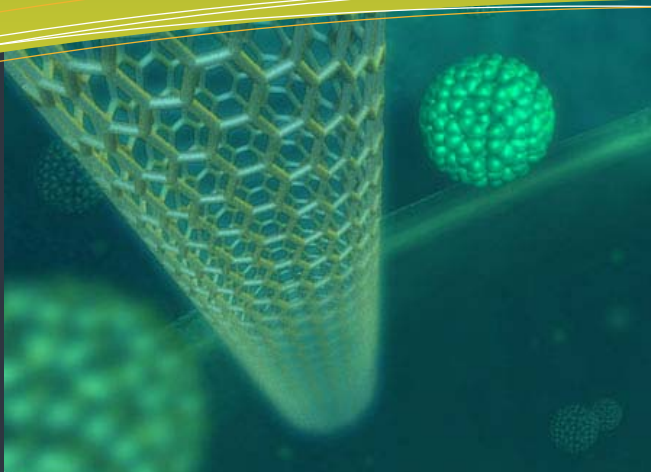


The Australia-China NanoNetwork Information Bulletin



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

Inside

ATN Chair to
engage
government 2

Suzhou forum
a success 2

Faith driven
nanoscience 3

Nanotechnol-
ogy for the
Energy
Challenge 3

Call for relaunch of the Australia/China Collaboration Fund



Left to right: Dr Tian-bin Ren, Institute of Nano and Bio-polymeric Material, Tongji University; Emeritus Professor Neil Furlong, Program Manager: Research, ATN; Ms Vicki Thomson, Executive Director, ATN; Professor Dong Qi, Vice President (International Relations), Tongji University; Professor Shen Jun, Director, Centre for Nanoscience and Technology, Tongji University

From 5-6 August, ATN Executive Director, Ms Vicki Thomson, and Project Manager (Research), Professor Neil Furlong, participated in Australia-China Science and Technology Week at the Shanghai World Expo. This policy forum was also attended by senior officials from the Department of Innovation, Industry, Science and Research (DIISR), current and former Chief Scientists, the Deputy Min-

ister from the Chinese Ministry of Science and Technology (MOST), the Chair of the Science and Technology Commission of Shanghai and Vice Presidents from Tongji University.

The inclusion of the NanoNetwork at this event, which brought together leading researchers from Australia and China

(Continued on page 2)

Enquiries
Ms Vicki Thomson
Executive Director (ATN)
vicki.thomson@atn.edu.au

Website
[www.atn.edu.au/
AustraliaChinaNanoNetwork](http://www.atn.edu.au/AustraliaChinaNanoNetwork)





ATN Chair to engage government

During their visit to Shanghai, Ms Thomson and Professor Furlong also met with researchers and research leaders from Tongji and Shanghai JiaoTong universities, the Ministry of Science and Technology, the Shanghai Nanotechnology Promotion Centre, as well as representatives of Aus-trade and Australian Education International (AEI) to both connect with ISTA NanoNetwork partners and to investigate avenues for the partnership's further development and expansion.

With the NanoNetwork's activities now requiring increasing engagement with broader Chinese and Australian agencies and research communities, it is important to embed the NanoNetwork in the consciousness of these agencies.

To aid the network's activities, ATN Chair, Professor Ross Milbourne, will from 28 - 30 October be visiting a range of Chinese Ministries and other agencies in Beijing and Shanghai, to raise the profile of the ATN and the NanoNetwork in particular, with a view to eventually securing support from Chinese agencies at national, provincial and city levels.

Call for relaunch of the Australia/China Collaboration Fund

(Continued from page 1)

in the areas of climate change, food and water security and nanotechnology, underlines the increasing recognition of the network as a meaningful research player in Australian/China collaborations.

In hosting this event, the Australian government acknowledged the critical role innovation will play in our future prosperity and wellbeing. It also noted that Australian science and technology links with China are both "precious and strong".

However, the fact that there is no specific fund to facilitate research collaboration between Australia and China raised questions among our Chinese partners and came at a time when the Chinese government, via the Deputy Minister of MOST, used the forum to announce a significant increase in funding for Australia-China research collaborations.

Suzhou Forum a success

From 11-17 July, ATN nano researchers Professor Xia Lou (Bio-nano Program Leader, Nanochemistry Research Institute, Curtin) and Professor Bruce Milthorpe (Dean of Science, UTS) participated by invitation in the International Forum on Nano-Biology, Nano-Medicine and Industry Development, organised by NanoNetwork partners at Southeast University (Nanjing) and held and hosted by the Suzhou Institute of Nano-tech and Nano-bionics.

