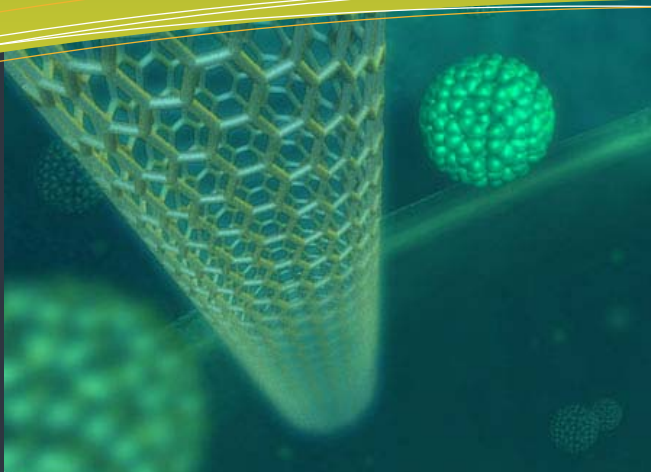


The Australia-China NanoNetwork Information Bulletin

AN INITIATIVE OF THE
AUSTRALIAN TECHNOLOGY NETWORK OF UNIVERSITIES (ATN)
AND INTERNATIONAL STRATEGIC TECHNOLOGY ALLIANCE (ISTA)



“to promote collaborative research projects and research training ; addressing key contemporary research challenges through nanoscience”

Inside

About the Australia-China Joint Laboratory on Nanoscience 2

Fighting infectious disease with nanoscience 3

Call for papers 3

NanoNetwork workshop in Nanjing 4

Joint Australia-China nanoscience laboratory announced



Professor Ross Milbourne, ATN Chair and Vice Chancellor: UTS, and Professor Shen Jiong, Vice President: South-east University and Deputy Chair: ISTA, signing the joint laboratory agreement.
Background (left to right): Professor Peter Coaldrake, Chair: Universities Australia, Vice Chancellor: Queensland University of Technology; Ms Lisa Paul, Secretary: DEEWR; Senator Chris Evans, Minister for Tertiary Education; Mr Tom Connor, Australian Consul General Shanghai

Building on collaborations that first began three years ago with the establishment of the Australia-China NanoNetwork, an Australia/China Joint Laboratory on Nanoscience will be established within the Suzhou Industry Park in Jiangsu Province, China.

The initiative builds on the current MOU between the ATN and ISTA, with Nanjing-based Southeast University the key Chinese partner for the laboratory. As the Joint Laboratory develops, researchers from other ISTA university

members in China will be welcomed to participate in joint Australia/China research projects.

The agreement for the laboratory was signed during the recent high-level university delegation to China, lead by Minister for Tertiary Education, Senator Chris Evans. Speaking at the signing ceremony, Senator Evans highlighted the laboratory as “a great example of the kind of cutting-edge research that can be undertaken when Australian and

(Continued on page 2)

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About the Australia-China Joint Laboratory on Nanoscience

The Joint Laboratory will be located at the Suzhou Industry Park near Shanghai. It will facilitate and pursue collaborative research and researcher development under the Australia/China NanoNetwork in areas of mutual interest and of relevance to communities and enterprises globally, and in Australia and China in particular. The laboratory will also aim to be a hub for other activities of the NanoNetwork such as research workshops, seminars, industry liaison and researcher/research student exchanges, including Summer Schools.

These activities will aim to further build personal and professional relationships between researchers and research students, particularly including the preparation of research students for their future entry into the globalised research workforce in Australia, China or elsewhere. The laboratory will function as an 'extended arm' for researchers and research students expanding their research activities/outcomes via collaborative projects and other activities.

While Southeast University will be the host for the laboratory, researchers from other Chinese universities will find numerous ways in which they can actively partner with its activities.

Joint Australia-China nanoscience laboratory announced

(Continued from page 1)

Chinese organisations work together."

The laboratory was also welcomed by Innovation Minister, Senator Kim Carr, referring to it as an "important agreement that will create further linkages and opportunities for Australian universities to engage with the rapidly expanding Chinese research sector.

"Through partnership, we can explore the exciting opportunities now opening in the nanotechnology field. Research undertaken at this centre, for example, could lead to better diagnosis and treatment of cancer; and more effective purification of drinkable and waste waters."

The goal of the ATN Joint Laboratory in Suzhou is to provide a working research environment in which staff and research students from the partners can undertake collaborative projects in targeted areas of nanoscience and nanotechnology.

ATN Chair, Professor Ross Milbourne, said the delegation and support shown by the Australian government for initiatives such as the NanoNetwork highlight the importance of China as a key market for the Australian economy by way of education and innovation.

