

ARCNN News. Edition 13, May 2007



Welcome

Dear Members and Friends

Welcome to the thirteenth edition of the ARCNN News.

We are in the process of revamping the Newsletter to bring more information which is of interest to you. We plan to include newly established facilities, funding deadlines, special issues of journals, new books, conferences and member news. If you want to see any additional items in the newsletter, please let us know.

The **Nanotechnology Web Based Forum is now live.** This Nano Forum has been set up to create and stimulate discussion on nanotechnology related matters. We encourage all members to register and take part in this forum.

Many Lecturers have visited Australia and given seminars and CDs of these seminars are available FREE to ARCNN members and friends.

Nanotechnology Facilities and Expertise Database will benefit the entire Australian Nanotechnology Community including Govt policy makers. Please submit your expertise and facility details using the ARCNN webpage.

Congratulations to Tom Rufford from The University of Queensland for being re-elected as the Student representative of the ARCNN Management Committee.

Preparations for ICONN 2008 are underway and the Conference will be held in Melbourne from 25th-29th February 2008. ICONN 2008 will be co-chaired by Paul Mulvaney and Abid Khan and will feature a new industry stream. More details in the next newsletter / ARCNN web page.

The Australian Government has just announced funding of \$21.5 Million over 4 years to establish the Nanotechnology Strategy further information can be found on the DITR web site.

Look forward to your active participation in the Network activities
C Jagadish, Convenor

Update profiles, address changes etc

Please remember to **advise address and email changes** so that the ARCNN member database is kept up to date. Your current details can be checked on your online profile at <http://www.ausnano.net/index.php?page=profiles>.

If you have not submitted an online profile, we would encourage you to do so as this provides a valuable resource for researchers seeking **collaboration** with people who have experience or expertise in a particular nanotechnology area. A **search facility** is provided on the Members Profiles webpage. Researchers looking to fill postdoc **positions** may also use the member database to locate students with research interests and experience in particular fields.

ARCNN Overseas Travel Fellowships – 1st Round 2007

Congratulations to the winners of the Overseas Travel Fellowships for this first round:

- Dr Joselito Razal (Uni of Wollongong),
- Dr Dusan Losic (Uni of South Australia)
- Mr Craig Bell (Uni of Queensland)
- Mrs Xiaoxia Yin (Uni of Adelaide)
- Ms Tara Schiller (QUT)
- Dr Jingxian Yu (Flinders Uni)

The ARCNN offers 5 awards of up to \$5000 every 6 months to PhD students and ECRs to assist them in carrying out collaborative research in overseas institutions.

Deadline for the next round of this year's Overseas Travel Fellowships is the 31st August. More information can be found at

http://www.ausnano.net/content/overseas_travel

ARCNN Long Term Visits

Congratulations to Brianna Thompson for successfully applying for a long term visit to the Bionic Ear Institute in Melbourne.

The ARCNN offers Long term and Short term funding for visits within Australia to successful applicants throughout the year. Further information about any of the funding available can be found at: http://www.ausnano.net/content/funding_and_sponsorship

Young Nanotechnology Ambassador Awards

The ARCNN will award selected students in each state/territory of up to \$2000 to present and facilitate interest in Nanotechnology at local schools.

The deadline for this year's first round of applications for the Young Nanoscience Ambassador Awards is 15 June. Further information about the Program can be found at: http://www.ausnano.net/content/young_ambass_awards

Distinguished Lecturer Tour planned for June

Professor Selim Ünlü, a Professor of Electrical and Computer Engineering, Biomedical Engineering, and Physics at Boston University will be visiting Australia in the last week of June. Prof Ünlü's career interest is in research and development of photonic materials, devices and systems focusing on the design, processing, characterization, and modeling of semiconductor optoelectronic devices, especially photodetectors, as well as high-resolution microscopy and spectroscopy of semiconductor and biological materials.

The title of his Seminar is: "Nanoscale Imaging of Semi-Conductor and Biological Systems".

The dates and locations of Prof Ünlü's talk are:

- ANU, Canberra – 20th June
- University of Western Australia, Perth – 25th June
- Monash or Melbourne Uni, Melbourne – 27th June
- Macquarie Uni, Sydney – 28th June
- University of Technology, Sydney – 29th June

For further information, please visit the ARCNN website: www.ausnano.net.

