

Symposium Program

SUNDAY 12 and MONDAY 13 February 2012

SUNDAY

Plenary Session Plenary Hall

Chair: Kevin Jack

- 1600 – 1610 **Welcome to the 33rd Australasian Polymer Symposium**
- 1610 - 1700 PL 1 - **Vitrimers**. Prof Ludwik Leibler, ESPCI
- 1700 - 1750 PL 2 - **Organic (Nano) Bionics**. Prof Gordon Wallace, University of Wollongong
- 1800 Coach transfers depart West Point Convention Centre (Wellington Room Entrance)
- 1830 – 2030 **Welcome Reception, Meadowbank Winery**

MONDAY

Plenary Session Plenary Hall

Chair: Amanda Ellis

- 0900 – 0950 PL 3 - **Stimuli-responsive Polymeric Superamphiphiles for Controlled Self-assembly**. Prof Xi Zhang, Tsinghua University
- 0950 – 1010 Morning Refreshments and Trade Exhibition

Advanced Materials Plenary Hall

Chair: Jas Pal Badyal

- 1010 - 1040 M1.1 - **Utilizing Supramolecular Interactions to Access Dynamic Materials**. Stuart Rowan*
- 1040 - 1055 M1.2 - **Using Hyperbranched Polymers for Surface Modification: Towards the Facile Self Assembly of Sensing Devices**. Idriss Blakey*, Kristofer J. Thurecht
- 1055 - 1110 M1.3 - **Self-assembly by hierarchical information transfer**. Rueben Pfukwa*, Alan E. Rowan, Paul Kouwer, Bert Klumperman
- 1110 - 1125 M1.4 - **Molecularly Imprinted Microgels**. Clovia Z. Holdsworth*, Edwin F. Romano Jr., Regina C. So
- 1125 - 1140 M1.5 - **Control of Poly(vinyl alcohol) fibre deposition during electrospinning via electric field Manipulation**. A. H. Nurfaizey*, J. Stanger, N. Tucker, N. Buunk, A. Wallace, A. R. Wood, M. P. Staiger
- 1140 - 1155 M1.6 - **Cellulose Acetate Polymeric Membranes with Varying Amounts of Covalently Attached POSS Nanoparticle Fillers**. Clare Worthley*, Kristina Constantopoulos, Elda Markovic, Milena Ginic-Markovic, Stephen Clarke
- 1155 - 1210 M1.7 - **Fabrication and In Vitro Testing of Chitosan-ECM Bandages for Photochemical Tissue Bonding**. Antonio Lauto*, Leonardo Longo, Damia Mawad
- 1210 - 1225 M1.8 - **Macroporous monolithic polymers containing embedded nanoparticles for high performance chromatography, sample preparation and catalysis**. Emily F. Hilder*, Dario Arrua, Mark E. Thomas, Roderick C. Jones, Paul R. Haddad

Polymers for Health Wellington Room

Chair: Brian Hawkett

- 1010 - 1040 M2.1 - **Smart glycopolymers and their interactions with lectins.** Remzi Becer*
- 1040 - 1055 M2.2 - **Mapping the Binding Efficiency between Concanavalin A and Star-Shaped Glycopolymers with Varying Degrees of Glycosylation.** Yong Chen*, Martina H. Stenzel
- 1055 - 1110 M2.3 - **Poly(glycidyl methacrylate) as a "polymeric building block" through post-polymerization processes.** Massimo Benaglia*
- 1110 - 1125 M2.4 - **Improving the performance of micelles as drug delivery carriers by shell-crosslinking.** Yoseop Kim*, Mohammad Pourgholami, David Morris, Martina H. Stenzel
- 1125 - 1140 M2.5 - **Controlling Properties of Polymeric Drug Capsules Using Charge-Shifting Polymers.** Sher Leen Ng*, Georgina K. Such, Angus P. R. Johnston, Frank Caruso
- 1140 - 1155 M2.6 - **Targeted Drug Delivery: Understanding cellular binding and uptake of nanoengineered capsules.** Angus P. R. Johnston*, Marloes M. J. Kamphuis, Georgina K. Such, Frank Caruso
- 1155 - 1210 M2.7 - **Synthesis of Amphiphilic Block Copolymers for Study of Cellular Interaction and Uptake.** Ted Chang*, Megan Lord, Martina Stenzel
- 1210 - 1225 M2.8 - **Modular Charge-Shifting Capsules for Therapeutic Delivery.** Georgina K. Such*, Kang Liang, Zhiyuan Zhu, Yan Yan, Hannah Lomas, Angus. P. R. Johnston, Frank Caruso

Latest Development in Polymer Synthesis Boardwalk Gallery

Chair: Laurent Fontaine

- 1010 - 1040 M3.1 - **Living p-quinodimethane polymerization for the synthesis of well-defined PPV materials: Is it even possible?** Thomas Junkers*
- 1040 - 1055 M3.2 - **Recent Travels in κ_2 -Land.** Johannes Barth, Sabine Beuermann, Michael Buback, Gregory T. Russell*, Rebekka Siegmann
- 1055 - 1110 M3.3 - **Recent Macromolecular Design and Application of Catalytic Chain Transfer Polymerization.** Alexander Soeriyadi*, Michael Whittaker, Cyrille Boyer, Thomas Davis
- 1110 - 1125 M3.4 - **CCT-derived Macromonomers as Macroinitiators for Anionic Polymerisation.** Gemma Sanders*, Rob Duchateau, Hans Heuts
- 1125 - 1140 M3.5 - **Predicting Polymer Tacticity in Radical Polymerization.** Michelle L. Coote*, Isa Değirmenci, Benjamin Noble
- 1140 - 1155 M3.6 - **Rapid, Selective and Reversible Nitroxide Radical Coupling (NRC) Reactions at Room Temperature.** Jakov Kulis*, Craig A. Bell, Aaron S. Micallef, Zhongfan Jia, Michael J. Monteiro
- 1155 - 1210 M3.7 - **PolyBank: Development of a bank of advanced polymeric materials via RAFT technology and high throughput experimentation.** Carlos Guerrero-Sanchez*, Daniel Keddie, Christian H. Hornung, Simon Harrisson, Simon Saubern, San H. Thang, Graeme Moad, Ezio Rizzardo, and John Chiefari
- 1210 - 1225 M3.8 - **Molecular Imprinting Using Biaryl Monomers: Comparison of Thermal and Microwave-assisted Approaches.** Hazit A. Zayas, Michael Bowyer, Adam McCluskey, Clovia Holdsworth*
- 1225 - 1325 Lunch and Trade Exhibition

