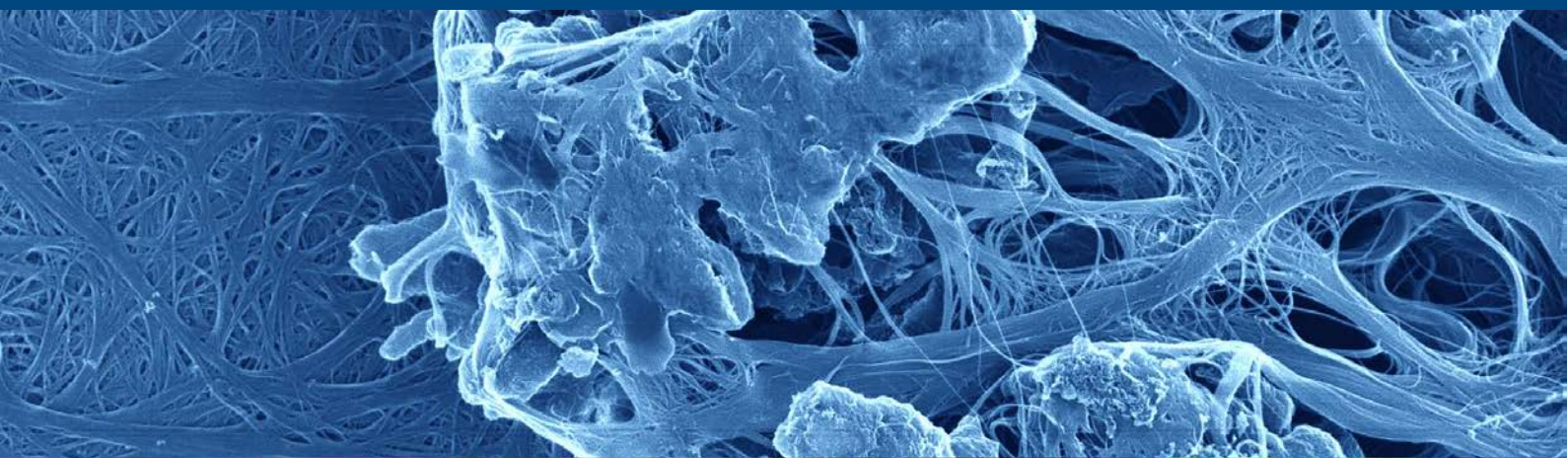


NanoS-E3 2015

International Workshop & School

27 September - 2 October | Kingscliff, Australia

Nanostructures for Sensors, Electronics & the Environment



Conference partners



scientaomicron



School Program

Sunday 27 September *timings subject to change

Time	Session
14.00pm – 17.00pm	Check in at Peppers Salt Resort & Spa, Kingscliff
19.00pm – 21.00pm	Registration and Welcome Function Lagoon Poolside, Peppers Salt Resort & Spa, Kingscliff

Monday 28 September

Time	Session
8.00am	Registration Moss Foyer Peppers Salt Resort & Spa, Kingscliff <i>(for those that missed the first registration)</i>
8.30 am	Welcome <i>Professor Nunzio Motta, QUT, Australia</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
8.45am	Interfaces, surfactants and self-assembly <i>Professor Ian Gentle, UQ, Australia</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
10.25am	Morning tea Moss Foyer Peppers Salt Resort & Spa, Kingscliff
10.50am	Mono and Bidimensional Materials for Chemical Sensing <i>Associate Professor Guido Faglia, University of Brescia, Italy</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
11.40am	Electrochemistry <i>Associate Professor Anthony O'Mullane, QUT, Australia</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
12:45pm	Lunch (12.45pm – 13.45pm) Season Restaurant, Peppers Salt Resort & Spa, Kingscliff + Break
16.00pm	Afternoon tea Moss Foyer Peppers Salt Resort & Spa, Kingscliff
16.15pm	Electrochemistry <i>Associate Professor Anthony O'Mullane, QUT, Australia</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
17.05pm	Fundamentals of Plasma Etching <i>Dr David Lishan, Plasma-Therm, USA</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
18.30pm	Conclusion of Day 1 - School Dinner at own arrangement

