

TABLE OF CONTENTS

Part I Conference Schedule	1
Part II Keynote Speeches	4
Part III Invited Presentations-1	6
Invited Presentation Guidelines	6
Invited Session 1: Electronic and Optical Materials	7
Invited Session 2: Energy and Environment Materials	8
Invited Session 3: Biomaterials and Medical Devices	9
Invited Session 4: Advanced Functional Materials.....	10
Special Session: Computaional Materials Science.....	11
Part IV Poster Presentations	12
Poster Guidelines.....	12
Best Poster Selection Guidelines.....	12
List of Posters.....	13
Part V Invited Presentations-2	16
Invited Presentation Guidelines	16
Invited Session 5: Materials Chemistry	17
Invited Session 6: Advance Structural Materials	18
Part VI Oral Presentations	19
Oral Guidelines	19
Best Oral Selection Guidelines	19
List of Oral Presentation	20
Part VII Conference Venue	22
Floor Plan of Conference Rooms	22
How to Reach Venue	23
Part VIII City Tour	24
Part IX Women Achievers	25

Part I Conference Schedule

MONDAY, September 16, 2019

State 1 & 2, Pullman Melbourne Albert Park

08:00-08:10 Conference Registrations

Arrival Tea & Coffee @ Mercure Lounge

08:10-08:30 Opening Ceremony

State 1 & 2, Pullman Melbourne Albert Park

[Keynote Presentations](#)

08:30-11:00 *State 1 & 2, Pullman Melbourne Albert Park*

11:00-11:20 COFFEE BREAK and GROUP PHOTOGRAPH @ Mercure Lounge

11:20-11:40 Welcome Speech by Lord Mayor Sally Capp - City of Melbourne

State 1 & 2, Pullman Melbourne Albert Park

11:20-12:00 Panel Discussion

[Keynote Presentations](#)

12:00-13:00 *State 1 & 2, Pullman Melbourne Albert Park*

13:00-13:40 BUFFET LUNCH

Mercure Lounge

[Keynote Presentations](#)

13:40-16:10 *State 1 & 2, Pullman Melbourne Albert Park*

16:10-16:30 COFFEE BREAK

Mercure Lounge

[Keynote Presentations](#)

16:30-18:00 *State 1 & 2, Pullman Melbourne Albert Park*

TUESDAY, September 17, 2019

08:00-10:00 **Invited Session 1: Electronic and Optical Materials**
State 1, Pullman Melbourne Albert Park

Invited Session 3: Biomaterials and Medical Devices
State 2, Pullman Melbourne Albert Park

10:00-10:20 **COFFEE BREAK**
Mercure Lounge

10:20-13:00 **Invited Session 1: Electronic and Optical Materials**
State 1, Pullman Melbourne Albert Park

Invited Session 4: Advanced Functional Materials
State 2, Pullman Melbourne Albert Park

13:00-13:40 **BUFFET LUNCH**
Mercure Lounge

13:40-16:00 **Invited Session 2: Energy and Environment Materials**
State 1, Pullman Melbourne Albert Park

Invited Session 4: Advanced Functional Materials
State 2, Pullman Melbourne Albert Park

16:00-16:40 **COFFEE BREAK and POSTER PRESENTATIONS**
Mercure Lounge

16:40-18:00 **Invited Session 2: Energy and Environment Materials**
State 1, Pullman Melbourne Albert Park

Special Session: Computational Materials Science
State 2, Pullman Melbourne Albert Park

