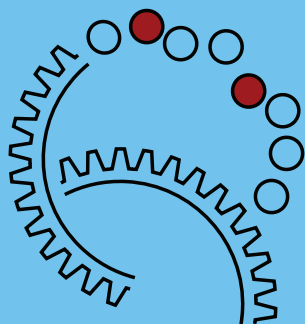


Australian Research Council
Nanotechnology Network



Welcome

Dear Members and Friends

Welcome to the fifteenth edition of the ARCNN News.

As you can see we have revamped the layout of the newsletter. Hope you all like it. We appreciate any comments and suggestions about the new layout or what else you would like to see included in the newsletter.

ICONN 2008 is well underway. **Abstracts are now closed**. Thanks to everyone who submitted an abstract, we have received over 500 to date. The program and registration brochure will be up on the ICONN website soon.

Professor Horst Hahn from Germany will be partaking in a Distinguished Lecturer tour after ICONN 2008. Anyone interested in hosting him between March 6th and 14th 2008 please contact Liz or Ilonka.

The deadline for the second round of the Young Nanotechnology Awards is coming up this month. Please make sure your applications are in by the 15th of October.

The next ECR-PG symposium will be held on the weekend before ICONN 2008, at the Bio-21 Institute at the University of Melbourne. We encourage students and ECRs to submit their abstracts ASAP, as the deadline is the 26th October 2007. More information can be found in this month's newsletter.

Looking forward to your active participation in 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 Nanoforum

The ARCNN nanoforum (<http://forum.ausnano.net.au/>) is now fully online and ready for use. It is intended to serve as a bulletin/discussion board for the nanotechnology community in Australia, so if you'd like to post notices there (e.g., positions open, confs/workshops, events, questions, discussion points, etc), please feel free to do so. You will need to register first, which you can do by clicking the register link at the top left corner of the website. When registering could you please ensure that your username is reflective of your actual name (e.g, surname, firstname_surname or something similar), so that people can identify who is making postings. Adam Micolich is the current moderator for this forum, if you have problems, questions or suggestions for topics to be posted to the forum site, feel free to email him at mico@phys.unsw.edu.au

ARCNN Awards and Deadlines

ARCNN Long and Short Term Visits

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 2nd round 2007

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 second round of applications for the Young Nanoscience Ambassador Awards is 15 October. Further information about the Program can be found at:

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

Journal Special Issues

IEEE Journal of Selected Topics in Quantum Electronics – call for papers for the special issue on Semiconductor Photonic Materials. Paper submission deadline is December 1, 2007.

More information can be found at: <http://www.i-leos.org>

Upcoming ARCNN Supported Events

The next ARCNN early career researcher and postgraduate student symposium will be held on the weekend before ICONN (23/24 Feb 08). The venue will be the Bio-21 Institute lecture theatre at the University of Melbourne (<http://www.bio21.unimelb.edu.au/>). Early career researchers (within 5 years of award of Ph.D) and postgraduate students wishing to present a talk (~20 minutes) at the Symposium should e-mail an abstract up to 2 pages in length (text and figures) to arcnn@rsphysse.anu.edu.au by Friday 26th October 2007. Authors will be notified about acceptance of abstracts by Monday 19th November 2007. Some travel support will be available for the selected speakers. For further details about this event, please go to http://www.ausnano.net/_files/ECR-PG_20Sym_2008.pdf

The 6th International Symposium on Metallic Multilayers is the next in a series begun in Kyoto (1993) and continued in Cambridge (1995), Vancouver (1998), Aachen (2001) and NIST-Boulder (2004), will be held at the University of Western Australia, Perth from 15-19th October 2007. More information on the symposium can be found at:

<http://www.mml07.uwa.edu.au>

The SPIE conference on Device and Process Technologies for Microelectronics, MEMS, Photonics and Nanotechnology will be held at the Australian National University, Canberra from 4-7th December 2007. There are limited ARCNN sponsored funds available for Students and ECR's. Please contact Dr Hoe Tan at hoe109@rsphysse.anu.edu.au by the **9th of Nov 2007**. For more details about the conference please go to: <http://spie.org/micro-nano-mems.xml>

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

Other Nano events

EU 7th Framework Programme (FP7) Further information including brochures and presentations can be found at

<http://www.ausnano.net/index.php?page=links>

ARC Centre of Excellence for Electromaterials Science (ACES)

One Day Workshop on Ethics and the Regulation of Risk in Nanotechnology will be held 5th November 2007 at the University of Wollongong

This workshop is intended to start to come to grips with some of the issues surrounding risk and regulation and to reflect on the implications of this range of issues for the development of nanotechnology in Australia. This workshop is being developed as part of the education stream of the ACES (see: <http://www.electromaterials.edu.au>).