Nanotechnology Facilities Database

ARCNN has added a Nanotechnology Research Facilities and Capabilities database onto our site. The aim of this database is to be a first access site to all the Nanotechnology Infrastructure facilities and capabilities available to nanotechnology researchers. All group leaders who are interested in adding their facilities onto the ARCNN site will be asked to add facilities/equipment/Infrastructure. NCRIS facilitators have been using the Network web page to get information about activities in various institutions in the country.

In each Newsletter we will be featuring a different facility.

Featured Nanotechnology Facilities

Spectroscopic Ellipsometry

Nanotechnology Capabilities:

Analysis of the optical properties of thin films and multilayer thin films from 1Å up to 1micron. Spectral region from 200nm to 2200nm. Can vary polarization of incident light and temperature of film, also spot size down to 50microns. Instrument is JY UVISEL (bought 2006).

Research Group:

[University of Melbourne, Chemistry School, Nanoparticles Group](#)

Contact Details:

[Paul Mulvaney](#)

61-3-8344-6486

Nanocrystal Laboratory

Nanotechnology Capabilities:

From January 2007, the Nanocrystal Laboratory will be located in the Bio21 Institute at the University of Melbourne. Facilities within the Laboratory or within the Bio21 Building include:

Electron Microscopy

- FEI 300kV FEGTEM
- FEI Nanolab FIB
- FEI FEGSEM
- FEI cryo FEGTEM
- Clean Room Class 1000
- Modern specimen preparation facilities for 1-4

Atomic Force Microscopy

- Dimension 3100 AFM

Lab Facilities

- Basic spin coater (Headland Research)
- Automated Dipcoater NIMA technologies
- Jobin Yvon Spectroscopic Ellipsometer (200-2000nm)
- Jobin Yvon Fluorolog Fluorimeter and Single Photon counting Lifetime (>500ps)
- Cary 5 UV-vis-NIR spectrophotometer
- EMITECH Sputter Coater

- Renishaw Raman confocal microscope
- Olympus 3-laser Confocal microscope for single molecule spectroscopy and imaging
- Cryo capability for fluorimeter (77K at present)
- state of the art Fume Cupboards/Schlenk Lines/laminar flow cupboards
- Dark Field Imaging and spectroscopy of single nanocrystals

Research Group:

[University of Melbourne, Chemistry School, Nanoparticles Group](#)

Contact Details:

[Paul Mulvaney](#)
61-3-8344-6486

Nanotechnology Strategy Funding announced by the Australian Govt.

The Australian Government is providing \$21.5 million over four years to establish the National Nanotechnology Strategy. Further information can be found at:

<http://www.industry.gov.au/assets/documents/itrinternet/NationalNanotechnologyStrategy20070504170811.pdf>

IEEE Nanotechnology Council Announced 2007 Award Winners

Prof Pallab Bhattacharya, University of Michigan (past ARCNN DL) and Prof Mark Reed, Yale University (Plenary Speaker at ICONN 2006) jointly won the IEEE Nanotechnology Pioneer Award for their pioneering contributions to Quantum Dot Optoelectronics and Nano and Molecular Electronics, respectively.

Prof Changwu Zhou, University of Southern California won the IEEE Early Career Nanotechnology Award for his seminar work on nanotube and nanowire electronics.

Prof Toshi Fukuda, Nagoya University won the IEEE NTC Distinguished Service Award for his services as President of the Council.

Congratulations to all the winners.

The Deadline for 2008 Awards is October 15, 2007. Further information will be posted on the ARCNN webpage.

Journal Special Issues-

Journal of Nanomaterials - call for papers for the special issues of the Journal of

Nanomaterials.

They can be accessed through the following links:

Surface Nanoscience: <http://www.hindawi.com/GetPage.aspx?journal=JNM&PAGE=SNS>

Architecture of Crystallographic Oriented Nanocrystals:

<http://www.hindawi.com/GetPage.aspx?journal=JNM&page=ACONC>

Composite Hollow Spheres and Capsules

<http://www.hindawi.com/journals/jnm/si/chsc.html>

Modeling and Characterization of the Interaction of Electromagnetic Wave with Nanocomposites and Nanostructured Materials