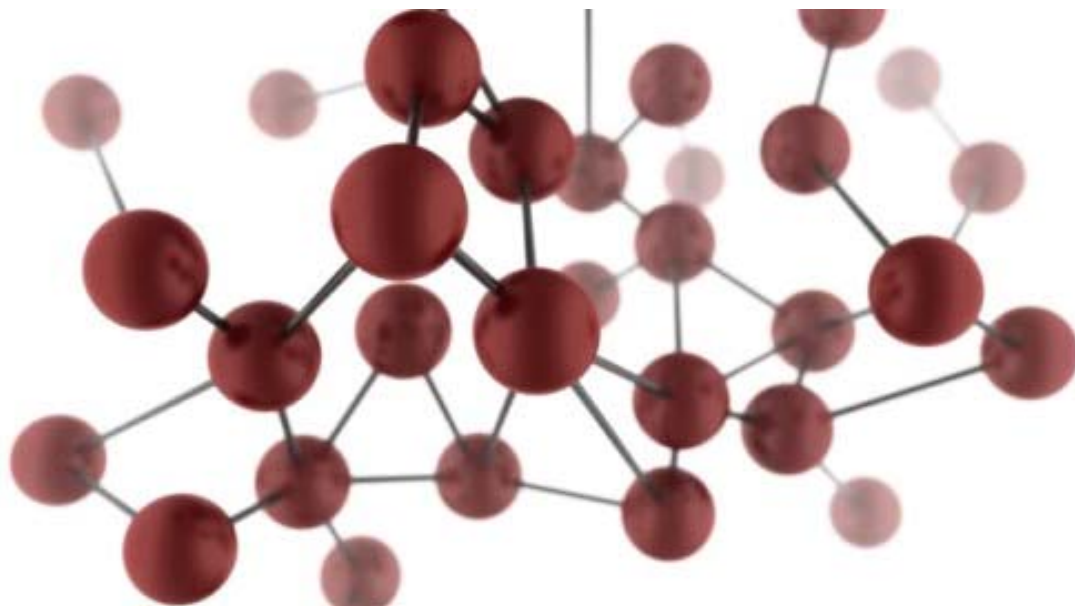
Former Trade Minister and current Education Minister, Simon Crean, speaking at the Expo in May, highlighted the point that Australia must be seen as more than a tourist destination – it needs to be seen as a destination to do business, invest, and expand trade and foreign partnerships.

The lack of specific funds to promote research collaboration between our two nations is contrary to that aim. The research environment is a highly competitive one and at a time when other nations are increasing their profile and financial commitment in China, the ATN has asserted that the absence of a dedicated fund is both short sighted and contrary to government rhetoric on the significance of China as a major partner. Significantly, it sends a mixed message to our Chinese partners about the true commitment to innovation and collaboration between our two nations.

The ATN researchers were amongst the ~20 presenters at the event, which was supported by Suzhou and Jiangsu Province authorities. It was widely considered a highly successful opportunity to showcase NanoNetwork collaborative research and meet with current research partners.

Beyond the Forum, the visit provided the opportunity for ATN researchers to engage with current and potential partners at the

(Continued on page 3)



Suzhou Forum a success

(Continued from page 2)

Institute of Functional Nano & Soft Materials (FUNSOM) at Soochow University, the Southeast University laboratories at the Suzhou Research Institute, and Huazhong University of Science and Technology (HUST).

As a result of those visits, discussions are currently underway to explore possible collaboration between HUST and Curtin University in Atomic Force Microscopy.

Nanotechnology for the Energy Challenge

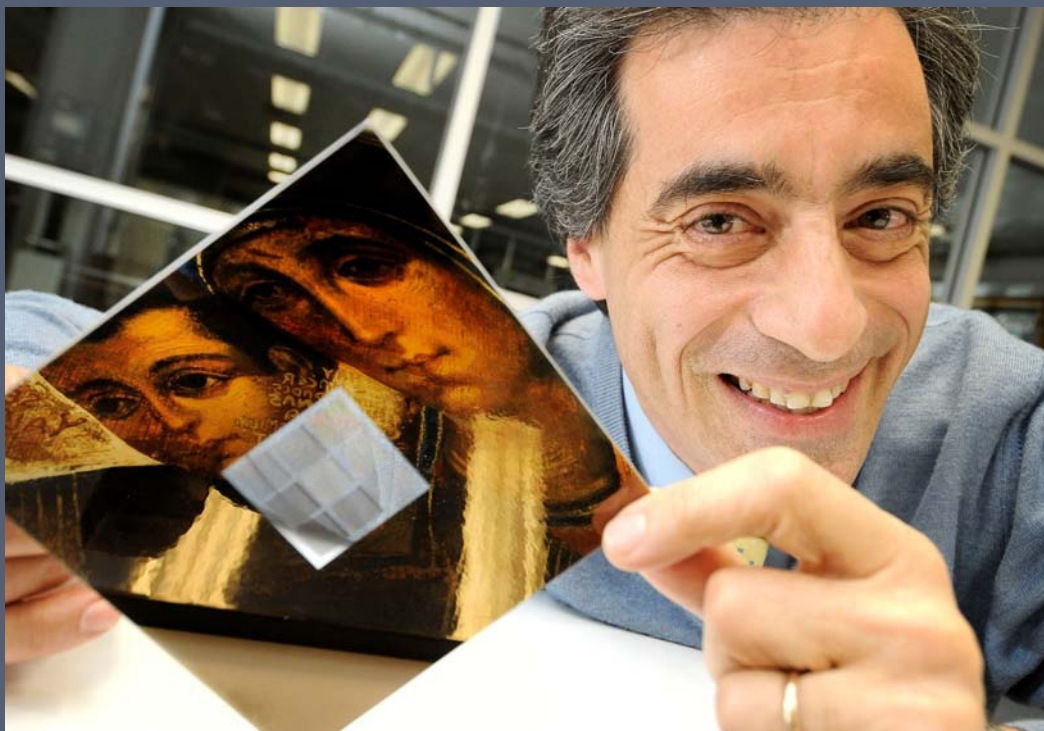
With the potential of nanotechnology to impact on energy production methods a key focus of the NanoNetwork, this new publication presenting the current state of the art with regard to different aspects of sustainable energy production and its efficient storage may be of interest to network researchers.

