technology transfer efforts.

Provided by University of Houston

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