Symposium Program

MONDAY 13 February 2012

Advanced Materials Plenary Hall

Chair: Feihe Huang

- 1325 - 1355 M1.9 - **Functional Nanocoatings.** Jas Pal Badyal*
- 1355 - 1410 M1.10 - **Controlled Synthesis of Block Copolymer for Proton Exchange Membrane Application.** S. X. Zhao*, J. M. Ren, P. A. Gurr, Y. X. Wang, G.G. Qiao
- 1410 - 1425 M1.11 - **New Fluorinated Polymers bearing Pendant Phosphonic Groups for Proton Conducting Membranes.** G. David*, R. Tayouo, B. Améduri, J. Rozière, S. Roualdès
- 1425 - 1440 M1.12 - **Porous PDMS Membranes Fabricated from Polymerizable Microemulsion Templates.** Shuhua Peng*, Patrick G. Hartley, Timothy C. Hughes, Qipeng Guo
- 1440 - 1455 M1.13 - **Use of the *Breath Figures* technique to form ordered microporous thin films from Poly(3-hydroxybutyrate) and Poly(3-hydroxybutyrate-co-3-hydroxyvalerate).** M. Huh, M. Jung, Y. S. Park, T. Kang, R.A. Russell, P.J. Holden*, S.I. Yun
- 1455 - 1510 M1.14 - **Non-cracking honeycomb formation on nonplanar surface driven by polymer intrinsic properties.** Zhou Zhang*, Timothy C. Hughes, Paul Gurr, Xiaojuan Hao, Greg Qiao
- 1510 - 1525 M1.15 - **Nanocomposite gels with extraordinary properties: Formation and characteristics of unique organic / inorganic network structures.** Kazutoshi Haraguchi*

Polymers for Health Wellington Room

Chair: Marion Gaborieau

- 1325 - 1355 M2.9 - **Applications for RAFT in Disperse Phase Systems.** Brian S. Hawkett*
- 1355 - 1410 M2.10 - **Development of core-crosslinked micelles for the delivery of albendazole.** Yue Zhao*, Yoseop Kim, Ling Zhang, Xin Tan, Martina H. Stenzel
- 1410 - 1425 M2.11 - **CPP-decorated polymeric micelles from arginine-based monomers: An efficient tool for drug delivery?** Yoseop Kim, Yoon Ji Kim, Sandra Binauld*, Martina H. Stenzel
- 1425 - 1440 M2.12 - **Synthesis, self-assembly and evaluation of cholesterol-containing biodegradable block copolymers for drug delivery applications.** Shrinivas Venkataraman*, Ashlynn L.Z. Lee, James L. Hedrick, Yi Yan Yang
- 1440 - 1455 M2.13 - **Biocompatible Patterned Polymer Surface Coatings to Control Protein Adsorption and Endothelial Cell Behaviour.** Stuart C. Thickett*, Joshua Moses, Jennifer Gamble, Chiara Neto
- 1455 - 1510 M2.14 - **Stabilization of Peptide- Based Vesicles via *In Situ* Oxygen-Mediated Cross-Linking.** Adrian Sulistio*, Anton Blencowe, Jiawei Wang, Gary Bryant, Xiaoqing Zhang, Greg Qiao
- 1510 - 1525 M2.15 - **Macromolecular Ruthenium Complexes as Anticancer Agents.** Bianca Blunden*, Donald Thomas, Martina Stenzel

Latest Developments in Polymer Synthesis Boardwalk Gallery

Chair: Junpo He

- 1325 - 1355 **M3.9 - Controlled Radical Polymerization, Metathesis, and “Click” Chemistry: A Versatile Combination to Target New Reactive Polymers.** L. Fontaine*, S. Pascual, V. Montembault, M. Levere, D. Le
- 1355 - 1410 **M3.10 - Investigation of Ring-Opening Metathesis Polymerisation with Hoveyda-Grubbs Catalysts.** Anton Blencowe*, Greg G. Qiao
- 1410 - 1425 **M3.11 - Block Copolymers via Macromercaptan Initiated Ring Opening Polymerization.** Catherine Lefay*, David Glé, Marion Rollet, Jérôme Mazzolini, Denis Bertin, Stéphane Viel, Christina Schmid, Christophe Boisson, Franck D’Agosto, Didier Gignes, Christopher Barner-Kowollik
- 1425 - 1440 **M3.12 - Organic Catalyst-Mediated Ring Opening Polymerization Towards the Near-quantitative Synthesis of Star Polymers.** J. M. Ren*, Q. Fu, A. Blencowe, G.G. Qiao
- 1440 - 1455 **M3.13 - Renewal of Allyl Polymerization Mechanism.** Akira Matsumoto*
- 1455 - 1510 **M3.14 - A Simple, Efficient and Novel Methodology in Forming Complex Macromolecular Architecture Films via Continuous Assembly of Polymers (CAP).** Edgar H. H. Wong*, Stefanie N. Guntari, Georgina K. Such, Anton Blencowe, Frank Caruso, Greg G. Qiao
- 1510 - 1525 **M3.15 - Synthesis of new bisallylic dithioether monomers for photoplastic polymers.** Cornelis Moorhoff*, Wayne Cook, Tara Schiller, Carl Braybrook, San Thang
- 1525 – 1545 Afternoon Refreshments and Trade Exhibition

