

# Nobel laureate for physics to join NUS

Co-creator of graphene is first Nobel winner to join a S'pore varsity



Professor Konstantin Novoselov said he decided to move to Singapore because of the strong research base in physics and materials science, as well as the “flexible, dynamic government” which has made research a key focus. PHOTO: UNIVERSITY OF MANCHESTER

## Chang Ai-Lien Science Editor

In a first for Singapore, a Nobel Prize winner is joining a university here.

Professor Konstantin Novoselov, 44, is part of the duo behind the revolutionary supermaterial graphene. He starts work at the National University of Singapore (NUS) on Monday as distinguished professor of materials science and engineering.

“I have had a long relationship with Singapore and worked intensely with NUS for many years,” said Prof Novoselov, who started collaborating with local scientists about a decade ago, and has been an international scientific adviser to the NUS Centre for Advanced 2D Materials since 2015.

He told *The Straits Times* that he decided to move here because of the strong research base in physics and

materials science as well as the “flexible, dynamic government” which has made research a key focus.

“I also wanted a fresh start, to get more inspiration and ideas,” added Prof Novoselov, who holds British and Russian citizenship.

“The potential of Singapore is far greater than people can imagine.”

Prof Novoselov, or “Kostya”, as he is known, and Professor Andre Geim were awarded the Nobel Prize for Physics in 2010 for their ground-breaking achievements with graphene.

A mere one-atom thick, graphene is the first two-dimensional material ever discovered, and superbly conductive, stretchable and strong.

It is considered by many as one of the most exciting materials in technological research, with a wide range of potential uses in fields as varied as consumer technology and environmental science. For in-

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stance, it is being tested in desalination filters that produce clean drinking water, batteries, next-generation LED bulbs and solar cells.

In Singapore, Prof Novoselov

plans to work on synthetic materials that do not currently exist.

Rather than designing products which are limited by the properties of the materials they are created from – such as the brittleness of glass, for instance – he wants to turn that idea on its head.

“Instead, we are talking about designer materials with pre-determined properties that we need,” he explained.

This could range from artificial skin which can heal itself or control humidity, to a neuromorphic computing system which can learn and perform a task on its own by interacting with its surroundings.

“I am fascinated by the idea of creating and exploring the properties of novel materials,” he said.

Said Professor Tan Eng Chye, who is NUS president: “We are thrilled that Kostya is joining NUS and that he will contribute to the

scientific community at NUS and in Singapore.

“This is a reflection of the vibrancy of the Singapore research community and a resounding recognition of the high quality of research applications produced by our faculty.”

Professor Ho Teck Hua, NUS senior deputy president and provost, added: “We hope that many of our young Singaporean researchers will be inspired by his commitment to research excellence and his drive to create new materials and develop novel applications for them.

“Our researchers will benefit greatly from having the opportunity to collaborate with Kostya and his lab on exciting research opportunities.”

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