Cost: \$50 (\$25 students). This includes morning tea + lunch + hand outs

Interested? Please register by emailing William Price at wprice@uow.edu.au

The Nanoparticle Measurement in Australia Workshop, will be held on the 19th November 2007, 9:30-4:30 at the University of Technology, Sydney. For more information go to <http://www.ausnano.net/index.php?page=events>

Mathematical & Computational Nanoscience 2007, a one-off 3-day symposium held at Victoria University in Wellington, New Zealand on December 9-11, 2007. This symposium is aimed at mathematicians and theoretical or computational scientists interested in nanoscale science and technology. Abstracts must be submitted by October 12th at <http://www.macdiarmid.ac.nz/mcn/>

For further details go to <http://www.macdiarmid.ac.nz/mcn/>

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 are 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.

Featured Facilities

Optical Characterisation Facility

Nanotechnology Capabilities:

- * SCI Filmtek wafer mapper
- * Metricon Prism Coupler
- * Shimadzu UV-Vis-IR spectrophotometer
- * Cary 5000 UV-Vis-IR spectrophotometer
- * Femtosecond Coherent MIRA Ti:sapphire laser and amplifier
- * Clark MXR CPA 2001 femtosecond Ti:sapphire laser with Light Conversion TOPAZ optical parametric generator
- * High resolution tunable dye laser and Ti:sapphire lasers

Materials Processing Facility

Nanotechnology Capabilities:

- * Access to customised Orsay Physics Focused Ion Beam Mill for nano-patterning
- * Oxford Plasma lab RIE 100 ICP dry etching system
- * TEPLA plasma cleaner
- * Lithograph facilities (Karl Suss MA6 mask aligner)
- * ExcelTeq SVG 8600 track coat/develop system
- * Custom laser direct write lithography system

Research Group:

Australian National University, Research School of Physical Sciences and Engineering, Laser Physics Centre

Contact Details:

Barry Luther-Davies

(61) 0261254255

Laser Physics Centre, RSPHysSE, Australian National University, Canberra ACT 0200

Other Nano News

We have just received news from the Australian Academy of Science that the Japan Society for the promotion of Science (JSPS) is holding its first "HOPE Meeting" on Nanoscience and Nanotechnology in Tsukuba from the 24th to the 28th of February 2008, and is offering up to five fully-funded scholarships, including air fares and local expenses, for Australian PhD students to participate. There will be up to five students from each of another 11 Asian/Pacific countries plus about 25 Japanese students, making about 80 participants in all. The aim of the meeting is to give opportunities to excellent graduate students from countries in the region to engage in interdisciplinary small-group discussions with Nobel Laureates and other distinguished scientists as well as with research students from other countries. According to the rules for the meeting, the five recommended candidates must be of Australian nationality, but need not be currently located in Australia. Nomination forms are available on our web-site <http://www.ausnano.net/> on the HOME page, and also under OTHER EVENTS. Nominations close with us here at ARCNN on Monday October 22. Forms should be submitted by e-mail and also by post to authenticate signatures.

Selection of the five final candidates will be made by ARCNN and these will be forwarded to the Australian Academy of Science for recommendation to JSPS.

As you may be aware, the National Industrial Chemicals Notification and Assessment Scheme (NICNAS, <http://www.nicnas.gov.au>) represents Australia on the OECD Working Party on Manufactured Nanomaterials (WPMN). The WPMN is seeking the assistance of national authorities to collect information that will feed into the various projects currently underway which are:

- * An OECD Database on Human Health and Environmental Safety Research;
- * Human Health and Environmental Safety Research Strategies on Manufactured Nanomaterials;
- * Safety Testing of a Representative Set of Nanomaterials;
- * Manufactured Nanomaterials and Test Guidelines;
- * Co-operation on Voluntary Schemes and Regulatory Programmes; and
- * Co-operation on Risk assessment.