Tuesday 29 September

Time	Session
8.30am	Registration Moss Foyer Peppers Salt Resort & Spa, Kingscliff
9.00am	Fundamentals of Plasma Etching <i>Dr David Lishan, Plasma-Therm, USA</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
10.05am	Introduction to Surface Science <i>Dr Josh Lipton-Duffin, QUT, Australia</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
10.50am	Morning tea Moss Foyer Peppers Salt Resort & Spa, Kingscliff
11.10am	Introduction to Surface Science <i>Dr Josh Lipton-Duffin, QUT, Australia</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
12.00pm	SPM and Molecular Self-assembly <i>Dr Jennifer McLeod, QUT, Australia</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff

12:45pm	Lunch (12.55pm – 13.55pm) Season Restaurant, Peppers Salt Resort & Spa, Kingscliff + Break
15.00pm	Set up posters on boards for student poster session Lillie Room, Peppers Salt Resort & Spa, Kingscliff
15.15pm	Afternoon tea Moss Foyer Peppers Salt Resort & Spa, Kingscliff
15.30pm	SPM and Molecular Self-assembly <i>Dr Jennifer McLeod, QUT, Australia</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
16:20pm	Re-engineering the Band-Gap: Searching for New Phases of Matter in Silicon and Diamond <i>Professor David Jamieson, University of Melbourne, Australia</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
18.00pm	Student Poster Session and Workshop Opening Lillie Room, Peppers Salt Resort & Spa, Kingscliff
19.15pm - 21.15pm	Dinner, Opening and Best Student Poster Award Lagoon Poolside, Peppers Salt Resort & Spa, Kingscliff

Workshop Program

Wednesday 30 September

Time	Session
8.00am	Registration Loder & Moss Foyer Peppers Salt Resort & Spa, Kingscliff (for those that missed the first registration)
8.15 am	Welcome <i>Professor Nunzio Motta, QUT, Australia</i> Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff
QUANTUM ELECTRONICS Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff	
8.30am	Keynote: Semiconductor Nanowires for Optoelectronics Applications <i>Prof Chennupati Jagadish, ANU, Australia</i>
9.00am	Controlling Electrons One at a Time in Silicon Ultra-Scaled Devices <i>Dr G. Tettamanzi, University of New South Wales, Australia</i>
9.15am	Keynote: Measuring spin states and tunnel couplings of electrons in atomic precision Si:P devices <i>Dr Matthew House, University of New South Wales, Australia</i>
9.45am	Direct Imaging of Straggled Ions for Top-down Fabrication of Si:P Qubits in Nano-scale Devices using Atom Probe Tomography <i>Prof D. Jamieson, University of Melbourne, Australia</i>
10.00am	Morning tea Loder & Moss Foyer Peppers Salt Resort & Spa, Kingscliff
SURFACE AND 2D MATERIALS Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff	
10.20am	Keynote: Surface-confined Polymerization by Ullmann and Schiff-Base Coupling Reactions <i>Dr Giorgio Contini, CNR Italy, Italy</i>
10.50am	STM Imaging of the Transition from SiC to Graphene <i>Prof Nunzio Motta, QUT, Australia</i>
11.05am	Observation of Plasmon Resonances in Two-Dimensional MoS2 <i>Prof Kourosh Kalantar-zadeh, RMIT, Australia</i>
11.20am	Molecular Self-assembly on Graphene vs Graphite <i>Dr Josh Lipton-Duffin, QUT, Australia</i>
11:35am	2D Covalent Organic Framework for Molecular Trapping <i>Dr Jennifer MacLeod, QUT, Australia</i>
ENERGY Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff	
11.50am	Keynote: Graphene and Other 2D Crystals for Energy Devices <i>Prof V. Pellegrini, Italian Institute of Technology (IIT), Italy</i>