WEDNESDAY, SEPTEMBER 18, 2019

Invited Session 5: Materials Chemistry

State 1, Pullman Melbourne Albert Park

08:00-10:00

Invited Session 6: Advance Structural Materials

State 2, Pullman Melbourne Albert Park

10:00-10:10

COFFEE BREAK

Mercure Lounge

Oral Session 1: Students Forum

State 1, Pullman Melbourne Albert Park

10:10-12:30

Oral Session 2: Students Forum

State 2, Pullman Melbourne Albert Park

12:30-13:30

CLOSING CEREMONY and BUFFET LUNCH

Mercure Lounge

The city tour operated by Bus Charter starts at 13:30

Part II Keynote Presentations

Time: 08:30-18:00, Monday, September 16, 2019

Location: State 1 & State 2, Pullman Melbourne Albert Park

08:30-09:00	Challenges and opportunities in data-driven materials design Amanda Barnard, Data61, Australia
09:00-09:30	Nanomaterial properties as revealed via <i>in situ</i> transmission electron microscopy Dmitri Golberg, Queensland University of Technology, Australia
09:30-10:00	YTA Rose Amal, University of New South Wales, Australia
10:00-10:30	Ten years of metal-free carbon electrocatalysts Liming Dai, Case Western Reserve University, USA
10:30-11:00	Nanostructured materials for energy-relevant electrocatalytic processes Shizhang Qiao, The University of Adelaide, Australia
11:00-11:20	COFFEE BREAK <i>Mercure Lounge</i>
11:20-11:40	<i>Welcome Speech by Lord Mayor Sally Capp - City of Melbourne</i>
11:40-12:00	Panel Discussion: WOMEN IN MATERIALS SCIENCE
12:00-12:30	The power of materials innovation; Breaking spectral and performance barriers for quantum devices Manijeh Razeghi, Northwestern University, USA
12:30-13:00	Cell membrane penetration without pore formation: Chameleonic properties of dendrimers in response to hydrophobic and hydrophilic environments Sean Smith, Australian National University, Australia
13:00-13:40	BUFFET LUNCH <i>Mercure Lounge</i>
13:40-14:10	Low-cost and high-performance hybrid phosphors for energy-efficient lighting technologies Jing Li, Rutgers University, USA
14:10-14:40	Magnetic nano-catalysts and carbonaceous waste for sustainable applications in chemical transformations Rajender Varma, Palacky University, Czech Republic
14:40-15:10	Recent developments of advanced GaN materials for light emitting diodes (LEDs) and laser diodes for energy efficient lighting and displays Steven Denbaars, University of California, Santa Barbara, USA

15:10-15:40	Materials spacetectonics: New conceptual paradigm of functional porous system Yusuke Yamauchi , The University of Queensland, Australia
15:40-16:10	Efficient air cathodes for rechargeable lithium oxygen batteries Jiazhao Wang , University of Wollongong, Australia
16:10-16:30	COFFEE BREAK <i>Mercurie Lounge</i>
16:30-17:00	Advanced synchrotron x-ray diffraction and imaging techniques for catalysis and electrocatalysis Hoydoo You , Argonne National Laboratory, USA
17:00-17:30	Anostructured layered double hydroxide based photocatalysts for solar fuels and value-added chemicals Tierui Zhang , Technical Institute of Physics and Chemistry, CAS, China

End of Day 1

Part III Invited Presentations-1

Invited Presentation Guidelines

Devices Provided by the Conference Organizer:

- Laptops (with MS-Office & Adobe Reader)
- Projectors & Screen
- Laser Sticks
- Microphones

* Laptop with Microsoft Windows will be provided. Requirement of MacBook or Use of personal laptops will only be allowed with prior intimation.

Materials Provided by the Invited Presenters:

- PowerPoint or PDF file

Please have your presentation ready in a memory stick, and save it in the laptop of your corresponding session about **15 minutes** before the start time. You also need to tell the Session Chair (before the start of your Session) that you are going to present your talk.

Best Young Scientist Selection Guidelines

Selection Criteria:

One best young scientist will be selected from EACH session based on the following items:

- ✚ Research Quality
- ✚ Presentation Performance
- ✚ Presentation Language
- ✚ Interaction with Listeners
- ✚ PowerPoint Design

Selection Procedure:

- ✚ Only the researchers younger than 35 years of age as on September 1, 2019 are eligible.
- ✚ The session chair/co-chair will select one best young scientist awardee.

Nature of the Award:

- ✚ This award consists of free registration to the Materials Oceania 2020 and a certificate;
- ✚ The awards will be given during the closing ceremony on September 18.

Invited Session 1: Electronic and Optical Materials

Session Chair: *Osama O. Awadelkarim, Pennsylvania State University, USA*

Session Co-Chair: *Yoshimine Kato, Kyushu University, Japan*

Time: 08:00-13:00 Tuesday September 17, 2019

Location: State 1, Pullman Melbourne Albert Park

08:00-08:20	Superconductivity enhanced by a ferroelectric quantum critical point Isao H. Inoue , National Institute of Advanced Industrial Science and Technology, Japan
08:20-08:40	Exploring novel engineered materials for flexible electronic system Osama O. Awadelkarim , Pennsylvania State University, USA
08:40-09:00	Si paste as a novel printing electronic material Yoshimine Kato , Kyushu University, Japan
09:00-09:20	Gas bubbles, liquid droplets and sound: The new frontier for nonlinear optics Ivan S. Maksymov , Swinburne University of Technology, Australia
09:20-09:40	Vertically-aligned resonant tunnelling devices with organic molecules as quantum dots Ryoma Hayakaw , National Institute for Materials Science, Japan
09:40-10:00	A facile strategy to fabricate conductive fabrics-polyaniline based Mohd Muzamir Mahat , MARA University of Technology, Malaysia
10:00-10:20	COFFEE BREAK <i>Mercurie Lounge</i>
10:20-10:40	Femtosecond nonlinear four wave mixing for study of carrier dynamics in porous silicon Lap Van Dao , Swinburne University of Technology, Australia
10:40-11:00	Effective and stable heat modulation by smart window technology using advanced electrochromic and electrophoretic nanomaterials Tam D. Nguyen , Nanyang Technological University, Singapore
11:00-11:20	RIKEN accelerator-driven compact neutron source as a material science investigation probe Yoshie Otake , RIKEN, Japan
11:20-11:40	Size tuneable NiCr₂O₄ nanoparticles for high charge storage parallel plate supercapacitor Biplab Kumar Paul , Jadavpur University, India
11:40-12:00	Wide band gap organic single crystal for thermal and third order nonlinear optical applications Bincy I.P. , MES College, India
12:00-12:20	Francisites as new geometrically frustrated quasi-two-dimensional magnets Alexander Vassiliev , M.V. Lomonosov Moscow State University, Russia
12:20-12:40	Structure-property relationships in α-, β'-, γ and δ-modifications of Mn₃(PO₄)₂ Olga Maximova , M.V. Lomonosov Moscow State University, Russia