Advanced Materials Plenary Hall

Chair: Stephen Clarke

- 1545 - 1615 **M1.16 - Supramolecular Polymers Based on Threaded Structure Connections.** Feihe Huang*
- 1615 - 1630 **M1.17 - Accessing Supramolecular Structures with (N-Methylated Cyclic Peptide)-Polymer Conjugates.** Ming Liang Koh*, Katrina A. Jolliffe, Sébastien Perrier
- 1630 - 1645 **M1.18 - Dually Thermo-sensitive Block-copolymers: Self-assembly into Micelles based on Aqueous LCST and into Inverted Micelles based on UCST in Alcohols.** Peter J. Roth*, Thomas P. Davis, Andrew B. Lowe
- 1645 - 1700 **M1.19 - Advanced Polymer Nanoparticles.** Luke A. Connal*, Eric D. Pressley, Craig J. Hawker
- 1700 - 1715 **M1.20 - Shear Induced Orientation and Structure Development in α -Isotactic Polypropylene Containing Particles.** Amita Bhatia*, Terence Turney, Graham Edward, Peng-Wei Zhu
- 1715 - 1730 **M1.21 - Supramolecular assembly as a route to organic nanotubes of tunable dimensions.** Robert Chapman*, Katrina A. Jolliffe, Sébastien Perrier
- 1730 - 1745 **M1.22 - Advanced fluorescence methods as a tool for studying polymer self-assembly.** Karel Procházka*, Miroslav Štěpánek, Pavel Matějčiček, Mariusz Uchman, Zuzana Limpouchová, Peter Košován, Filip Uhlík, Jana Humpolíčková, Martin Hof, Joerg Schroeder

Symposium Program

MONDAY 13 February 2012

- 1745 - 1800 M1.23 - **Processable Star Polymers.** Azrinawati Mohd. Zin*, Erica Wanless, Clovia Holdsworth
- 1800 - 1815 M1.24 - **Vesicle-Templated pH-Responsive Polymeric Nanocapsules.** Syed Imran Ali*, Johan P.A. Heuts, Brian S. Hawkett, Alex M. van Herk
- 1815 - 1830 M1.25 - **A Facile Approach to Chemically Modified Graphene and its Polymer Nanocomposites.** Jun Ma*, Izzuddin Zaman, Hsu-Chiang Kuan

Polymers for Health Wellington Room

Chair: Heather Maynard

- 1545 - 1615 M2.16 - **Nanoparticles with pendant cyclodextrins as drug delivery carrier.** Martina Stenzel*, Firdaus Yhaya, Manuela Callari
- 1615 - 1630 M2.17 - **Stimuli-responsive polymers for MRI imaging.** Mariana Beija*, Yang (Daniel) Li, Andrew B. Lowe, Thomas P. Davis, Cyrille A. Boyer
- 1630 - 1645 M2.18 - **Polymeric micelles with pendant pair-wise carboxylato groups afforded via Michael addition for sufficient cis-platinum drug delivery.** Vien T. Huynh*, Paul de Souza, Martina H. Stenzel
- 1645 - 1700 M2.19 - **Development of a PET-MRI Hyperbranched Polymer Imaging Agent.** Nathan Boase*, Kristofer Thurecht, Eskender Mume, Suzanne Smith, Cameron Alexander, Idriss Blakey
- 1700 - 1715 M2.20 - **Multifunctional Star and Hyperbranched polymer for cancer targeted drug delivery and MR imaging.** Yang Li*, Hien Duong, Mariana Beija, Andrew Lowe, Tom Davis, Cyrille Boyer
- 1715 - 1730 M2.21 - **Novel lanthanide(III) hyperbranched polymers as advanced targeting imaging agents.** Sabrina Dehn*, Sébastien Perrier
- 1730 - 1745 M2.22 - **Hydrophobically modified OSA starches: a fluorescence probe study of the influence of macromolecular architecture on the critical micelle concentration.** Morgan J. Tizzotti*, Michael C. Sweedman, Christian Schaefer, Robert G. Gilbert
- 1745 - 1800 M2.23 - **Enzymatic Degradation of Poly(Polyol Sebacte).** Qizhi Chen*, Shuling Liang
- 1800 - 1815 M2.24 - **Synthesis and Physico-Mechanical Characterization of Reinforced Microcellular Polyurethane-Sisal Biocomposites.** M. Bassyouni*, Shereen M.-S. Abdelhamid

Latest Developments in Polymer Synthesis Boardwalk Gallery
Chair: Kristopher Thurecht

- 1545 - 1615 M3.16 - **Small Molecular Kinetic Model for the RAFT Process.** Junpo He*
- 1615 - 1630 M3.17 - **Synthesis and Characterization of "Glycopolyurethanes".** Christina Ott*, Christopher D. Easton, Thomas R. Gengenbach, Sally L. McArthur, Pathiraja A. Gunatillake
- 1630 - 1645 M3.18 - **Catalytic Cycle of Nitroxide Activation and Regeneration.** Ganna Gryn'ova*, Keith U. Ingold and Michelle L. Coote
- 1645 - 1700 M3.19 - **NMP and ATRP in nanoreactors: Factors influencing compartmentalization effects on bimolecular termination.** Per B. Zetterlund*
- 1700 - 1715 M3.20 - **Towards Nitroxide Mediated Photo-Polymerization.** Yohann Guillaneuf*, Davy-Louis Versace, Denis Bertin, Jean-Pierre Fouassier, Jacques Lalevée, Didier Gigmes
- 1715 - 1730 M3.21 - **Miniemulsion polymerization based on in situ surfactant formation and ultrasonication: A novel synthetic route to nano-sized (< 20 nm) polymer particles.** Yi Guo*, Per B. Zetterlund
- 1730 - 1745 M3.22 - **Well-defined Amphiphilic Block Copolymer Nanoobjects via Nitroxide-Mediated Emulsion Polymerization.** Emilie Groison*, Ségolène Brusseau, Franck D'Agosto, Stéphanie Magnet, Rabi Inoubli, Laurence Couvreur, Bernadette Charleux
- 1745 - 1800 M3.23 - **Controlled/living radical polymerization in CO₂-induced miniemulsions.** Siqing Cheng*, Per B. Zetterlund
- 1800 - 1815 M3.24 - **Polymeric nanoparticle synthesis in CO₂-induced emulsions.** Da Wei Pu*, Frank P. Lucien, Per B. Zetterlund
- 1815 - 1830 M3.25 - **Corrosion resistant double stranded conducting polymer nanocomposite coating for aircraft applications.** Gunjan Gupta*, Nick Birbilis & A.S.Khanna