Edited by Javier Garcia-Martinez, Director of the Molecular Nanotechnology Lab at the University of Alicante (Spain), the book focuses on three main themes: sustainable energy production, efficient energy storage, and energy sustainability.

It provides an excellent overview of the subject on the scientific level, covering recent progress as well as exciting activities at the development stage, ranging from nanomaterials for energy production, via fuel cells and nanostructured materials for fuel production, to supercapacitors and climate change.

(Continued on page 4)

Faith driven nanoscience



Professor Nunzio Motta, Principal Research Fellow, School of Engineering Systems, QUT
A lithographic mask used to control the growth of carbon nanotubes reflects his image of Mary and Jesus

When academic Nunzio Motta arrived in Australia from Italy with his wife and four children in 2003 he wasn't advancing his career but his experience of God providing for his life.

The Australia-China NanoNetwork has been a major beneficiary of Nunzio's decision to do what the Catholic Church had asked of him: move to Australia.

Nunzio is established in Brisbane, at Queensland University of Technology (QUT) as Principal Research Fellow in the School of Engineering Systems, Faculty of Built Environment and Engineering.

His research focuses on the special properties of very small nanotubes, each typically many times smaller than say, a

human blood cell or the thickness of a human hair, to enhance the production of clean energy from the sun or to detect greenhouse gases in new generations of nano-sensors. This research generates global recognition and he is a foundation member of the NanoNetwork.

In 1981 he had graduated with a "Laurea" (Physics) from the Università di Roma "la Sapienza" and in 1986 took a PhD (Physics) from Scuola Normale Superiore di Pisa.

Since then he has been involved in studying the properties of materials, and in particular of semiconductors at the nano-scale. Looking at the formation of nano-crystals of Germanium on Silicon

Edited by Javier Garcia-Martinez

WILEY-VCH

Nanotechnology for the Energy Challenge

With a Foreword by Ernest J. Moniz



Nanotechnology for the Energy Challenge

(Continued from page 3)

Nanochallenges in energy, as well as those in health and the environment, will be a focus of an upcoming NanoNetwork workshop, "Nanoscience - Real World Opportunities" to take place on 21st October at the Nanjing University of Aeronautics and Aerospace (NUAA), in association with the ISTA Annual General Meeting.

For further information on this event, please contact Professor Neil Furlong neil.furlong@rmit.edu.au

Faith driven nanoscience

(Continued from page 3)

through the powerful "eye" of the Scanning Tunneling Microscope, capable of visualizing single atoms on a surface, has been his major research interest in the University of Roma Tor Vergata, where he worked for 20 years.

In QUT now he is leading a group to use this instrument, recently funded by the ARC for the first time in Queensland, to boost research capacity towards energy and environmental applications.

The juxtaposition of being a leading figure in nano research which is at the absolute edge of the worldwide research frontier, with an experience of faith such that the Catholic Church sent Nunzio to Australia as a missionary naturally arouses curiosity, but it sits easily with Nunzio. He is equally committed and passionate about both. In fact it's simple: "Both do good for mankind", he says.

So why a missionary and why Australia? Nunzio speaks of turning for support to God, who gave him and his wife an appreciation of values and the possibility of loving one another in everyday life. Most importantly for Nunzio, Jesus Christ turned a

marriage that had been in trouble into a strong and enduring relationship.

"In Rome we had one child when we were very young and then my work became my main commitment: I was driven by work, not by family. That led to an unhappy wife and I had a choice to make," he says. "We sought support in the Catholic Church and I saw what Jesus Christ could do to help us. So my wife and I felt the desire to help others to meet him, as we had been helped. It changed our lives."

In Brisbane Nunzio and his wife, with their children operate as missionaries across two parishes, participating in twice weekly bible meetings and also youth meetings. Nunzio stresses the church's view that missionary work is not confined to third world countries and that he is not the only person Rome has sent to Australia to encourage a return to faith.

"No. It worries the church that people in countries such as Australia are so busy and have changing priorities so that their faith is being forgotten," he says. "We are here to help revive that faith, to remind people what it means to have faith. That is why I was asked to come here. It is important work."