<http://www.hindawi.com/GetPage.aspx?journal=JNM&page=NANOWAVE>

The journal of Nanomaterials ISSN: 1687-4110, e-ISSN: 1687-4129 is an international refereed journal. The overall aim of the Journal of Nanomaterials (JNM) is to bring science and applications together on nanoscale and nanostructured materials with emphasis on synthesis, processing, characterization, and applications of materials containing true nanosize dimensions or nanostructures that enable novel/enhanced properties or functions. It is directed at both academic researchers and practising engineers. JNM will highlight the continued growth and new challenges in nanomaterials science, engineering, and nanotechnology, both for application development and for basic research. For complete information about JNM, please visit the journals website at <http://www.hindawi.com/GetJournal.aspx?journal=JNM>

New Text Book on NanoChemistry by the Royal society of Chemistry (UK)

Professor Geoff Ozin of University of Toronto has written a book on NanoChemistry published by the Royal Society of Chemistry (UK). This book is widely used as a text book and this may be of interest to you. More information can be found on the RSC website: <http://www.rsc.org/Publishing/Books/News/Nanochemistrytext.asp>

Upcoming ARCNN Supported Events

The 3rd Asian and Pacific Rim Symposium on Biophotonics (APBP2007) in conjunction with Downunder II to be held in Cairns from 9-11th July

<http://www.swinburne.edu.au/hosting/apbp2007/>

The Nanostructures for Electronics Energy and Environment (Nano-E3) workshop and school to be held at South Stradbroke Island, Qld from the 3-7th September

<http://www.scientificambitalia.org/events06/nanows.html>

Further details of the above can be found at
<http://www.ausnano.net/index.php?page=events>

Other Overseas Nano events

Asian Nano Forum Meeting to be held in Taiwan in June 13-16, 2007. For more information visit the ANF website: <http://www.asia-nano.org/>

IEEE Nanotechnology Conference (IEEE NANO 2007) will be held in Hong Kong during August 2-5, 2007. Further information could be found at: <http://www.ieee-nano.org/>

IEEE/LEOS Optical MEMS and NanoPhotonics 2007 will be held in Taiwan during August 12-16, 2007. Abstract submission deadline is: May 18, 2007. Further information could be found at: <http://omems2007.itrc.org.tw/>

EU 7th Framework Programme (FP7) Further information including brochures and presentations can be found at <http://www.ausnano.net/index.php?page=links>

Other Nano events

The 12th International COMS Conference (COMS2007) will be held 2-6 September 2007 at the Sofitel Hotel, Melbourne Australia. COMS is the leading international conference on the commercialisation of micro and nano technologies. COMS addresses the issues of opportunity realisation - from research, technology transfer, manufacturing processes, facilities, infrastructure, investment, applications and markets, to unique issues such as regulatory, social implications, education and workforce development. COMS is a networking showcase of insight, knowledge, experience and inspiration. COMS2007 will bring together leaders from all over the world and every sector of the supply chain - from high tech companies, national labs, regional development and government agencies, investment and consulting groups, market researchers, educationalists and students - all sharing, learning and creating partnerships in an open interactive environment.

For your convenience, a full provisional technical program and conference information is available at the Conference website: www.mancef-coms2007.org.

The I2CAM Workshop will be held 9-13th April 2007 at Yeppoon. Further information can be found under this link www.physics.uq.edu.au/i2camworkshop

Nanowerk offers a unique and free nanomaterials database with over 1,400 nanomaterials, largest nanotech conference database, daily news coverage, exclusive Nanowerk Spotlight articles plus a vast range of other information and links. This site can be accessed through this link <http://www.nanowerk.com/>

Other Nano news

NanoSafe Australia is a nationwide research network of Australian toxicologists and risk assessors, who aim to address the issues concerning the occupational and environmental health and safety of nanomaterials. The network's missions are:

- To support government, industry and non-government organizations (NGOs) in their efforts to understand the health and safety issues surrounding nanotechnology products and their manufacturing processes.
- To provide quality data for the appropriate risk assessments of nanomaterials. Nanosafe Australia has recently produced a position paper on current OHS best practices for the Australian nanotechnology industry, and network members actively contribute to several government advisory committees on nanotechnology health and safety issues. If you are interested in further information on these issues, see their website at

<http://www.rmit.edu.au/rd/nanosafe>

ARCNN Admin Contacts

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Fax 02 6125 3915.

For further information regarding ARCNN or any events, please contact Liz or Ilonka, or go to www.ausnano.net