Poster Session Tasman Room

- 1830 – 2030 Refreshments will be served during the Poster Session

Symposium Program

TUESDAY 14 February 2012

Plenary Session Plenary Hall

Chair: Lachlan Yee

- 0900 – 0950 PL 4 - **Combating Diseases with Peptide - Synthetic Polymer Conjugates.** Prof Harm-Anton Klok, Ecole Polytechnique Federale de Lausanne
- 0950 – 1010 Morning Refreshments and Trade Exhibition

Advanced Materials Plenary Hall

Chair: Xi Zhang

- 1010 - 1040 T1.1 - **Functional Nanomaterials from Block Copolymer Self-Assembly.** Ulrich Wiesner*
- 1040 - 1055 T1.2 - **Synthesis and Functionalization of Ordered Macromolecular Architectures Using a Combination of RAFT Polymerization and Click Chemistry.** John Moraes*, Thomas Maschmeyer, Sébastien Perrier
- 1055 - 1110 T1.3 - **Use of plasma polymerisation to facilitate new growth possibilities for surface-initiated polymerisation.** Bryan R. Coad*, Yi Lu, Katie E. Styan, Laurence Meagher
- 1110 - 1125 T1.4 - **Simultaneous photoinduced silver nanoparticles formation and cationic polymerization of divinyl ethers.** Wayne D. Cook*, Phoi Boon, Quoc Dat Nghiem, Qizhi Chen, Tara Schiller, Bjorn Winther-Jensen, Kei Saito, Marco Sangermano
- 1125 - 1140 T1.5 - **Photoclick chemistry for spatially and temporally functionalized materials.** G. Delaittre*, T. Paulöhrl, M. Dietrich, M. Glassner, K. Öhlschläger, M. Bastmeyer, C. Barner-Kowollik
- 1140 - 1155 T1.6 - **Interactions of Charged Block Copolymers with Surfaces: a Tunable Roughness.** Ya-Mi Chuang*, Idriss Blakey, Kevin Jack, Michael Leeson, Todd Younkin, Andrew K. Whittaker
- 1155 - 1210 T1.7 - **Carbon nanotube strain sensors for paint degradation monitoring.** Michael K. Njuguna, Nicholas Tilley, Cheng Yan, Geoffrey D. Will, John M. Colwell*
- 1210 - 1225 T1.8 - **New Fluorescent Nanocomposites for Fingerprint Detection.** Jessiré Dilag*, Hilton Kobus, Amanda Ellis

Polymers for Health Wellington Room

Chair: Bert Klumperman

- 1010 - 1040 T2.1 - **Delivery Agents Designed from Core-Shell Carbohydrate-Based Block Copolycondensates.** Theresa Reineke*
- 1040 - 1055 T2.2 - **Self-Catalyzed Degradable Polycation for DNA Release.** Nghia P. Truong*, Zhongfan Jia, Melinda Burgess, Liz Payne, Nigel A. J. McMillan, Michael J. Monteiro
- 1055 - 1110 T2.3 - **siRNA Delivery with ABA Triblock Copolymers and Star Block Copolymers.** Bill Chong, Carlos Guerrero-Sanchez, Thilak Gunatillake, Tam Le, San H. Thang*, Tracey Hinton, and Shuning Shi, Mark Tizard
- 1110 - 1125 T2.4 - **Hyperbranched Polymer/siRNA Conjugates as Targeted Cancer Therapeutics.** Daniel J. Coles*, Nigel A.J. McMillan, Andrew K. Whittaker, and Kristofer J. Thurecht
- 1125 - 1140 T2.5 - **Reducible multiblock poly(lysine)-PEG for siRNA delivery.** Warren Knowler*, Pete Cass, Thilak Gunatillake, Tracey Hinton, Shuning Shi, Mark Tizard

- 1140 - 1155 T2.6 - **Polydimethylsiloxane microchannel modifications for DNA detection in microfluidics.** Dmitry Khodakov, Claire E. Lenehan, Gunther Andersson, Hilton Kobus, Amanda V. Ellis*
- 1155 - 1210 T2.7 - **A novel approach towards dynamic cross-linked hydrogels.** Shereen Tan*, Anton Blencowe, Greg Qiao
- 1210 - 1225 T2.8 - **Hybrid Hydrogel Sponges with Controlled Pore Sizes.** Berkay Ozelcik*, Anton Blencowe, Geoff Stevens, Greg Qiao

Early Career Researchers Boardwalk Gallery

Chair: David Lewis

- 1010 - 1040 T3.1 - **Separation of copolymers, conjugates and supramolecular architectures of polysaccharides, thermoresponsive and pH-responsive polymers by capillary electrophoresis in the critical conditions.** Patrice Castignolles*, Mariam Mnatsakanyan, Pierre Guiglion, Rozet Roi, Angel Medina-Oliva, Joel Thevarajah, Danielle Taylor, Jerikho Bulanadi, Cameron Ferris, Marc in Het Panhuis, Matthias Destarac, Francois Ganachaud, Christopher Jones, Manfred Schmidt, Antonio Lauto, Marion Gaborieau
- 1040 - 1110 T3.2 **Polymeric Theranostics: Hyperbranched Polymers for Treating Disease.** Kristofer J Thurecht*, Idriss Blakey, Hui Peng, Barbara Rolfe, Cameron Alexander, Andrew K Whittaker
- 1110 - 1140 T3.3 - **Biosensor and Drug Delivery Technology through Surface Modification.** Anthony Michael Granville*, Solomon Le-Masurier, Yan Jin, Kok Hou Wong
- 1140 - 1210 T3.4 - **Acid/Base "Switchable" Chain-Transfer Agents for RAFT Polymerization.** Daniel J. Keddie*, Carlos Guerrero-Sanchez, Roger Mulder, Graeme Moad, Ezio Rizzardo, San H. Thang
- 1225 - 1325 Lunch and Trade Exhibition