12:40-13:00 **Development of flexible carbon nanotube electrochemical sensor using screen printed technique**

Soheli Farhana, University in Kuala Lumpur, Malaysia

13:00-13:40 **BUFFET LUNCH**
Mercure Lounge

Invited Session 2: Energy and Environment Materials

Session Chair: *Barbara Szpunar, University of Saskatchewan, Canada*

Session Co-Chair: *Hiromitsu Takaba, Kogakuin University, Japan*

Time: 13:40-18:00 Tuesday September 17, 2019

Location: State 1, Pullman Melbourne Albert Park

13:40-14:00 **Comparison of structural stability of β silicon carbide and thoria**

Barbara Szpunar, University of Saskatchewan, Canada

14:00-14:20 **Molecular modeling of stability and emission properties of halide perovskites**

Hiromitsu Takaba, Kogakuin University, Japan

14:20-14:40 **Enhancement of redox mediator effect at air electrode for rechargeable Li-O₂ batteries**

Morihiro Saito, Seikei University, Japan

14:40-15:00 **Colossal reversible barocaloric effects in plastic crystals**

Pol Lloveras, Polytechnic University of Catalonia, Spain

15:00-15:20 **Guest Li⁺ ion conductors based on NaI-NaBH₄ and their potential use for all-solid-state batteries**

Reona Miyazaki, Nagoya Institute of Technology, Japan

15:20-15:40 **Nanomaterials for energy conversion and storage**

Nasir Mahmood, RMIT University, Australia

15:40-16:00 **Heterostructured titanium dioxide photocatalyst**

Chiaki Terashima, Tokyo University of Science, Japan

16:00-16:40 **COFFEE BREAK and POSTER PRESENTATIONS**

Mercure Lounge

16:40-17:00 **Nanocomposite catalysts for reduction of 4-nitrophenol**

Piotr Cyganowski, Wroclaw University of Science and Technology, Poland

17:00-17:20 **Efficient down/up-conversion rare earth pair doped luminescent materials for Si-solar cell applications**

C. K. Jayasankar, Sri Venkateswara University, India

17:20-17:40 **Two dimensional materials preparation and their properties of oxygen evolution reaction**

Chuanbao Cao, Beijing Institute of Technology, China

17:40-18:00 [Interaction of corrosion-induced hydrogen with nascent defects in steel under neutron irradiation](#)
Evgenii Krasikov, Kurchatov Institute, Russia

Invited Session 3: Biomaterials and Medical Devices

Session Chair: *Kun Qian, Shanghai Jiao Tong University, China*

Time: 08:00-10:00 Tuesday September 17, 2019

Location: State 2, Pullman Melbourne Albert Park

08:00-08:20 [Hemoglobin–albumin cluster as red blood cell substitute](#)
Teruyuki Komatsu, Chuo University, Japan

08:20-08:40 [Use of multivalent-type compounds for enhancement of biological affinities](#)
Koji Matsuoka, Saitama University, Japan

08:40-09:00 [Tuning the size and composition of nanohydrogels using a “phantom monomer” for biological applications](#)
Gerardo Byk, Bar Ilan University, Israel

09:00-09:20 [Nanoparticle engineering towards highly efficient drug delivery systems and SERS-based bio-sensing](#)
Beatrice Fortuni, Catholic University of Leuven, Belgium

09:20-09:40 [Photocontrollable adhesion: A bioinspired microstructured transport device](#)
Emre Kizilkan, Kiel University, Germany

09:40-10:00 [Design of new metabolic platforms for *in vitro* diagnostics](#)
Kun Qian, Shanghai Jiao Tong University, China

