ZERNIKE INSTITUTE COLLOQUIUM

Thursday, December 3rd, 2015

16:00h, Lecture Hall: 5111.0080 **Coffee and cakes from 14:30h**

Graphene: a physicist's view of the "wonder material"

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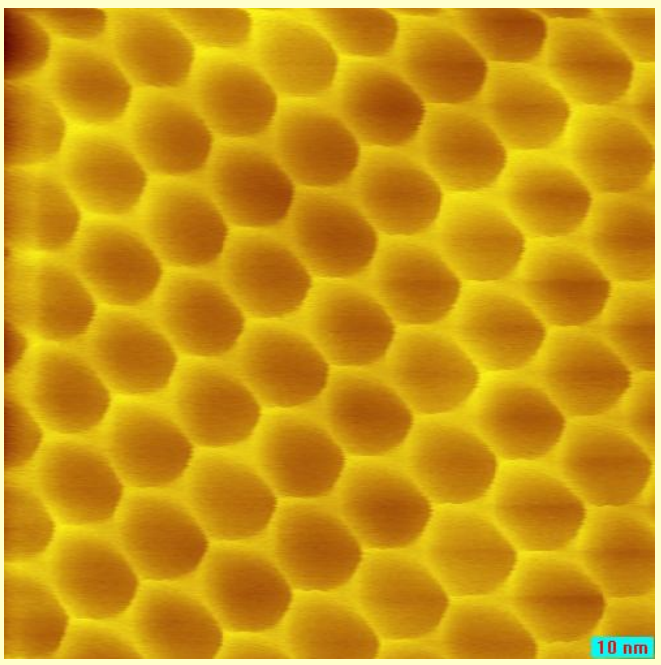
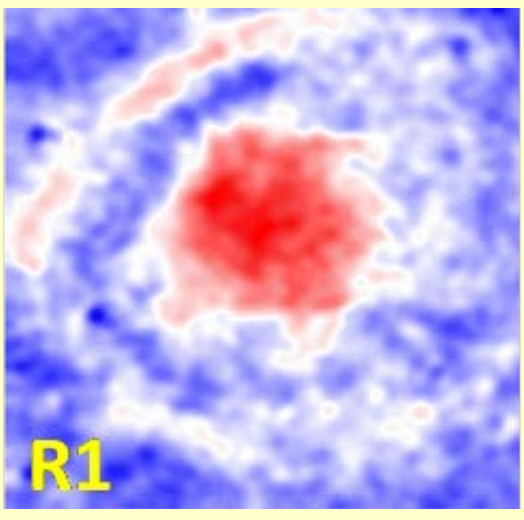
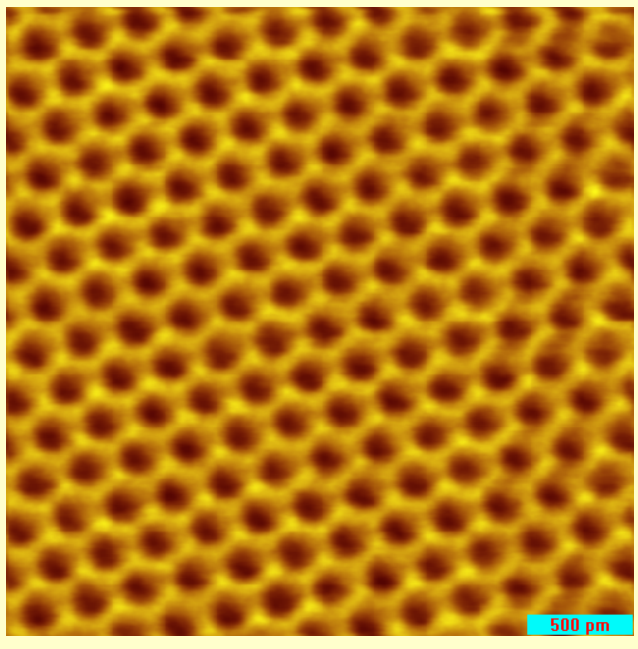


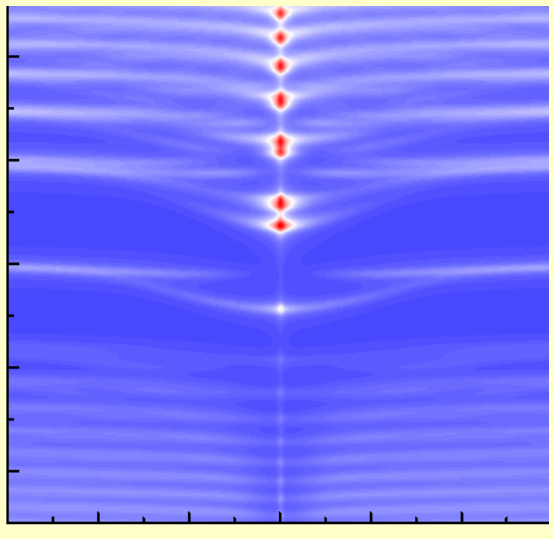
Since its first scotch-tape extraction from graphite in 2004, Graphene – a one atom-thick crystal of carbon - has metamorphosed from the poor relative of diamond into a "wonder material".

By now it has amassed an impressive string of superlatives (lightest, thinnest, strongest material, best electrical and thermal conductor) and a host of close 2D relatives extracted from other layered materials. Due to their remarkable properties 2D materials are rapidly moving from research laboratories into industrial, medical and electronics applications.

For physicists much of the continuing excitement about graphene stems from its exotic charge carriers - Dirac fermions - which resemble two dimensional massless neutrinos.







I will review the story and physics of graphene and its fascinating electronic properties, as viewed through scanning tunneling microscopy and Landau level spectroscopy experiments performed in my group.

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