NOBELIST ANDRE GEIM TO SPEAK OCTOBER 15 & 16 AT UMD

Photo: U. Montan

- **CMTC Distinguished Lecture**
  Beyond Graphene: Electronic Properties of van Der Waals Heterostructures
  October 15, 2012
  1201 Physics - 2:00PM

- **Prange Prize Lecture**
  Random Walk to Graphene
  October 16, 2012
  1412 Physics - 4:00PM

For more information, please visit:
www.umdphysics.umd.edu

Nobel Laureate Andre Geim, of the University of Manchester, UK, has been named the 2012 recipient of the Richard E. Prange Prize and Lectureship in Condensed Matter Theory and Related Areas. Dr. Geim will deliver a public presentation entitled "Random Walk to Graphene" on October 16, 2012. He was awarded the 2010 Nobel Prize in physics with Konstantin Novoselov "for groundbreaking experiments regarding the two-dimensional material graphene." Graphene, a single layer of carbon atoms arranged in a hexagonal lattice, exhibits tremendous stability, strength and electrical conductivity. Geim and Novoselov isolated the substance by using Scotch tape to peel it from graphite.

Additionally, Dr. Geim will give a technical CMTC Distinguished Lecture entitled "Beyond Graphene: Electronic Properties of van Der Waals Heterostructures" on October 15.

The Prange Prize, established by the UMD Department of Physics and the Condensed Matter Theory Center, honors the late Professor Richard Prange, whose distinguished career at Maryland spanned four decades (1961 - 2000). It is made possible through the generosity of Dr. Prange's wife, Dr. Madeleine Joullié, a Professor of Chemistry at the University of Pennsylvania.

CMTC

physics
University of Maryland

A. Geim

“Beyond Graphene: Electronic Properties of van Der Waals Heterostructures”

Following the advent of graphene, several other one-atom or one-molecule thick crystals have been isolated and preliminary studied. They range from semiconducting monolayers to wide-gap insulators and, possibly, metals. This library of two-dimensional crystals opens a possibility to construct various 3D structures with on-demand properties, which do not exist in nature but can be assembled in Lego style by stacking individual atomic planes on top of each other in a desired sequence. I will overview our recent progress in making such materials and studying their electronic properties.