10:00-10:20 **COFFEE BREAK**
Mercure Lounge

Invited Session 4: Advanced Functional Materials

Session Chair: *Katsumi Yoshida, Tokyo Institute of Technology, Japan*

Time: 10:20-16:00 Tuesday September 17, 2019

Location: State 2, Pullman Melbourne Albert Park

10:20-10:40	Development of highly microstructure-controlled boron carbide neutron absorbers for fast reactors Katsumi Yoshida , Tokyo Institute of Technology, Japan
10:40-11:00	Reflection studies of barium lanthanum titanates in 8.2 to 12.4 GHz frequency range Shalini Bahel , Guru Nanak Dev University, India
11:00-11:20	Cold spray process for thick ceramic coatings Motohiro Yamada , Toyohashi University of Technology, Japan
11:20-11:40	Stimuli responsive and molecularly imprinted polymers for phthalates removal Joanna Wolska , Wroclaw University of Science and Technology, Poland
11:40-12:00	Engineered woods based on rice straw: Structure, properties and uses Nattakan Soykeabkaew , Mae Fah Luang University, Thailand
12:00-12:20	Improving molded pulp products from agro wastes via blending approach Nattaya Tawichai , Mae Fah Luang University, Thailand
12:20-12:40	Theoretical assessment of wettability on silane coatings: From hydrophilic to hydrophobic Haiming Huang , Guangzhou University, China
12:40-13:00	Nanofabrication technology for structure control of nano-materials and their applications Chi Won Ahn , Korea Advanced Institute of Science and Technology, Korea
13:00-13:40	BUFFET LUNCH <i>Mercure Lounge</i>
13:40-14:00	Interfacing biomolecules with nanomaterials: Structure and function at the atomic-scale Tiff Walsh , Deakin University, Australia
14:00-14:20	Chemical engineering of nanostructured materials for varying applications Xingmao Jiang , Wuhan Institute of Technology, China
14:20-14:40	Preparation of graphene based magnetic hybrids for dye removal application Ing Kong , La Trobe University, Australia
14:40-15:00	The potential of using gold nanoparticle-based assay for target molecule detection Dakrong Pissuwan , Mahidol University, Thailand
15:00-15:20	Next-generation latent finger-mark detection using functionalised silicon oxide nanoparticles Fehmida K Kanodarwala , University of Technology Sydney, Australia

15:20-15:40	<p>Nanofabrication processes for catalysts on nano-silicon materials for energy conversion devices</p> <p>Ahmed Halima, Monash University, Australia</p>
15:40-16:00	<p>Magnetic properties of LSMO, LSMKO and LSMPO superparamagnetic nanomaterials</p> <p>Sunita Keshri, Birla Institute of Technology, India</p>
16:00-16:40	<p>COFFEE BREAK and POSTER PRESENTATIONS</p> <p><i>Mercurie Lounge</i></p>

Special Session: Computational Materials Science from Data61, CSIRO, Australia

Time: 16:40-18:00 Wednesday September 18, 2019

Location: State 2, Pullman Melbourne Albert Park



16:40-18:00	<p>Active-learning directed simulation of small molecule surface binding</p> <p>Christopher A. Feigl, Data61, CSIRO, Australia</p>
	<p>Feature selection for machine learning of surface catalysts</p> <p>Julia Melisande Fischer, Data61, CSIRO, Australia</p>
	<p>Understanding and predicting defective graphene-oxide structures using machine learning</p> <p>Benyamin Motevalli Soumehsaraei, Data61, CSIRO, Australia</p>

End of Day 2

Part IV Poster Presentations

Poster Guidelines

Materials Provided by the Conference Organizer:

- Poster Boards
- Adhesive Tapes or Clamps

Materials Provided by the Presenters:

- Printed Posters

Requirement for the Posters:

- Material: not limited
- Size: 1*1 Meters

Best Poster Selection Guidelines

Selection Criteria:

- ✚ Research Quality
- ✚ Presentation Skill
- ✚ Design



Selection Procedure:

Poster Award Sponsors

- ✚ The judgment will be done by Board of Jury.
- ✚ When the competition is being conducted, each participant should be ready in front of his/her poster to answer all questions from the judges.
- ✚ The winners will be announced at the closing ceremony of the conference. The decision of the winner will be withdrawn if the winner/winners is/are not present at the time of announcement.
- ✚ The judge's decision will be final and no clarification will be given.

Nature of the Award

- ✚ This award consists of free registration to the Materials Oceania 2020 and a certificate sponsored by Royal Society of Chemistry;
- ✚ The awards will be given during the closing ceremony on September 18.