Advanced Materials Plenary Hall

Chair: Eduardo Vivaldo-Lima

- 1325 - 1355 T1.9 - **Acid-Bearing Polymer Membranes for PEM Fuel Cells.** E.M.W. Tsang, A. Yang, Z. Shi, T. Weissbach, S. Holdcroft*
- 1355 - 1410 T1.10 - **Polymer nanocomposites: is it worth the effort?** Theo J. Dingemans*, Maruti Hegde, Y. Si, Edward T. Samulski
- 1410 - 1425 T1.11 - **Continuous Assembly of Polymers (CAP): A Versatile Approach for Surface-Driven Nanocoatings.** Stefanie Nina Guntari*, Tor Kit Goh, Anton Blencowe, Edgar H. H. Wong, Frank Caruso, Greg G. Qiao
- 1425 - 1440 T1.12 - **Structure/Property Relationships in Sulphur containing Epoxy Resins for High Performance Applications.** Wouter Vogel, Theo Dingemans, Russell J. Varley*, Buu Dao, Wendy Tian, Stephen Christensen
- 1440 - 1455 T1.13 - **Synthesis of Core Cross-linked Star (CCS) Polypseudorotaxane via Inclusion Complexation of CCS PCL Polymers and α -Cyclodextrins.** Q. Fu*, J. M. Ren, S. Tan, G.G. Qiao
- 1455 - 1510 T1.14 - **Functionalization of Well-Defined Star Polymers Built from Biodegradable Microgel/Nanogel Cores via Click Chemistry.** Jinna Liu*, Thomas P. Davis, Cyrille Boyer

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1510 - 1525 T1.15 - **Effect of Lateral Fluorine Substituent on Mesophase behavior of Bent-shaped Molecules with Asymmetric Central Naphthalene Core.** Xiaodong Li*, Mao-sheng Zhan, Kai Wang

Polymers for Health Wellington Room

Chair: Per Zetterlund

- 1325 - 1355 T2.9 - **Synthesis and application of drug delivery systems.** Nathalie Bailly, Hamilton Kakwere, Mark Thomas, Gwenaelle Pound-Lana, Bert Klumperman*
- 1355 - 1410 T2.10 **Nitric Oxide: A New Hope for the Treatment of Multidrug Resistant Cancers.** Cyrille Boyer*
- 1410 - 1425 T2.11 - **Various preparation methods of highly porous hydroxyapatite/polymer nanoscale biocomposites for bone regeneration.** Fangfang Sun, Hongjian Zhou, Jaewook, Jaebeom Lee*
- 1425 - 1440 T2.12 - **Biocompatible Polyurethanes for Spinal Cord Regeneration.** Aaron S. Micallef*, Bronwin Dargaville, Fiona F. Filardo , Florian H. M. Graichen , Mike S. O'Shea , Firas Rasoul , David K. Wang, Andrew K. Whittaker
- 1440 - 1455 T2.13 - **Polyurethane Nanocomposites as Biomaterials – Mechanical Performance, Morphology and Biocompatibility.** Darren Martin*, Azlin Fazlina Osman, Yosephine Andriani, Ajay Padsalgikar, Martin Svehla, Peter Halley, Rodney Minchin
- 1455 - 1510 T2.14 - **Development of Bioactive 3D Block Copolymer Scaffolds for Repair of Bone Tissue.** Chunli Liu*, Hui Peng, Yin Xiao, Andrew K. Whittaker
- 1510 - 1525 T2.15 - **Optimal Design of Polymer Artificial Muscles.** Geoffrey M. Spinks*, Gordon G. Wallace, Philip G. Whitten and Wen Zheng

Innovation Session Boardwalk Gallery

Chair: Ramon Tozer

- 1325 - 1345 T3.9 - **Setting up and starting a spin off company: The story of Warwick Effect Polymers.** David Haddleton*
- 1345 - 1405 T3.10 - **Intellectual Property and Science – an overview.** Ramon Tozer*
- 1405 - 1425 T3.11 - **Collaborative Industry Driven Polymer Research in Australia.** Ian Dagle*^{*}
- 1425 - 1445 T3.12 - **Beyond patents – forms of intellectual property protection.** Richard Grant*^{*}
- 1445 - 1505 T3.13 - **The Materials Accelerator: A National Network In Manufacturing Materials.** Ralph P.Cooney*^{*}
- 1505 - 1525 T3.14 - **When and How to Patent an Invention.** Sarah Whitehead*^{*}, Grace Chan
- 1525 – 1545 Afternoon Refreshments and Trade Exhibition

Opto- and Electro-active Polymers Plenary Hall

Chair: Richard Kaner

- 1545 - 1615 T1.16 - **Stimulus-Responsive Polymers Interfaced with Porous Semiconductors.** Roshan Vasani, Stéphanie Pace, Amanda V. Ellis, Nicolas H. Voelcker*
- 1615 - 1630 T1.18 - **Synthesis and Characterization of Thiophene Polymer Brushes.** Robert Brooke*, Anirudh Sharma, Marie-Claire Hermant, David Lewis