"Our international collaborative partnerships are key to growing our next generation of research leaders who will ensure that we remain a relevant, global

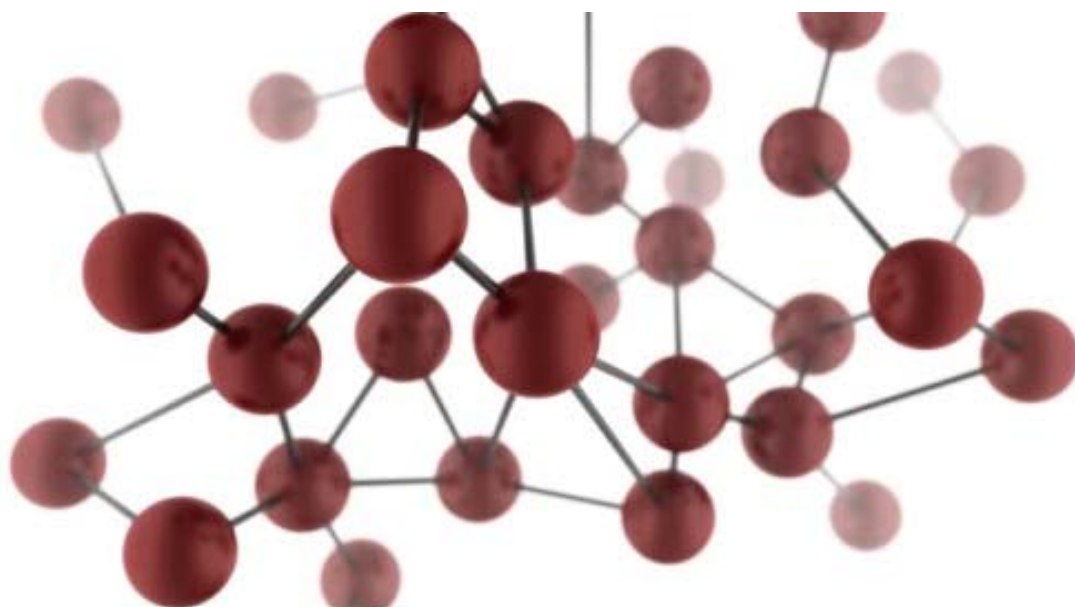


Suzhou Industry Park - Suzhou is a world heritage location approx 20 mins by fast train from central Shanghai

and innovative nation. A visit such as this, and the announcement of the nanoscience laboratory, is a tangible demonstration of our commitment as a nation to those partnerships.

"This laboratory will be an international hub for research with a focus on the application of nanoscience to solve global problems in the area of health and medicine, the environment and renewable energy. Importantly, it will offer significant partnering opportunities for researchers and PhD students – who will really be the engine room of our nation in the future."

Subsequent to the signing, Professor Milbourne also met with the leadership of the Shanghai Academy of Science and Technology and the Shanghai Nanotechnology Promotion Centre to update them on NanoNetwork activities in the Shanghai area. Both organisations are very supportive of the network, and are actively moving towards joint researcher and research student exchange programs.



Shaping the NanoNetwork

As an initiative driven by the activities of its members, we are interested in your views on future directions for the Australia-China NanoNetwork. For example:

- The NanoNetwork, via its ATN and Southeast University lead researchers, will be preparing over coming months a Plan for how the Joint Laboratory will operate. All ATN and NanoNetwork partner

researchers are encouraged to make suggestions on ways the laboratory might better build productive Australia/China research collaboration.

- Do you have any ideas to which the NanoNetwork might contribute?
- Would you like to see the NanoNet-

(Continued on page 4)

Fighting infectious disease with nanoscience



Dr Vipul Bansal

Australia-China NanoNetwork researchers have received a US\$100,000 Grand Challenges Explorations grant from the Bill & Melinda Gates Foundation to support an innovative global health research project conducted titled "Nanochip Biosensor for Infectious Diseases and Malaria."

The research team, lead by Dr Vipul Bansal, Senior Lecturer of Bio-nanotechnology at RMIT University's School of Applied Sciences, comprises collaborators from RMIT and Southeast University (Nanjing).

The project is a proof-of-concept idea, wherein Dr Bansal has proposed a nano-biotechnology enabled transformational approach to develop a low-cost, ultra-fast, disposable,

nanochip biosensor that can be non-invasively used to detect malaria and infectious diseases with ultrahigh selectivity and sensitivity.

"If successful, a battery-powered, non-invasive finger scanner can be developed in the next stage of the project. Such an invention could potentially revolutionize the way infectious diseases are currently diagnosed, particularly in the developing world" said Dr Bansal.

The project is one of 65 grants announced by the Gates Foundation in the fifth funding round of Grand Challenges Explorations, designed to help scientists around the world explore bold and largely unproven ways to improve health in developing countries. It supports ideas that fall outside current scientific paradigms and might lead to significant advances in global health.

The grants were provided to scientists in 16 countries on 5 continents and are highly competitive, receiving more than 2,400 proposals in this round.

"These are bold ideas from innovative thinkers, which is exactly what we need in global health research right now," said Dr. Tachi Yamada, president of the Gates Foundation's Global Health Program. "I'm excited to see some of these daring projects develop into life-saving breakthroughs for those who need them the most."

2011 International Conference on Materials for Renewable Energy & Environment - Call for Papers

20-22 May, Shanghai, China

The China Energy Society and the University of Shanghai for Science and Technology (USST) are pleased to announce this conference, co-sponsored by the ATN.