List of Posters

Time: September 17,2019 16:00-16:40

Location: Mercure Lounge

ICME001	Synthesis and drug binding properties of recombinant canine serum albumin <i>Tomomi Hasegawa, Chuo University, Japan</i>
ICME002	Insulin receptor binding aptamer and milk exosome conjugates as promising therapeutic agents for Diabetes <i>Gna Ahn, Chungbuk National University, Republic of Korea</i>
ICME003	Protection layer/semiconductor structure of photoelectrode for photoelectrochemical water splitting <i>Jianyun Zheng, Curtin University, Australia</i>
ICME004	Bacterial nanofibrillar polymer (BNP) for wound-healing application <i>Seon Hyung Lee, Chungbuk National University, Republic of Korea</i>
ICME005	Super tough, thermally conductive composite hydrogel and its biomedical applications <i>Yi Wang, Sichuan University, China</i>
ICME006	Highly stretchable and self-healing “solid-liquid” elastomer with strain-rate sensing capability <i>Qi Wu, Sichuan University, China</i>
ICME007	Characterizing the multi-scale energy dissipation mechanism of natural rubber <i>Cheng Huang, Sichuan University, China</i>
ICME008	Ultra-tough, defect-tolerant and humidity-responsive self-healing elastomers for intelligent actuators <i>Yong Zhu, Sichuan University, China</i>
ICME009	Ionic modified halogenated elastomers with the capabilities of self-healing and water insensitivity <i>Linjun Zhang, Sichuan University, China</i>
ICME010	Synthesis of catalase microtube motors with controllable velocity and biodegradability <i>Natsuho Sugai, Chuo University, Japan</i>
ICME011	Structural and electrochemical properties of Li- and Mn-rich positive electrode materials exhibiting oxygen activity <i>Katarzyna Redel, AGH University of Science and Technology, Poland</i>
ICME012	Ecofriendly synthesis of gold nanoparticles using low-cost biosorbents from lower Silesia region <i>Dorota Jermakowicz-Bartkowiak, Wroclaw University of Science and Technology, Poland</i>
ICME013	Investigation on mechanical and frictional properties of barium titanate and PVDF using atomic force microscopy <i>Yajing Kan, Southeast University, China</i>

ICME014	<p>Overview of the composite nanoceramics prepared by sintering of in-situ made multiphase nanopowders in the bimetallic system aluminum nitride AlN/gallium nitride GaN</p> <p><i>Jerzy F. Janik, AGH University of Science and Technology, Poland</i></p>
ICME015	<p>Comparison of two different metal sulfide systems used in the mechanochemical synthesis of kesterite $\text{Cu}_2\text{ZnSnS}_4$ for photovoltaic applications</p> <p><i>Jerzy F. Janik, AGH University of Science and Technology, Poland</i></p>
ICME016	<p>Electrically colour tunable colloid in nonpolar solvents for the color reflective display film</p> <p><i>Woo Jin Yim, NSPECTRA Co., Ltd., Republic of Korea</i></p>
ICME017	<p>Quantum-dot microcapsule film for an oxygen and moisture problems</p> <p><i>Jinseok Song, NSPECTRA Co., Ltd., Republic of Korea</i></p>
ICME018	<p>Effect of oleothermal synthesis parameters on TiO_2 quantum dots functionalized graphene</p> <p><i>Felipe Amorim Berutti, Federal University of Rio Grande do Sul, Brazil</i></p>
ICME019	<p>$\text{NaLuGdF}_4:\text{Yb}^{3+}/\text{Er}^{3+}$ up-conversion nanoparticles as an optical sensor</p> <p><i>Bui The Huy, Changwon National University, Republic of Korea</i></p>
ICME020	<p>Paper-based sensors coupled with smartphone for fluorescence detection of phenolic pollutants based on amphiphilic quantum dots</p> <p><i>Salah M Tawfik, Changwon National University, Republic of Korea</i></p>
ICME021	<p>Tuning the size and composition of nanohydrogels using a “phantom monomer” for biological applications</p> <p><i>Gerardo Byk, Bar Ilan University, Israel</i></p>
ICME022	<p>Development of selective hydrophilic/hydrophobic treatment towards future application to semiconductor substrate</p> <p><i>Hiroshi Ikari, Tokyo University of Science, Japan</i></p>
ICME023	<p>Effective and stable heat modulation by smart window technology using advanced electrochromic and electrophoretic nanomaterials</p> <p><i>Tam Duy Nguyen, Nanyang Technological University, Singapore</i></p>
ICME024	<p>Effect of W loading on TiO_2 electrochromic properties</p> <p><i>Annelise Kopp Alves, Federal University of Rio Grande do Sul, Brazil</i></p>
ICME025	<p>Effects of phase structure on up-conversion photoluminescence and dielectric performance in Er^{3+} doped $(\text{Bi}_{0.5}\text{Na}_{0.5})\text{TiO}_3\text{-BaTiO}_3$ lead-free ceramics</p> <p><i>Chao Chen, Jingdezhen Ceramic Institute, China</i></p>
ICME026	<p>Development of a self-charged photo-power cell based on <i>in situ</i> synthesized Electroactive and large dielectric SrF_2/PVDF nanocomposite film</p> <p><i>Farha Khatun, Jadavpur University, India</i></p>
ICME027	<p>A facile synthesis of supported metal nanoparticles with high dispersion by using the melt-infiltration method</p> <p><i>Shin Wook Kang, Korea Institute of Energy Research, Republic of Korea</i></p>
ICME028	<p>The utilization of nanocellulose as catalyst support for methanol steam reforming</p> <p><i>Soohyun Kim, Korea Institute of Energy Research, Republic of Korea</i></p>