- 1630 - 1645 T1.19 - **Recent Development of Charge Transport Materials and Donor Materials for Organic Solar Cells.** Xiwen Chen*, Zhitao(Tom) Jiang, Yu Chen, Deng Hong, Scott Watkins, Mei Gao, Ping Lu, Haiqiao Wang, Yanguang Wang
- 1645 - 1700 T1.20 - **Influences of Functional Groups on the Orientation Birefringence of Uniaxially Drawn Cellulose Ester Films.** Mohd Edeerozey Abd Manaf*, Shogo Nobukawa, Masayuki Yamaguchi
- 1700 - 1715 T1.21 - **Linear expansion of electrochemically actuating gels.** S. C. Moratti*, L.R. Hanton, C.J. MacAdam, S.K. Goswami
- 1715 - 1730 T1.22 - **Bacterial Cellulose Electro Active Polymer for Biomimetic Robot.** Si-Seup Kim*, Chang-Doo Kee
- 1730 - 1745 T1.23 - **Self-assembled Electrically Active Multilayers for the Functionalization of 2D and 3D Neural Scaffolds.** Kun Zhou*, David R. Nisbet, George A. Thouas, Claude C. Bernard, John S. Forsythe
- 1745 - 1800 T1.24 - **Conducting Polymer Anti-Microbial Agents.** Ralph Cooney*, Simon Swift, James Wu, Adeline Le Cocq, Sudip Ray, Marija Gizdavic-Nikolaidis, Karnika de Silva
- 1800 - 1815 T1.25 **One Single Component Conducting Polymer Hydrogel as a Scaffold for Tissue Engineering.** Damia Mawad*, Elise Stewart, David L. Officer, Gordon G. Wallace
- 1815 - 1830 T1.26 - **Charge Loss in the Electrospinning System.** Jonathan Stanger*, Nick Tucker, Mathieu Sellier, Mark Staiger, Alan Wood

Polymer Characterisation Wellington Room Chair: Patrice Castignolles

- 1545 - 1600 T2.16 - **Two-dimensional distributions of complex branched polymers.** Francisco Vilaplana, Jovin Hasjim, Robert G Gilbert*
- 1600 - 1615 T2.17 - **Study on the Mechanical Model of Double Network Hydrogel.** Isamu Riku*, Koji Mimura
- 1615 - 1630 T2.18 - **Characterization of polysaccharides for medical applications and bioplastics with solid-state NMR and capillary electrophoresis.** Marion Gaborieau*, Gino Mangiante, Julien Bernard, Aurelia Charlot, Etienne Fleury, Joel Thevarajah, Rozet Sallom Roi, Mariam Mnatsakanyan, Antonio Lauto, Patrice Castignolles
- 1630 - 1645 T2.19 - **Production and characterization of deuterated cellulose.** Christopher Garvey*, Michael Gidley, Deirdre Mikkelsen, Charles Hocart, Marion Gaborieau, Marie Gillon, Peter Holden
- 1645 - 1700 T2.20 - **Investigating the Cooking of Starch – Simultaneous Small-Angle Neutron Scattering and Rapid Visco-Analysis.** James Douth, Mark Bason, Ferdi Franceschini, Douglas Clowes, Kevin James, Elliot P. Gilbert*
- 1700 - 1715 T2.21 - **Injection Molding Studied by Flash DSC Experiments.** Franz Reisinger, Craig Gordon*
- 1715 - 1730 T2.22 - **Investigating the Self-Assembly of Block Copolymer Films by Grazing-Incidence Small-Angle X-Ray Scattering.** Kevin S. Jack*, Imelda Keen, Anguang Yu, Han-Hao Cheng, Idriss Blakey, Michael J. Leeson, Todd R. Younkin, Andrew K. Whittaker
- 1730 - 1745 T2.23 - **Versatile X-ray solutions for polymer screening, characterization, quality control and compliance testing.** T. van der Maten*, Scott Gilroy

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- 1745 - 1800 T2.24 - **Topological Assessment of Novel Polymers Subjected to Photoinduced Creep and Stress Relaxation.** Tara Schiller*, Wayne Cook, Cornelis Moorhoff
- 1800 - 1815 T2.25 - **Mapping phase separation of deuterated/hydrogenated polymer blends using Infrared microspectroscopy.** R.A. Russell*, P.J. Holden, L. John R. Foster
- 1815 - 1830 T2.26 - **Characterization of polymers using high resolution impedance spectroscopy.** M. Darestani*, H. Coster, V. Gomes, M. Abtahi

Polymers and the Environment Boardwalk Gallery

Chair: Daniel Keddie

- 1545 - 1600 T3.16 - **Polymer 'tools' for probing ecological questions in the marine environment.** Lachlan H Yee*, Tilmann Harder, Shaun Neilsen, Peter D Steinberg, Symon Dworjanyn, Peter L Harrison
- 1600 - 1615 T3.17 - **Investigation of Native Spinifex Plant Resin and Fibers as Renewable Building Blocks for Composite.** N.Amiralian*, P.Memmott, D.Martin
- 1615 - 1630 T3.18 - **Influence of Soils Type on the Above-Ground Degradation of Polyethylene Thin Films.** Emilie Gauthier*, Melissa Nikolic, Bronwyn Laycock, Jennifer Maia, Gregory Cash, Peter Halley, Graeme George
- 1630 - 1645 T3.19 - **Dielectric investigation of novel reprocessable ionomers based on Natural rubber.** Georgekutty Joseph*, Thommachan Xavier
- 1645 - 1700 T3.20 - **Wholly Printed Polypyrrole-based Biosensors on Flexible Substrate.** Bo Weng*, Aoife Morrin, Roderick Sheppard, Karl Crowley, Anthony J. Killard, Gordon G. Wallace
- 1700 - 1715 T3.21 - **Thermal Degradation Study of a Polyimide Foam.** Xiao-Yan Liu*, Mao-Sheng Zhan, Kai Wang
- 1715 - 1730 T3.22 **Using SAXS to make real-space models of photo-oxo-degradable LLDPE as it ages.** Michael P. Weir*, Yu-Chieh Hsu, Christopher J. Garvey, Peter Halley, Rowan Truss, Timothy Nicholson
- 1730 - 1745 T3.23 - **Improving the Interfacial Properties of Polylactide/Jute Biocomposites by Application of Amphiphilic PEG-PLLA Block Copolymers.** Kevin Magniez*, Andreea S. Voda, Audrey Fichini, Abdullah A. Kafi, Bronwyn Fox, Qipeng Guo
- 1745 - 1800 T3.24 - **New opportunities in renewable polymer and functional materials.** M. S. O'Shea*, F. H.M. Graichen, B. A. Leita, G. Peeters
- 1800 - 1815 T3.25 - **Antagonism Between Transition Metal Prodegradants In Accelerated Photo- and Thermo-Oxidation of Polyethylene Films.** Melissa Nikolić*, Emilie Gauthier, Bronwyn Laycock, Karina George, Gregory Cash, Peter Halley, Graeme George
- 1815 - 1830 T3.26 - **Determination of Monosaccharides from Chemically Hydrolysed Polysaccharides for the Biofuel Industry.** James Oliver*, Michael Phillips, Mark Williams, Patrice Castignolles