12.20am	Compound Semiconductor Nanowire Solar Cells <i>Prof Chennupati Jagadish, ANU, Australia</i>
12:35pm	Sustainable Natural Polymers for Energy Storage Devices <i>Prof Eddy Zhang, Griffith University, Australia</i>
12.50pm	Lunch (12.50pm – 13.50pm) Season Restaurant, Peppers Salt Resort & Spa, Kingscliff + Break
15.45pm	Afternoon tea Loder & Moss Foyer Peppers Salt Resort & Spa, Kingscliff
EMERGING APPLICATIONS Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff	
16.00pm	Keynote: Nanotechnology: New Paradigms for Nanomedicine <i>Prof Fabio Beltram, Scuola Normale Superior, Italy</i>
16.30pm	Biomimetic Mineralization of Metal-organic Frameworks from Biomacromolecules <i>Dr Kang Liang, CSIRO, Australia</i>
16.45pm	Bio-inspiration: A New Path to Reach Multifunctional Nanomaterials <i>Dr Ziqi Sun, QUT, Australia</i>
17.00pm	Transparent Conducting Electrodes for Organic Electronic Devices <i>Dr Soniya Yambem, QUT, Australia</i>
17.15pm	High Performance Printable Donor-Acceptor Based Organic Semiconductors for Novel Organic Electronic Devices <i>A/Prof Prashant Sonar, QUT, Australia</i>
17.30pm	Engineering of Materials for the Next Generation Data Storage Memories <i>A/Prof Roy Vallaisamy, City University of Hong Kong, Hong Kong</i>
17.45pm	Magnetic Framework Composites for the Uptake of Heavy Metals from Water <i>Dr Raffaele Ricco, CSIRO, Australia</i>
18.00pm	Highly Ordered Nanoporous Materials with Multiple Functions <i>Prof Ajayan Vinu, The University of Queensland, Australia</i>
18.15pm	Conclusion of Day 1 - Workshop Dinner at own arrangement

Thursday 1 October

Time	Session
7.30am	Board bus for Whale Watching Trip Peppers Salt Resort & Spa, Kingscliff
9.00am	Board Whale Watching boat Gold Coast
12.00pm	Return to Peppers Salt Resort & Spa, Kingscliff
13:00 pm	Lunch (13.00pm – 14.00pm (Workshop delegates only)) Season Restaurant, Peppers Salt Resort & Spa, Kingscliff + Break
15.45pm	Afternoon tea Loder & Moss Foyer Peppers Salt Resort & Spa, Kingscliff
NANOMATERIALS Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff	
16.00pm	Keynote: Access and Control Over Quantum States in the Solid State <i>Prof S. Rogge, University of New South Wales, Australia</i>
16.30pm	Individual Oxide Nanowires for Nano-Optoelectronics <i>Prof Guido Faglia, University of Brescia, Italy</i>
16.45pm	Shining Synchrotron Light on Nanoscale Electronics <i>Prof Michael James, Australian Synchrotron, Australia</i>
17.00pm	Computational studies on materials for lithium and sodium ion batteries <i>Prof Debra Searles, The University of Queensland, Australia</i>
17.15pm	Dynamic Efficiency of Metallic Nanocatalysts <i>Dr Hector Barron-Escobar, CSIRO, Australia</i>
17.30pm	Mechanical Tensile Properties of Layered Sodium Titanate Nanowire <i>Prof Yuan Tong Gu, QUT, Australia</i>
17.45pm	ScientaOmicron/Scitek presentation
19.00pm - 21.30pm	Formal Dinner Plantation Room 1 & 2, Mantra on Salt Beach

