France–Atlanta 2011 : Symposium on Graphene, october 28th, 2011

Published on Thursday May 12, 2011
View online : https://www.france-science.org/France-Atlanta-2011-Symposium-on.html

- Where : Manufacturing Research Center (MaRC) Auditorium, Georgia Institute of Technology campus, 813 Ferst Drive NW, Atlanta, GA 30332.
- When : October 28, 2011 at 8.30am

The Georgia Institute of Technology is organizing a one-day workshop on graphene, the ultra-thin carbon material that promises to advance electronics beyond silicon. Leading French and American scientists in the field will give keynote presentations and share ideas to nurture existing partnerships and foster new collaborations between US and French research institutions.

From our projected speakers that day :


A new “templated growth” technique for fabricating nanoribbons of epitaxial graphene has produced structures just 15 to 40 nanometers wide that conduct current with almost no resistance. These structures could address the challenge of connecting graphene devices made with conventional architectures – and set the stage for a new generation of devices that take advantage of the quantum properties of electrons. “We can now make very narrow, conductive nanoribbons that have quantum ballistic properties,” said Walt de Heer, a professor in the School of Physics at the Georgia Institute of Technology. “These narrow ribbons become almost like a perfect metal. Electrons can move through them without scattering, just like they do in carbon nanotubes.” De Heer discussed recent results of this graphene growth process March 21st at the American Physical Society’s March 2011 Meeting in Dallas.

“In our templated growth approach, we have essentially eliminated the edges that take away from the desirable properties of graphene,” de Heer explained. “The edges of the epitaxial graphene merge into the silicon carbide, producing properties that are really quite interesting.”

In creating these graphene nanostructures, de Heer and his research team first use conventional microelectronics techniques to etch tiny “steps” into a silicon carbide wafer whose surface has been made extremely flat. They then heat the contoured wafer to approximately 1,500 degrees Celsius, which initiates melting that polishes any rough edges left by the etching process.


To know more, click on the following link : Graphene Nanoribbons at Georgia Tech

Event page on France-Atlanta 2011 website