ICME029	Dipicolylamino quinoline derivative as novel dual fluorescent detecting system for Hg ²⁺ and Fe ³⁺ <i>Waroton Paisuwan, Chulalongkorn University, Thailand</i>
ICME030	Ultrasonic observation of H ₂ gas replacement in a pipe <i>Takuya Kido, Kyushu University, Japan</i>
ICME031	Performance and durability of flat-tubular solid oxide 3-cell stack in the reversible electrolysis-fuelcell operation <i>Sun-Dong Kim, Korea Institute of Energy Research, Republic of Korea</i>
ICME032	Effects of an inner coating of crystalline GDC nanosol in the porous metal support on the electrochemical properties of metal-supported SOFC cells <i>Tae Woo Kim, Korea Institute of Energy Research, Republic of Korea</i>

Part V Invited Presentations-2

Invited Presentation Guidelines

Devices Provided by the Conference Organizer:

- Laptops (with MS-Office & Adobe Reader)
- Projectors & Screen
- Laser Sticks
- Microphones

* Laptop with Microsoft Windows will be provided. Requirement of MacBook or Use of personal laptops will only be allowed with prior intimation.

Materials Provided by the Invited Presenters:

- PowerPoint or PDF file

Please have your presentation ready in a memory stick, and save it in the laptop of your corresponding session about **15 minutes** before the start time. You also need to tell the Session Chair (before the start of your Session) that you are going to present your talk.

Best Young Scientist Selection Guidelines

Selection Criteria:

One best young scientist will be selected from EACH session based on the following items:

- ✚ Research Quality
- ✚ Presentation Performance
- ✚ Presentation Language
- ✚ Interaction with Listeners
- ✚ PowerPoint Design

Selection Procedure:

- ✚ Only the researchers younger than 35 years of age as on September 1, 2019 are eligible.
- ✚ The session chair/co-chair will select one best young scientist awardee.

Nature of the Award:

- ✚ This award consists of free registration to the Materials Oceania 2020 and a certificate;
- ✚ The awards will be given during the closing ceremony on September 18.

Invited Session 5: Materials Chemistry

Session Chair: *Ivan Nemeč, Charles University, Czech Republic*

Time: 08:00-10:00 Tuesday September 17, 2019

Location: State 1, Pullman Melbourne Albert Park

08:00-08:20	Advanced phase characterization of novel prospective materials for NLO hydrogen-bonded salts and cocrystals of heteroaromatic bases Ivan Nemeč , Charles University, Czech Republic
08:20-08:40	Material design of porous coordination polymer for high performance adsorbent of NH₃ and NH⁴⁺ Tohru Kawamoto , National Institute of Advanced Industrial Science and Technology, Japan
08:40-09:00	Temperature dependent crystal structure of LaSr₃Fe₃O₁₀ with intercalated H₂O and OH⁻ Isao Kagomiya , Nagoya Institute of Technology, Japan
09:00-09:20	Insights into the activation of molecular oxygen for alcohol oxidation over Pd single-atom catalyst Yu Cong , Dalian Institute of Chemical Physics, CAS, China
09:20-09:40	Ceramic composites with zero-thermal-expansion property Ikuo Yanase , Saitama University, Japan
09:40-10:00	Gelcasted solid-state-sintered SiC ceramic foams with excellent permeability Haibo Wu , Shanghai Institute of Ceramics, China
10:00-10:10	COFFEE BREAK <i>Mercurie Lounge</i>

Invited Session 6: Advance Structural Materials

Session Chair: *Frank Czerwinski, CanmetMATERIALS, Canada*

Time: 08:00-10:00 Wednesday September 18, 2019

Location: State 2, Pullman Melbourne Albert Park

08:00-08:20	Recycled AA6111 Al alloys manufactured by melt conditioned direct chill casting and thermomechanical forming processes Isaac Chang , Brunel University London, UK
08:20-08:40	Improving thermal stability of aluminum alloys through additions of rare earths Frank Czerwinski , CanmetMATERIALS, Canada
08:40-09:00	PM production of tungsten and its alloy: A multi-scale numerical study Xizhong An , Northeastern University, China
09:00-09:20	Refractories; An essential evil? Michael Walton , RefMet, Australia
09:20-09:40	Acousto-microfluidic one-step synthesis and activation of metal-organic frameworks (MOFs) Heba Ahmed , RMIT University, Australia
09:40-10:00	Effect of chicken feather and its carbon derivatives on the compressive strength of cement mortar Bryan Pajarito , University of the Philippines, Philippines
10:00-10:10	COFFEE BREAK <i>Mercure Lounge</i>

Part VI Oral Presentations

Oral Presentation Guidelines

Devices Provided by the Conference Organizer:

- Laptops (with MS-Office & Adobe Reader)
 - Projectors & Screen
 - Laser Sticks
 - Microphones
- * Laptop with Microsoft Windows will be provided. Requirement of MACBOOK or Use of personal laptops will only be allowed with prior intimation.