Annual General Meeting Plenary Hall

- 1840 - 1940 RACI Polymer Division

Student Night The Squires Bounty, Salamanca

- 2030 - late Happy Hour and drink specials available to students

Plenary Session Plenary Hall

Chair: Greg Qiao

- 0900 – 0950 PL 5 - **Semi-Telechelic and Telechelic Polymers for Conjugation to Biomolecules: From Smart Nanocapsules to Reversible Surface Modification.** A/Prof Heather Maynard, University of California
- 0950 – 1010 Morning Refreshments and Trade Exhibition

Advanced Materials Plenary Hall

Chair: Greg Russell

- 1010 - 1040 W1.1 - **Modeling of polymer network formation by nitroxide-mediated radical copolymerization of vinyl/divinyl monomers using a multifunctional polymer molecule approach.** Julio C. Hernández-Ortiz, Eduardo Vivaldo-Lima*
- 1040 - 1055 W1.2 - **Poly(o-methoxyaniline)-Lignosulfonic Acid Composite.** Xiao Wang*, Sudip Ray, Ralph Cooney, Paul Kilmartin
- 1055 - 1110 W1.3 - **Electrically Conductive, Tough Hydrogels with pH Sensitivity.** Sina Naficy*, Geoffrey M Spinks, Gordon G Wallace
- 1110 - 1125 W1.4 - **Supported Hydrogel Polyacrylamide Membranes for the Size-Selective Separation of Gold Nanoparticles.** David Valade*, Yujung Jeon, Lawrence K. Wong, Michael J. Monteiro
- 1125 - 1140 W1.5 - **The Effect of the First Network Heterogeneity on the Mechanical Properties of PNVP-PAAC Double Network Hydrogels.** Hai Xin*, Hugh R. Brown, Sureyya Saricilar, Geoffrey M. Spinks, Philip G. Whitten
- 1140 - 1155 W1.6 - **The influence of hydrophobic modification on the structural alteration of granular branched polysaccharides by β -amylase enzyme treatment.** Michael Sweedman*, Morgan Tizzotti, Robert Gilbert
- 1155 - 1210 W1.7 - **Toughening of PLA: Routes towards Improvement in Mechanical Properties.** Mojtaba Abtahi*, Avinash Baji, Yiu-Wing Mai
- 1210 - 1225 W1.8 - **Thermomechanical Behavior of Conducting Polymer Blends.** J. A. Campbell*, A. Sharma, D. A. Lewis

Polymers for Health Wellington Room

Chair: Michael Whittaker

- 1010 - 1040 W2.1 - **Making Proteins Smarter by Conjugation with Responsive Polymers.** Brent S. Sumerlin*, Ming Li, Hongmei Li, Priyadarsi De
- 1040 - 1055 W2.2 - **Versatile Multi-functionalization of Magnetic Nanoparticles for Biomedical Applications.** Johan Sebastian Basuki*, Thomas Paul Davis, Cyrille Boyer
- 1055 - 1110 W2.3 - **Novel Crosslinked Polymeric Vesicles Conjugated with cis-Platinum Drug.** Jiangtao Xu*, Jing M. Ren, Qiang Fu, Greg G. Qiao
- 1110 - 1125 W2.4 - **Micelles: NO delivery.** Hien T.T. Duong*, Tom P. Davis, Cyrille Boyer
- 1125 - 1140 W2.5 - **Electrospinning Writing of Scaffolds for Enhanced Cellular Infiltration.** Brooke Farrugia*, Rebecca Dawson, Toby Brown, Paul Dalton, Dietmar Hutmacher, Tim Dargaville

Symposium Program

WEDNESDAY 15 February 2012

- 1140 - 1155 W2.6 - **Tailoring Layer-by-Layer Films to Reduce Protein Fouling.** Sarah J. Dodds*, Angus P.R. Johnston, Georgina K. Such, Robert de Rose, Frank Caruso
- 1155 - 1210 W2.7 - **Optimizing interfaces to regulate neural progenitor cells using polyelectrolyte multilayers and BDNF.** Kun Zhou, David R. Nisbet, George A. Thouas, Claude C. Bernard, John S. Forsythe*
- 1210 - 1225 W2.8 - **Optimization of Polysiloxane Ophthalmic Biomaterials Used as Accommodating Intraocular Lens Using Factorial Design.** Timothy C. Hughes*, David L.J. Alexander, Tam Le, Asitha Balachandra, Fei Huang, Lisa P.T. Hong, Xiaojuan Hao