We would appreciate your response by cob 15 October 2007, to enable a consolidated response to be provided to the OECD by the stipulated deadline of 19 October. Please send your response to matthew.gredley@nicnas.gov.au.

If you have any queries or concerns, please contact Roshini Jayewardene (tel 02 8577 8860) or Matthew Gredley (tel 02 8577 8873)

The questionnaire can be accessed at:

http://www.ausnano.net/_files/OECDquestionnaire_September_2007.doc

The Australian Academy of Science is still inviting applications from Australian researchers to participate in European research networks known as COST Actions.

Details can be found at: <http://www.science.org.au/internat/cost.htm>

Bandwidth Foundry International Commences NCRIS Program

Bandwidth Foundry International (BFI), your Sydney-based photomask manufacturer

and micro-fabrication facility, would like to bring to your attention that it has commenced offering subsidized services and facility access to Australian institutions through the National Collaborative Research Infrastructure Strategy (NCRIS), www.ncris.dest.gov.au program. Every week, 16 hours of facility time will be available at a rate of \$75 per hour, plus raw materials costs, a significant boon for researchers who want to build micro- and nano-scale devices but have been previously unable to afford the high costs of infrastructure. This represents a 35 to 50% reduction in the pricing of our photomasks, one of the key elements in micro-fabrication research. Moreover, the heavily subsidized facility access rates will enable researchers to economically establish an at-call fully-furnished laboratory complete with experienced technical staff, making them more agile and productive. Facility access under the NCRIS program is available on a first-come first-served basis, and bookings are filling fast. If you would like to access BFI's facilities or services under the NCRIS program please contact David O'Connor on

bfi.info@bwfoundry.com, or phone (02) 8374 5300.

Distinguished Lecturer

Prof Horst Hahn, from the Karlsruhe Institute for Nanotechnology in Germany will be visiting Australia as an invited speaker at ICONN 2008, and has agreed to do a Distinguished Lecturer tour after ICONN wraps up. His main research interests are in the areas of synthesis, characterisation and functional (physical and chemical) properties of nanostructured materials in the form of thin films, nanoparticles and bulk materials. Anyone that is interested in hosting Prof Hahn between March 6th and 14th, please contact Liz or Ilonka.

IEEE Nanotechnology Council 2008 Awards – Call for Nominations

IEEE Nanotechnology is calling for nominations for the following awards:

- (i) Nanotechnology Pioneer Award
- (ii) Early Career Nanotechnology Award
- (iii) NTC Distinguished Service Award

The Deadline for 2008 Awards is October 15, 2007. Further information can be found at <http://www.ausnano.net/index.php?page=newsitem&id=22>

The Australian National Fabrication Facility

Subsidised access to state-of-the-art facilities for micro and nanofabrication is now available to all Australian researchers through the Australian National Fabrication Facility (ANFF, www.anff.org.au).

Under the National Collaborative Research Infrastructure Strategy, www.ncris.dest.gov.au , the ANFF links seven nodes across Australia offering cutting-edge equipment for the processing of hard materials (metals, composites and ceramics) and soft materials (polymers and polymer-biological moieties). Each node offers expertise in a specific range of areas. Across the capability, these range from the fabrication of advanced materials and functional organic/polymer synthesis to the fabrication of devices, such as microelectronic, microfluidic and photonic. Critically, the ANFF provides the infrastructure and technical support for research to be taken through to proof of concept.

Researchers can either work at the node under expert guidance, or contract for

specialised products to be fabricated at highly competitive rates.

Participating institutions include: Australian National University, Bandwidth Foundry International, Macquarie University, the Melbourne Centre for Nanotechnology, the Optical Fibre Technology Centre, and the Universities of Newcastle, New South Wales, Queensland, South Australia and Wollongong.

Access to the facility has commenced and bookings are now available. So, to discuss how the ANFF can meet your fabrication needs, contact Rosie Hicks on rosie.hicks@anff.org.au or call 0438 454077.

ARCNN Admin Contacts

Network Manager: Ms Liz Micallef

Tel: 02 6125 5952

Network Administrator: Ms Ilonka Krolikowska

Tel: 02 6125 2495

Or email Liz and Ilonka: arcnn@ausnano.net

Fax: 02 6125 3915

For further information on ARCNN events, contact Liz or Ilonka, or go to: www.ausnano.net