

ARCNN Early Career Researcher & Post Graduate Symposium
Seminar Room, Research School of Physics and Engineering, Building 60
Australian National University
19-20th February 2009

Co- Chairs: Hannah Joyce- ANU, Adam Micolich- UNSW

Thursday 19/2

Welcome/Intro

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| 9:00 | Session 1 Nanofabrication - Session Chair - Hannah Joyce | | |
| 9:15 | Yaqiong Zhou | Structures and Properties of Electrospun Nanofibre Yarns | Deakin University |
| 9:30 | Shulei Chou | Lithium Metal Battery Using V ₂ O ₅ Nanomaterials Cathode and Room Temperature Ionic Liquid Electrolyte | University of Wollongong |
| 9:45 | Paul G. Spizzirri | Nano-materials for Imaging and Spectroscopy | University of Melbourne |
| 10:00 | Belinda Hartmann | Towards peptide nanomaterials: A novel approach to peptide manufacture | University of Queensland |
| 10:15 | Aurelia W Dong | Characterisation of Amphiphile Self-Assembly Materials using Positron Annihilation Lifetime Spectroscopy (PALS) : Phytantriol/Water Lyotropic Liquid Crystalline System | CSIRO Molecular and Health Technologies, VIC |
| 10:30 | Ryan Weed | A New Beamline for Positron Annihilation Lifetime Spectroscopy (PALS) | Australian National University |
| 10:45 | Morning Tea | | |
| 11:15 | Invited | | |
| | Paul Meredith | From Shampoo to Solar Cells – An Alternative Research Career Pathway | University of Queensland |
| | Lunch | | |
| | Session 2 Nanoscience for Medicine, Biology and the Environment - Session Chair - Adam Micolich | | |
| 13:00 | Mega Ng | Preparation of silver doped TiO ₂ coating for bactericidal application | University of New South Wales |
| 13:15 | Jeremy Allan | Comparison of methods used to treat nanowaste from research and manufacturing facilities | University of Western Sydney |
| 13:30 | Roslyn Tedja | Toxicity of Titanium Dioxide in human lung carcinoma cell lines | The University of New South Wales |
| 13:45 | Greg Yuejun Kang | On-chip Separation and Detection of Bioparticles | Monash University |
| 14:00 | Javad Foroughi | A Novel Approach to Produce Polypyrrole Biopolymer Nano-Composite Fibres | University of Wollongong |
| 14:15 | Hilda Wiogo | PMAA Stabilisation of Magnetite Nanoparticles | University of New South Wales |
| 14:30 | Ming Tan | Surface acoustic wave driven microchannel flow | Monash University |
| 14:45 | May Lim | Magnetic Nanoparticle for Gene Delivery: Cellular Uptake, Gene Expression, and Cytotoxicity Study | University of New South Wales |
| 15:00 | Afternoon Tea/ Lab Tour | | |
| | Session 3 Carbon Nanotubes - Session Chair - Hoe Tan | | |
| 16:00 | Mino Naebe | Carbon Nanotube Reinforced Rod-Rigid Polyimide Composite | Deakin University |
| 16:15 | Chee Howe See | Towards the large-scale synthesis of carbon nanotubes | University of Sydney |
| 16:30 | Cameron Shearer | Vertically aligned single-walled carbon nanotube arrays on porous silicon | Flinders University |
| 16:45 | Monica Hanus | Synthesis of Coiled carbon Nanomaterials | University of Sydney |
| 17:00 | Poster Session | | |
| 17:45 | Photos/Break | | |
| 18:00 | BBQ | | |

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Friday 20/2

Session 4 Fabrication and Properties of Inorganic Nanostructures - Session Chair- Michael Gao

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| 9:00 | Abdul Sattar | Coalescence of Pb and Sn nanoclusters in percolating films | University of Canterbury, Christchurch |
| 9:15 | Dario Buso | Sol-Gel films containing metal and semiconductor nanoparticles for Hydrogen detection | CSIRO Materials Science and Engineering |
| 9:30 | Kristy Vernon | Interactions between Metallic Nanoparticles | University of Melbourne |
| 9:45 | Jing-Hua Fang | Fabrication Of Silver Nano-structures Using Porous Anodic Aluminium Oxide Nano-templates | University of Melbourne |

10:00

Morning Tea

Session 5 Theory and Modelling, Session Chair - Neville Fletcher

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|-------|----------------|--|--------------------------------|
| 10:45 | Steve Lade | Transport without net bias | Australian National University |
| 11:00 | Yue Chan | Magnetic field driven nano tippe top | University of Wollongong |
| 11:15 | Thien Tran-Duc | Modelling interactions between two benzene dimers | University of Wollongong |
| 11:30 | Sheng Liu | A new method of characterization of tip areas at small contact depth | University of Queensland |
| 11:45 | Richard Lee | Polyhedral model and geometric structure for silicon nanotubes | University of Wollongong |

Lunch

Session 6 Carbon Nanostructures - Session Chair - Jenny Wong-Leung

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|-------|-----------------|--|-------------------------------------|
| 13:15 | Tony Wright | Optical Conductivity of Graphene Based Structures | University of Wollongong |
| 13:30 | Carlo Bradac | A magnetometer based on single spins in nanodiamond | Macquarie University |
| 13:45 | Maksym Rybachuk | Bulk carbon coatings: stepping out of the twilight zone | Queensland University of Technology |
| 14:00 | Peter Sherrell | 3-Dimensional Carbon Composite Electrodes – for Alternative Hybrid Devices | University of Wollongong |

Session 7 Thin films and semiconductors, Session Chair - Fu Lan

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|-------|-----------------|--|--|
| 14:15 | Brett Johnson | Dopant-enhanced H diffusion into amorphous silicon and its effect on the kinetics of solid phase epitaxy | University of Melbourne |
| 14:30 | Ian McKerracher | Photonic crystal filters for quantum dot infrared photodetectors | Australian National University |
| 14:45 | Paolo Falcaro | Fabrication of X-ray patternable mesostructured silica films | CSIRO Manufacturing and Materials Technology |
| 15:00 | Daniel Gomez | Coherent coupling of Excitons in quantum dots and surface plasmons | CSIRO Materials Science and Engineering |

15:15

Thank you/Conclusion

Afternoon Tea

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Posters

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|--|-----------------|---|--------------------------------|
| | David Sprouster | Vibrational properties of Cobalt nanoparticles | Australian National University |
| | Jason Roberts | Pulsed sub-nanosecond positron beam. | Australian National University |
| | Suriati Paiman | Effects of V/III Ratio and Size on the Crystal Structure and Optical Properties of InP Nanowires | Australian National University |
| | Danyu Liu | Coupling Analysis of GaAs Based Micro-disk Lasers with Different External Claddings | Australian National University |
| | Hannah Joyce | GaAs Nanowires for Optoelectronics: Nanowire Structure, Phase Purity and Compositional Purity | Australian National University |
| | Jung Hyung Kang | Straight GaAs Nanowires on Si (111) Substrates Coated by Thin GaAs Buffer Layer | Australian National University |
| | Ian Goon | Fabrication and Dispersion of Gold Shell protected magnetite nanoparticles for biomedical applications. | University of New South Wales |

