

## SCIENTIFIC PROGRAM

The Scientific Program will include Plenary Lectures, Special Lectures, Award Lectures, Keynote Lectures, Oral Lectures, and Poster Presentations. The official language of the Symposium is English. Registration, all lectures and poster presentations will be held in the University of Auckland.

All posters will be placed on the viewing boards from the Thursday morning and will therefore be available for viewing during coffee breaks and lunch for the duration of the conference.

### Lectures

Thursday, 23 November, 2017

8:30 Registration  
8:50 Opening Ceremony

Chairperson: Prof Yuji Mikata

9:00 – 9:45 PL-1 Osamu Ishitani (Tokyo Institute of Technology)  
Photocatalytic CO<sub>2</sub> Reduction Using Metal Complexes as Key  
Players

Chairperson: Prof Hideki Hashimoto

9:45 – 10:05 KL-1 James D. Crowley (University of Otago)  
Palladium(II) Metallosupramolecular Cages: Self-assembly and  
Molecular recognition

10:05 – 10:25 KL-2 Paul G. Plieger (Massey University)  
Linked [Fe<sup>III</sup><sub>3</sub>] Triangles

10:25 – 10:55 Coffee Break

Chairperson: Prof Hideki Hashimoto

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|---------------|------------------------|--|
| 10:55 – 11:15 | KL-3                   | Lyall R. Hanton (University of Otago)<br>Towards hydrazone based gel actuators   |
| 11:15 – 11:30 | OL-1                   | Yutaka Amao (Osaka City University)<br>Visible-light driven CO <sub>2</sub> reduction with the zinc porphyrin and biocatalyst  |
| 11:30 – 11:45 | OL-2                   | Motowo Yamaguchi (Tokyo Metropolitan University)<br>Pyrazine-bridged Macrocyclic Tetranuclear Ruthenium Complex: Synthesis, Inclusion Behavior, and Electrochemical Properties |
| 11:45 – 12:00 | OL-3                   | Kazuo Miyamura (Tokyo University of Science)<br>Cold Crystallisation – A Phenomenon that can Store Heat Energy   |
| 12:00 – 13:00 | Lunch & Poster Session |  |

Chairperson: Dr Erin Leitao

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|---------------|------|---|
| 13:00 – 13:45 | SL-1 | Sally Brooker (University of Otago)<br>From breaking simple self assembly rules to tuning spin crossover and developing active 'green' polymerisation catalysts |
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Chairperson: Prof Yutaka Amao

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| 13:45 – 14:05 | KL-4 | Carla Meledandri (University of Otago)<br>Nanoscale MOFs with Hierarchical-Pore Architectures Prepared Through Microemulsion Methods          |
| 14:05 – 14:25 | KL-5 | Nicola E. Brasch (Auckland University of Technology)<br>Probing the Mechanisms of Nitroxyl Release from Photoactive Piloty's Acid Derivatives |

- 14:25 – 14:40      OL-4      Hsiang-Jung Wu (Kogakuin University)  
Patterned Cu<sub>2</sub>O thin-film fabricated by using UV-irradiation to  
a molecular precursor film including Cu(II) complexes
- 14:40 – 14:55      OL-5      Alina Uusiku (Kogakuin University)  
Direct preparation of aqueous solutions involving Cu(II)  
complex of EDTA, from copper plates by electrochemical process

14:55 – 15:25      Coffee Break

Chairperson: Prof Christian Hartinger

- 15:25 – 16:10      PL-2      Shane Telfer (Massey University)  
Multicomponent Metal-Organic Frameworks