Workshop Program continued

Friday 2 October

Time	Session
8.00am	Registration Loder & Moss Foyer Peppers Salt Resort & Spa, Kingscliff
ELECTRONICS AND PHOTONICS Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff	
8.30am	Keynote: Multifunctional Materials for Electronics and Photonics <i>Prof Federico Rosei, Institut National de la Recherche Scientifique (INRS), Canada</i>
9.00am	Designing Semiconducting Metal Oxides for Solar Energy Conversion <i>Prof Lianzhou Wang, The University of Queensland, Australia</i>
9.15am	Nanoengineered TiO₂ and Ta-doped TiO₂ for Highly Conducting Transparent Electrodes / Functional Photoanodes <i>Prof Andrea LiBassi, Politecnico di Milano, Italy</i>
9.30am	Plasmonic Effects in Photocatalysis: Nanostructures for Light Absorption <i>Dr Daniel Gomez, CSIRO, Australia</i>
9.45am	Clusters for Photocatalysis <i>Prof Gunther Andersson, Flinders University, Australia</i>
10.00am	Morning tea Loder & Moss Foyer Peppers Salt Resort & Spa, Kingscliff
SYNTHESIS Loder Moss Room, Peppers Salt Resort & Spa, Kingscliff	
10.20am	Keynote: Functional Nanohybrids: Plasma-related Effects <i>Prof Kostya Ostrikov, QUT/CSIRO, Australia</i>
10.50am	Layer-by-Layer Assembly: Technologies and Applications <i>Dr Joseph Richardson, CSIRO, Australia</i>
11.05am	Flame Synthesis of Tailored Nanostructures for Highly Performing Devices <i>Dr Antonio Tricoli, ANU, Australia</i>
11.20am	Conversion of n-Type CuTCNQ into p-Type Nitrogen-Doped CuO and the Implication for Room Temperature Gas Sensing <i>Dr Mahnaz Shafiei, QUT, Australia</i>
11.35am	Keynote: Vortex Fluidics Organisation of Materials <i>Prof Colin Raston, Flinders University, Australia</i>
12.05pm	Engineering Metal-Organic Frameworks <i>Dr Paolo Falcaro, CSIRO, Australia</i>
12.20pm	Combined Raman, IR and DFT Investigations of Superconductivity in AIB₂-type and Related Structures <i>Prof Jose Alarco, QUT, Australia</i>
12.35pm	Energetics of Nano-Layer Structures from Semi-Analytic RPA-Level Theory <i>Prof John Dobson, Griffith University, Australia</i>
12.50pm	Summary & Conclusions <i>Professor Nunzio Motta, QUT, Australia</i> Moss Room, Peppers Salt Resort & Spa, Kingscliff
13:00pm - 14.00pm	Lunch Season Restaurant, Peppers Salt Resort & Spa, Kingscliff

Posters

Single-walled Carbon Nanotubes-Black Silicon Solar Cells Fabrication

Hawazn Abuhasha, Flinders University, Australia

Polyamide membrane embedded with functionalized single wall carbon nanotubes SWCNTs for water treatment

Naseem Alghamdi and Nasser Alotaibi, Flinders University, Australia

Conjugation Paclitaxel to Functionalised Gold Nanoparticles for Breast Cancer Treatment

Zahrah Alhalili, Flinders University, Australia

Towards Semiconducting Graphene

Mojtaba Amjadi Pour, QUT, Australia

Phases of Carbon: Boron-implanted Diamond

Haydn Bowers, University of Melbourne, Australia

Single-walled Carbon Nanotube/Silicon Heterojunction Solar Cells

Tom Grace, Flinders University, Australia

Study of Si diffusion during the formation of epitaxial graphene layers on 3C SiC/Si (111)

Bharati Gupta, QUT, Australia

Promoted Protein Adsorption and Cellular Attachment upon Nanostructured Au Surface

Baolin Huang, QUT, Australia

Single-Layer Sodium Phosphidostannate(II): A First-Principles Study

Yalong Jiao, QUT, Australia

Analysis of In₂S₃ Buffer Layer Properties Effects on a CIGS Solar Cell Performance Using SCAPS

Nima Khoshsirat, QUT, Australia

Phosphorene: Anisotropic Electronic/Transport Properties of a Unique 2D Material

Liangzhi Kou, QUT, Australia

Bi Donors in Silicon for Clock Transitions and Implant Precision

William Lawrie, University of Melbourne

Encapsulating Quantum Dots into ZnO Nano/Microrods for Advanced photonics Applications

Mei Lyu, QUT/University of Chinese Academy of Sciences, Australia/China

Structural, Electrical, Mechanical and Optical Properties of BiI₃ Monolayer

Fengxian Ma, QUT Australia

Ultra-Sensitive Photodetectors by Hierarchical Nanoparticles Network

Noushin Nasiri, ANU, Australia

Room Temperature Gas Sensing Properties of Ultrathin Carbon Nanotube Films by Surfactant-Free Dip Coating

Carlo Piloto, QUT Australia

Photoluminescence properties of individual ZnO nanowire

Federica Rigoni, University of Brescia, Italy

Prediction of a Large-Gap Quantum Spin Hall Insulator in 3D Thorium Oxychalcogenides and 2D Diamond-Like Gabi Bilayer

Aizhu Wang, QUT, Australia

Mechanical Behavior of Graphene Under Impact Loading

Kang Xia, QUT, Australia

Application of Polymers in Carbon Nanotube Silicon Heterojunction Solar Cells

Leping Yu, Flinders University, Australia

The Current Status of CZTS Thin Film Solar Cells in Photovoltaic

Shengli Zhang, QUT, Australia