Materials Provided by the Oral Presenters:

- PowerPoint or PDF file in a memory stick

Please have your presentation ready in a memory stick, and save it in the laptop of your corresponding session about **15 minutes** before the start time.

Best Oral Presentations Selection Guidelines

Selection Criteria:

One best presentation will be selected from EACH session based on the following items:

- ✚ Research Quality
- ✚ Presentation Performance
- ✚ Presentation Language
- ✚ Interaction with Listeners
- ✚ PowerPoint Design

Selection Procedure:

- ✚ The judgment will be done by Board of Jury.

Nature of the Award:

- ✚ This award consists of free registration to the Materials Oceania 2020 and a certificate;
- ✚ The awards will be given during the closing ceremony on September 18.

List of Oral Presentations

Time: September 18, 2019 10:10-12:30

Location: State 1, Pullman Melbourne Albert Park

10:10-10:20	Development of a 3D printed scaffold allowing multiple drug delivery for the treatment of bone metastasis in breast cancers Habib Belaid , European Institute Des Membranes, France
10:20-10:30	Uptake, permeability and diffusion of multifunctional mesoporous silica nanoparticles in 3D cell assemblies Indra Van Zundert , Catholic University of Leuven, Belgium
10:30-10:40	Development of antimicrobial and biocompatible fluorescent Hydroxyapatite-chitosan nanocomposite films for biomedical applications Somtirtha Kool Banerjee , Jadavpur University, India
10:40-10:50	Polybutylene succinate porous scaffold prepared by fused deposition modeling and salt leaching techniques for drug delivery application Kasidis Teerasuchai , Silpakorn University, Thailand
10:50-11:00	Charcterization of calceined waste shells Wiranchana Srichanachaichok , Mahidol University, Thailand
11:00-11:10	The influence of thermoplastic nonwovens containing multi-walled carbon nanotubes on CFRPs properties Kamil Dydek , Warsaw University of Technology, Poland
11:10-11:20	3D printed PLA/BN scaffolds for bone tissue engineering application Habib Belaid , European Institute Des Membranes, France
11:20-11:30	Effect of co-solvent on the properties of non-woven porous neomycin-loaded poly(lactic acid)/polycaprolactone fibers Thiphathai Hongthipwaree , Silpakorn University, Thailand
11:30-11:40	Properties of nonwoven polylactic acid fibers from prepared by simple rotational jet spinning method Worapon Rodchanasuripron , Silpakorn University, Thailand
11:40-11:50	Magnetic nanoparticles for monocyte separation Porntida Wattanakull , Mahidol University, Thailand
11:50-12:00	Doped ZnO in hybrid nanostructure for lighting and solar cell applications Yu Zhang , Lyon Institute of Nanotechnology, France
12:00-12:10	Polyethyleneimine (PEI) impregnated bimetallic MIL-101 metal organic frameworks (MOF) for CO ₂ capture study Sanjit Gaikwad , Changwon National University, South Korea
12:10-12:20	Generation of charged Ti nanoparticles and their deposition behaviour under the applied bias during RF magnetron sputtering Ji Hye Kwon , Seoul National University, South Korea

