

Condensed Matter Physics

Inaugural Nano Masterclass Success

www.physics.manchester.ac.uk/outreach/nanomasterclass/

The inaugural Nano Masterclass, run by the NoWNANO DTC and Graphene NOWNANO CDT, took place at the University of Manchester on the 9th March 2016, at the Schuster building. The event saw 41 A-Level students and their teachers participate in a full day programme consisting of a series of lectures, hands-on sessions and lab tours.

In the morning, the participants received an introduction to the CDT by its Director, [Professor Irina Grigorieva](#). This introduction was followed by inspiring talks, covering topics from the fundamental science of 2D materials up to their technological application, delivered by esteemed academics [Professor Sir Konstantin Novoselov](#), [Dr Aravind Vijayaraghavan](#) and [Dr Olga Tsigkou](#).

After lunch participants proceeded to the heart of the event: an afternoon programme where they interacted with CDT student ambassadors through student-led talks and hands-on activities. NoWNANO DTC students Philip Thomas (2013 Cohort) and Stephen Worrall (2012 Cohort) delivered talks on what it means to be a PhD student and some of the wonders of doing research. Graphene NOWNANO students Fiona Porter, Vaiva Nagyte and Richard Stevenson (2015 cohort) ran a hands-on session 'make your own graphene' offering participants the use of research-grade graphite and optical microscopes to produce and identify atomically-thin graphene.

Adam Shorrock (2015 Cohort) and Daryl McManus (2013 Cohort) also led participants in a session focused on graphene applications allowing the participants to explore the (opto)electronic properties of inkjet-printed circuits of 2D materials, and of transparent and flexible commercial graphene films.



Finally, the participants had the chance to observe nano-science researchers at work, by visiting the Centre for Mesoscience and Nanotechnology in a tour led by CDT students Daniel Kelly (2015 Cohort) and Roshan Krishna Kumar (2013 Cohort).

The afternoon sessions also counted with the contribution of undergraduate physics student ambassadors, Alice Matthews and Philipa Stokoe. A key aspect of the event was the support given by the School of Physics and Astronomy, where the event was hosted. This included also the technical assistance at the electronics laboratory by Peter Cunane, and the support of Sabah Salih whose ample experience organising outreach events was key to make the event a success.

Participants in the masterclass, students and teachers alike, commented that they thoroughly enjoyed their experience and had a fun time with the hands-on activities and exchanging ideas with active researchers. We look forward for the next edition in 2017.

Condensed Matter Theory Seminar

Monday 9 May, 3pm
Niels Bohr Room - Schuster Building

Speaker - **Prof Leonid Glazman (Yale)**

'Coulomb Blockade of Electron Transport through a Proximitized Nanowire'