Latest Development in Polymer Synthesis Boardwalk Gallery

Chair: Thomas Junkers

- 1010 - 1040 W3.1 - **Novel and Powerful Polymeric Platforms for Conjugation and Postpolymerization Functionalization.** Filip Du Prez*, Pieter Espeel, Milan M. Stamenović, Fabienne Goethals, Claire F. Hansell, Rachel K. O'Reilly
- 1040 - 1055 W3.2 - **Tuning Macromolecular Functionality via Efficient Radical Exchange Reaction.** Kathryn Fairfull-Smith*, Steven Bottle, Aaron Micallef, James Blinco
- 1055 - 1110 W3.3 - **ROMP and Click Modification of Acetylene Functionalised Random and Block Copolymers.** Johann v. Hensbergen*, Andrew B. Lowe, Robert P. Burford
- 1110 - 1125 W3.4 - **The Fabrication of Star Polymer-based Films via ROMP-mediated Continuous Assembly of Polymers (CAP-ROMP).** Steven Harris Wibowo*, Stefanie Nina Guntari, Edgar H. H. Wong, Anton Blencowe, Frank Caruso, Greg G. Qiao
- 1125 - 1140 W3.5 - **Facile Route to Functional Hyperbranched Polymers by Combining RAFT Polymerization and Thiol-Yne Chemistry.** Raphael Barbey*, Sébastien Perrier
- 1140 - 1155 W3.6 - **RAFT polymerization and post-processing using a multi-stage continuous flow approach.** Christian H. Hornung*, Karin von Känel, Stella Kyi, Xuan Nguyen, Almar Postma, Simon Saubern, John Chiefari
- 1155 - 1210 W3.7 - **Rapid and Highly Efficient Functionalization of Polymer Bromide End-Groups by SET-NRC.** Zhongfan Jia*, Craig A. Bell, Michael J. Monteiro
- 1210 - 1225 W3.8 - **Self-Assembly of Porphyrin-Polymer Conjugates obtained via CuAAC Chemistry.** Derrick A. Roberts*, Maxwell J. Crossley, Sébastien Perrier
- 1225 - 1325 Lunch and Trade Exhibition

Plenary Session Plenary Hall

Chair: Martina Stenzel

- 1325 - 1415 PL 6 - **Bioconjugates and glycopolymers from living radical polymerisation.** Prof David Haddleton, University of Warwick

Living Radical Polymerisation Plenary Hall
Chair: Tom Davis

- 1425 - 1455 W1.9 - **Polymer Architectures and Nanostructures Generated via Living Radical Polymerization.** Michael J. Monteiro*
- 1455 - 1510 W1.10 - **Efficient synthesis of α -isocyanate end-functional polymers.** Guillaume Gody*, Thomas Maschmeyer, Sébastien Perrier
- 1510 - 1525 W1.11 - **Syntheses of Polyacrylates by SET-LRP for use in Adhesives and Sealants.** John Woods*, Tony Jacobine, David Dworak
- 1525 - 1540 W1.12 - **Living Free Radical Polymerisation in the Presence of Cu(0): Towards Biological Precision.** Alexander H. Soeriyadi, Cyrille Boyer, Fredrik Nystrom, Per Zetterlund, Michael R. Whittaker *

The Batteard-Jordan Australian Polymer Medal

- 1540 - 1610 W1.13 - **End Group Transformation and RAFT Polymerization.** Graeme Moad*, Ming Chen, Yen K. Chong, Matthias Haeussler, Shadi Houshyar, Daniel Keddie, Ezio Rizzardo, San H. Thang, John Tsanaktsidis

Polymers for Health Wellington Room
Chair: Remzi Becer

- 1425 - 1455 W2.9 - **Star-Shaped PEO-Based Polymers as Artificial Channels : Correlation between Chemical Structure and Channel Activity.** Zahra Eskandani, Nezha Badi, Véronique Bennevault-Celton, Cécile Huin, Philippe Guégan*
- 1455 - 1510 W2.10 - **Study of Diffusion of Model Drugs in Well-Defined Thermo-responsive Poly(*N*-isopropylacrylamide)-Based Hydrogels.** Huey Wen Ooi*, Kevin Jack, Hui Peng, Kristi Anseth, Andrew Whittaker
- 1510 - 1525 W2.11 - **Folate-mediated cancer targeting polymeric micelles as a drug carrier for platinum anticancer agents.** Wei Scarano*, Hien T.T Duong, Paul De Souza, Martina Stenzel
- 1525 - 1540 W2.12 - **Antiviral polymer therapeutics: polymer prodrug design for hepatitis C.** Anton A. A. Smith*, Mille Kryger, Kasper F. Rasmussen, Alexander N. Zelikin
- 1540 - 1555 W2.13 - **Development of wireless and highly sensitive sensor devices for biomedical applications.** Solomon P. Le-Masurier*, Anthony M. Granville
- 1555 - 1610 W2.14 - **New Synthesis of Biodegradable Nanoparticles based on Dextran.** Felicity J. Hughes*, Hien Duong, Tom P. Davis, James M. Hook, Cyrille Boyer

Symposium Program

WEDNESDAY 15 February 2012

Advanced Composite Materials Boardwalk Gallery

Chair: Filip Du Prez

- 1425 - 1455 W3.9 - **Exploring the synthesis and applications of graphene.** Jonathan Wassei, Sergey Dubin, Jaime Torres, Richard B. Kaner*
- 1455 - 1510 W3.10 - **Imparting Polymer Properties to Graphene Composites via π - π Stacking Surface Modification.** Jingquan Liu*, Tom Davis
- 1510 - 1525 W3.11 - **Using Copolymer Micro-domains to Control the Orientation of Multi-Walled Carbon Nanotubes in a Uniformly Distributed Thin Film.** Tony Aitchison*, Milena Ginic-Markovic, Stephen Clarke
- 1525 - 1540 W3.12 - **Surface Modification of Carbon Nanotubes Using RAFT Polymer Coatings.** Xiaojuan Hao*, Marcio Pasotto, Xuan Nguyen, Yue (Luna) Liu, Jieshan Qiu, Timothy C. Hughes
- 1540 - 1555 W3.13 - **Polymer Coating of Multiple-Walled Carbon Nanotubes via RAFT Mediated Emulsion Polymerisation.** Duc Nguyen*, Chris Such, Brian Hawkett
- 1555 - 1610 W3.14 - **Electrospun Polystyrene Short Fibres from Ultrasonication Method.** Marini Sawawi*, George P. Simon, David Nisbet
- 1610 - 1630 Afternoon Refreshments and Trade Exhibition

Plenary Session Plenary Hall

Chair: Sébastien Perrier

- 1630 - 1720 PL 7 - **The Origins of Living Radical Polymerization (LRP) in CSIRO.** Prof David Solomon, University of Melbourne
- 1720 - 1810 PL 8 - **RAFT polymerization: past, present and future.** Dr Ezio Rizzardo, CSIRO
- 1810 - 1830 Symposium Conclusion

Symposium Dinner Tasman Room

- 1930 - 2330 Enjoy a 3 course dinner with beverages and entertainment from Rum Jungle