Chairperson: Dr Erin Leitao

- 16:10 – 16:30      KL-6      Allan G. Blackman (Auckland University of Technology)  
Photocatalytic H<sub>2</sub> evolution from a series of Co<sup>III</sup> complexes
- 16:30 – 16:45      OL-6      Kenji Matsumoto (Kochi University)  
Influence of the properties of hydroxamate-type artificial  
siderophores on the recovery from iron starvation in grape  
tomato
- 16:45 – 17:00      OL-7      Yuri Maeda (Nagoya Institute of Technology)  
Electrochemical properties and electrocatalytic ability in proton  
reduction of heterometallic trinuclear complexes both in organic  
and aqueous solutions
- 17:00 – 17:15      OL-8      Keisuke Kawamoto (Kanazawa University)  
Syntheses of water soluble polyoxomolybdenum cation  
protected by macrocyclic triazacyclononane cobalt(III)  
complexes

17:15 – 17:25      Short Break

17:25 – 17:35      Award Ceremony

Chairperson: Prof Mitsunobu Sato

17:35 – 18:05      AL-1      Kazuhiro Manseki (Gifu University)  
Creation of metal complex-based polymer nanocomposite  
materials for photoenergy conversion

Friday, 24 November, 2017

Chairperson: Prof Takanori Nishioka

9:00 – 9:45      PL-3      Takumi Konno (Osaka University)  
Coordination Chemistry of Gold(I) Metalloligands with Thiol-  
containing Amino Acids

Chairperson: Prof Hiroki Nagai

9:45 – 10:05      KL-7      J. Robin Fulton (Victoria University of Wellington)  
Reactive  $\beta$ -diketiminato group 12 and 13 complexes

10:05 – 10:25      KL-8      J. Nigel Lucas (University of Otago)  
Superphenylphosphine Ligands for Control of Coordination  
Geometry and Supramolecular Assembly

10:25 – 10:55      Coffee Break

Chairperson: Prof Hiroki Nagai

10:55 – 11:15      KL-9      Martyn P. Coles (Victoria University of Wellington)  
Synthesis and Reactivity of Low Valent Antimony and Bismuth  
Compounds

11:15 – 11:30      OL-9      Haruo Akashi (Okayama University of Science)  
Molybdenum Dithiolene Complexes: Trinuclear Mixed-Valence  
Complexes and Geometrical Isomers of Dinuclear Complexes

11:30 – 11:45      OL-10      Masahiro Mikuriya (Kwansei Gakuin University)  
Mono-, Di-, Tri-, and Tetra-nuclear Manganese Complexes with  
Multidentate Ligands

11:45 – 12:00      OL-11      Misaki Nakai (Kansai University)  
Syntheses and biodistribution of  $^{99m}\text{Tc}$ -sulfonamide and

sulfocoumarin derivatives toward molecular imaging in tumor hypoxia

12:00 – 13:00 Lunch & Poster Session

Chairperson: Prof James Wright

13:00 – 13:45 PL-4 Peter Schwerdtfeger (Massey University)  
When Gold Meets Relativity

Chairperson: Dr Stefan Schwarz

13:45 – 14:05 KL-10 Erin M. Leitao (University of Auckland)  
Creating Main-Group Molecules and Polymers using Catalysis

14:05 – 14:25 KL-11 Keith C. Gordon (University of Otago)  
The use of spectroscopic and computational methods to understand excited states

14:25 – 14:40 OL-12 Toru Honda (Kogakuin University)  
XPS spectra of Ga<sub>2</sub>O<sub>3</sub>, In<sub>2</sub>O<sub>3</sub> and their alloys fabricated by molecular precursor method

14:40 – 14:55 OL-13 Shin-ichiro Sato (Hokkaido University)  
Thermodynamic Fluctuation of Carboxyl- and Methoxycarbonyl-Porphyrin Aggregates in Water/Alcohol Binary Solution

14:55 – 15:25 Coffee Break

Chairperson: Shigenobu Yano

15:25 – 16:10 SL-2 Nobuaki Kambe (Osaka University)  
Cross-Coupling Reactions Catalyzed by Group 9 Transition Metals