This conference will focus on topical and challenging subjects in the recent development of renewable energy and environment materials and will include keynote lectures, invited talks, oral and poster presentations. Researchers, managers, and students with an interest in the field are encouraged to attend the event.

Scope of the Conference:

- Materials for Solar cells, biomass energy, and wind energy
- Materials for Renewable Energy Conversion
- Energy Storage Materials, Batteries and Super-capacitors
- Photo-catalysts and Solid-State Lighting
- Energy saving materials and environment protection
- Cleaning Utilization of Coals
- Others related

Manuscript submission deadline: 10 Feb, 2011

Submission guidelines are available via www.atn.edu.au/AustraliaChinaNanoNetwork

Shaping the NanoNetwork

(Continued from page 3)

work undertake any new initiatives? ATN researchers have recently suggested the NanoNetwork establish a research equipment and infrastructure data base - it is now planned that such a database will be operational in 2011.

- Do you know of potential research funding sources (In Australia, China or elsewhere) to which our nanoresearchers might apply for support for collaborations?
- Is there a nanotheme that the NanoNetwork might support via a new national/international Workshop or Conference?

If you have any input on these or other matters relating to NanoNetwork activities and directions, please contact Professor Neil Furlong:

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NanoNetwork workshop in Nanjing

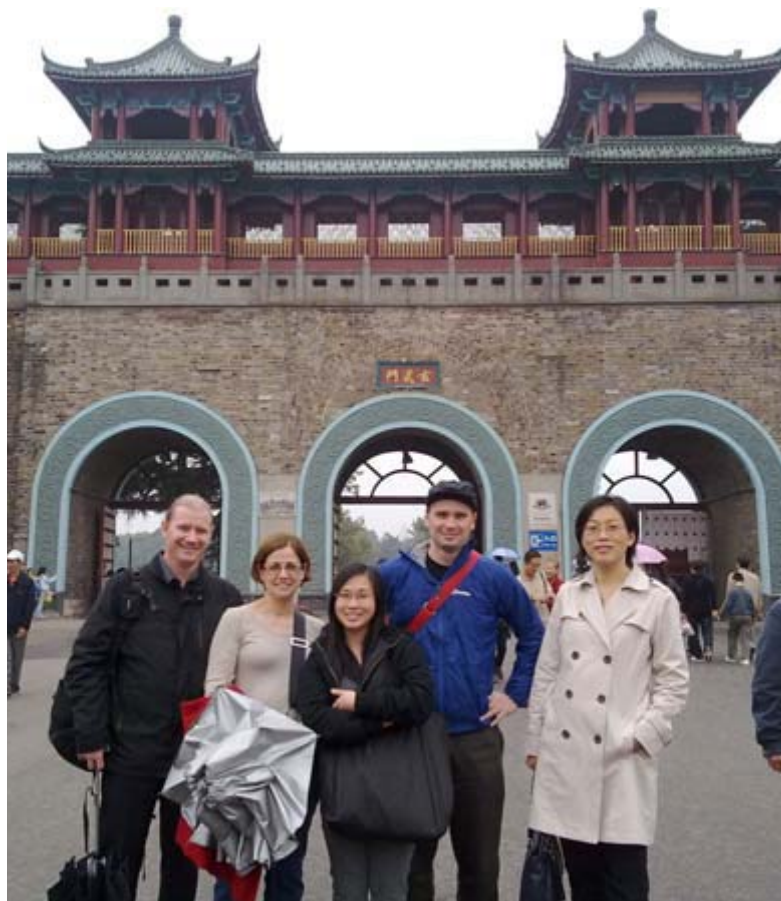
Five ATN nanoresearchers were among those who participated in an Australia-China NanoNetwork Workshop hosted by the Nanjing University of Aeronautics and Astronautics (NUAA) on 21 October .

The Workshop, held in the lead up to the 2010 Annual Meeting of the International Strategic Technology Alliance (ISTA), focused on discussion of key research challenges for novel nanomaterials in the areas of medicine/health and environment/water.

ATN researchers presented their ideas formally alongside researchers from NUAA, the Chinese Academy of Sciences Nano-Institute (Suzhou) and Hong Kong Polytechnic University.

Researchers and research students from Tongji University (Shanghai), Southeast University (Nanjing) and Zhejiang University (Hangzhou) also contributed to subsequent group discussions.

Building on the outcomes from the workshop, the ATN will continue to support the dialogues developed, with a view to assisting ATN researchers and their Chinese colleagues to develop new collaborative projects.



ATN researchers who participated in the Nanjing workshop. From left: Dr Wayde Martens (QUT), Dr Stella Valenzuela (UTS), Ms Jane Ng (UTS), Dr Benjamin Thierry (UniSA) and Associate Professor Linda Zou (UniSA)

At the ISTA meeting, Prof Neil Furlong provided an update on activities and outcomes of the NanoNetwork, including the plan for the Australia-China Joint Laboratory on Nanoscience to the broader ISTA membership of Chinese universities. The meeting was very supportive of the proposed laboratory.

The ISTA meeting also provided an opportunity for the participating ATN researchers to further build their own China 'networks' – including the development of future adjunct supervisors for research students.