Chairperson: Dr Muneebah Adams

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| 16:10 – 16:30 | KL-12       | Graham C. Saunders (University of Waikato)<br>Carbon-Fluorine Bond Fission and Dearomatization in Group 9<br>N- Heterocycle Stabilized Carbene Complexes               |
| 16:30 – 16:45 | OL-14       | Takanori Nishioka (Osaka City University)<br>Metal-metal bond formation and cleavage controlled by<br>reversible coordination and dissociation of a two-electron donor |
| 16:45 – 17:00 | OL-15       | Yuji Mikata (Nara Women's University)<br>Quinoline/Isoquinoline-Based Heptadentate Ligands with<br>Zn <sup>2+</sup> /Cd <sup>2+</sup> -Specific Fluorescent Response   |
| 17:00 – 17:10 | Short Break |  |

Chairperson: Dr Muneebah Adams

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| 17:10 – 17:30 | KL-13                           | Penelope J. Brothers (University of Auckland)<br>Lighting up sugars: linking BODIPY to sugars through boron  |
| 17:30 – 17:50 | KL-14                           | Vladimir Golovko (University of Canterbury)<br>Atomically precise metal clusters – unique species bridging the<br>gap between atoms and metallic particles |
| 17:50-18:10   | Poster Award & Closing Ceremony |  |

## Poster Presentations

- P-1 Hiroki Sato (Kwansei Gakuin University)  
Elucidation of Photoprotective Function in LH1 Antenna Pigment- Protein Complexes from a Purple Photosynthetic Bacterium *Rhodospirillum rubrum*
- P-2 Lynn Lisboa (Auckland University of Technology)  
Mechanistic Studies on the Reaction of the Vitamin B<sub>12</sub> Derivative Aquacobalamin with Phenylsulfinate
- P-3 Shota Seto (Kwansei Gakuin University)  
Isolation and Purification of Capsanthin from Red Paprika (*Capsicum annuum* L.) and its Application to the Advanced Spectroscopic Measurements
- P-4 Ruth B. Cink (Auckland University of Technology)  
Photorelease of Nitroxyl (HNO): Effects of a Simple Modification to the (Hydroxynaphthalenyl)methyl Phototrigger
- P-5 Nao Yukihiro (Kwansei Gakuin University)  
Stabilization of the fucoxanthin reconstituted into the light- harvesting 1 complex from a purple photosynthetic bacterium *Rhodospirillum rubrum* G9+
- P-6 Vinay Bharadwaj (Auckland University of Technology)  
Towards the Development of Photoactivatable HNO Donors: Synthesis and Photolysis of O-(2-Nitrobenzyl)-protected Analogues of Piloty's Acid
- P-7 Kozo Fukumoto (University of the Ryukyus)  
Carbon-sulfur bond activation of thioether by an iron complex
- P-8 Sanam Movassaghi (University of Auckland)  
Development of Anti-Cancer Organometallic Complexes with Bidentate N-Heterocyclic Carbene Ligands



- P-9 Satoshi Iwatsuki (Konan University)  
Chelating Ligand-Counter Cation Hybrid Resins for Effective Aqueous Boron Separation: Molecular Design Based on Boronic Acid Complexation Mechanism
- P-10 M. P. Sullivan (University of Auckland)  
Elucidating the interactions between organometallic complexes and proteins
- P-11 Toru Ishikawa (Tokyo University of Science)  
Thermal property of Ni salen type complex with two methyl groups in ethylene diamine moiety
- P-12 Hannah U. Holtkamp (University of Auckland)  
Improving speciation of metal based anticancer agents in serum samples via coated capillaries for CE-ICP-MS analysis
- P-13 Hideaki Takano (Waseda University)  
Computational Study of Iridium Complexes as Transition States in Formal [4+1] Cycloaddition of Biphenylene with Alkenes: Rational Explanation of [4+1] Prior to [4+2] Cycloaddition
- P-14 J. Kim (University of Auckland)  
Towards anticancer metal complexes based on novel SAHA- derived ligands
- P-15 Yoshihiko Sera (Fuji Chemical Industries Co. Ltd.)  
Synthesis of Amorphous Fe<sub>2</sub>O<sub>3</sub>/RGO Composite
- P-16 Saawan Kumar (University of Auckland)  
Conjugation of ruthenium complexes to magnetite nanoparticles for drug delivery
- P-17 Tomoko Horibe (Fuji Chemical Industries Co. Ltd.)  
Photoinduced Hydrogen Evolution by *Am*-Fe<sub>2</sub>O<sub>3</sub>/RGO

- P-18 Muneebah Adams (University of Cape Town)  
Evaluation of ruthenium(II)-, rhodium(III)- and palladium(II)-organosilane thiosemicarbazone complexes as antiparasitic agents
- P-19 Akitsugu Hayashi (Kansai University)  
Carbonate Co(III) complexes with polypyridine ligand as hypoxia Activated prodrug
- P-20 Dianna Truong (University of Auckland)  
Benzimidazolium-derived *N*-heterocyclic carbene Ru<sup>II</sup> and Os<sup>II</sup> arene complexes and peptide conjugates as novel anticancer agents
- P-21 Mako Tamaki (Osaka City University)  
Catalytic Ability of Nickel(II) Complexes with Sugar-Coated Tridentate or Bidentate *N*-Heterocyclic Carbene Ligands
- P-22 K. Tong (University of Auckland)  
Ferrocene-functionalized multi-nuclear organometallic anticancer compounds with Ir, Rh, Ru, and Os co-centres
- P-23 Takashi Yoshida (Tokyo University of Science)  
Thermal behaviour of [Ni(salen)] derivatives having methyl substituent groups at nitrogen bridge
- P-24 A. Melton (University of Auckland)  
Hydrogen Peroxide on Demand for Water Treatment
- P-25 Shoki Yasuhara (Okayama University of Science)  
Synthesis and crystal structures of niobium(V) complexes of fluoroporphyrin and fluorochlorin derivatives
- P-26 A. Ransley (University of Auckland)

Development and testing of antibacterial polymer membranes for use in water purification systems

- P-27 Narimi Fujii (Okayama University of Science)  
Antibacterial Activity of Metal Complexes of Sugar-conjugated Fluorochlorin Derivatives
- P-28 Ayiya B. Bitrus (University of Auckland)  
Synthesis of the First Tridentate Ligand that incorporates both Pyridinylidene Amide (PYA) and Remote N-Heterocyclic Carbene (rNHC) donors groups
- P-29 Shoichi Yamane (Okayama University of Science)  
Synthesis and characterization of novel tris(2-pyridyl- methyl)amine molybdenum compounds having a Mo<sub>3</sub>S<sub>4</sub> core
- P-30 Terence M. Christy (University of Auckland)  
Chemistry of sulfur-functionalized osmabenzenes
- P-31 Takuya Sawada (Okayama University of Science)  
Photooxygenation with magnesium complexes of sugar-conjugated fluorochlorin derivatives
- P-32 S. Schwarz (Universität Bayreuth)  
Preparation of a highly active Pd-Ce-Al oxide catalyst for the oxidation of methane
- P-33 Yukari Ishimoto (Osaka City University)  
Synthesis of Thiophene-Bridged Iron Carbonyl Complexes Derived from Quinoly-Substituted Thiophenes
- P-34 Toyataka Nakae (Osaka City University)  
Development of iron-based CO-releasing molecules inducible by longer wavelength light

P-35 Naoto Kuwamura (Osaka University)  
Stepwise Construction of a Pt<sup>II</sup>-Pd<sup>II</sup>-Ni<sup>II</sup> Heterotrimetallic Coordination Polymer  
Showing a Significant Enhancement in Catalytic Hydrogen Evolution by Metal-ion  
Cooperative Effect