List of Oral Presentations

Time: September 18, 2019 10:10-12:30

Location: State 2, Pullman Melbourne Albert Park

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| 10:10-10:20 | <p>Role of colossal dielectric Cu impregnated α-MnO₂ nanoparticles in highly durable asymmetric solid state supercapacitor</p> <p>Dheeraj Mondal, Jadavpur University, India</p> |
| 10:20-10:30 | <p>Homochiral metal-organic frameworks functionalized SERS substrate for attomolar enantio-selective detection</p> <p>Olga Guselnikova, University of Chemistry and Technology, Czech Republic</p> |
| 10:30-10:40 | <p>A route to reach the absorption limit of perovskite solar cells by using metal-oxide front contacts</p> <p>Mohammad Ismail Hossain, The Hong Kong Polytechnic University, Hong Kong</p> |
| 10:40-10:50 | <p>Capacitive organic anode based on fluorinated-contorted hexabenzocoronene: Applicable to lithium-ion and sodium-ion storage cell</p> <p>Jaehyun Park, Ulsan National Institute of Science and Technology, Republic of Korea</p> |
| 10:50-11:00 | <p>Deterministic growth of a sodium metal anode on a pre-patterned current collector for highly rechargeable seawater batteries</p> <p>Jaeho Jung, Ulsan National Institute of Science and Technology, Republic of Korea</p> |
| 11:00-11:10 | <p>GdBaCo_{2-x}Mn_xO_{5+δ} layered perovskites as cathodes for solid oxide fuel cells</p> <p>Anna Olszewska, AGH University of Science and Technology, Poland</p> |
| 11:10-11:20 | <p>A statistical and systemic study of the interaction between lubricin (LUB) on different substrate surfaces</p> <p>Mingyu Han, Deakin University, Australia</p> |
| 11:20-11:30 | <p>Bulk deformation and toughness behavior of titanium alloys comprising the C15-type laves and beta phase</p> <p>Chirag Dhirajlal Rabadia, Edith Cowan University, Australia</p> |
| 11:30-11:40 | <p>Cyclic deformation behaviors of a nickel based superalloy: Potential competing failure mechanism</p> <p>Wei-Wen Kong, Institute of Metal Research, CAS, China</p> |
| 11:40-11:50 | <p>Influence of relative contents of materials in coating mortars with natural river sand and limestone binder filler with similar granulometric distribution</p> <p>Ieda Maria Fagundes Zanolla, Chinese Academy of Sciences, China</p> |
| 11:50-12:00 | <p>Preparation of inorganic porous adsorbent by gasification fly ash and adsorption behavior for Cr(VI) removal</p> <p>Yang Guo, China University of Mining and Technology, China</p> |
| 12:00-12:10 | <p>Enhanced electrochemical properties of ultrathin Ni(OH)₂-MnO₂ hybrid nanosheets by plasma induced grafted MWCNTs as binder-free electrode for high performance supercapacitor</p> <p>Ai-Wen Chai, National Cheng Kung University, Taiwan</p> |
| 12:10-12:20 | <p>Thermolysis behavior of microcrystalline cellulose at low heating rates</p> <p>Mohamed Rashid Ahmed-Haras, RMIT University, Australia</p> |
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Part VII Conference Venue

Hotel Pullman Melbourne Albert Park

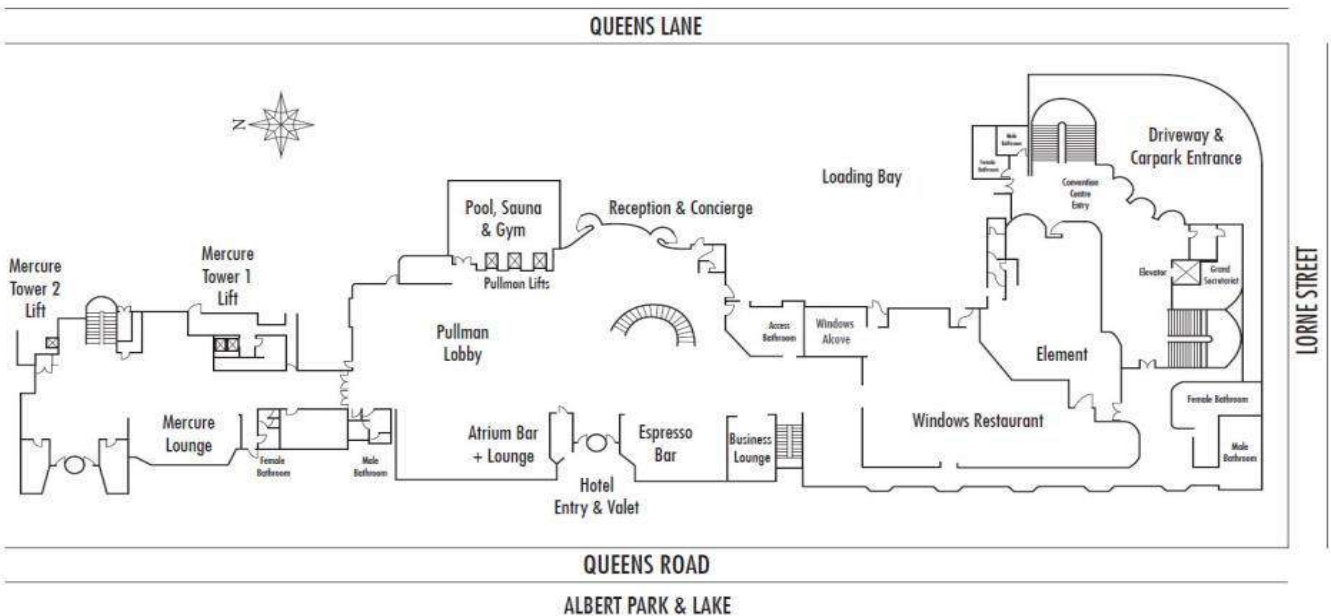
Address: 65 Queens Road, Melbourne, VICTORIA , 3004, Australia

Tel.: 613-8554-2813

Website: <https://www.pullmanalbertpark.com.au/>

Floor Plan of Conference Rooms

GROUND FLOOR



CONFERENCE AND EVENT CENTRE



How to reach Pullman Melbourne Albert Park from Melbourne Airport (MEL)?

Option 1: Taxi from Melbourne Airport (MEL- Tullamarine) – Highly recommended

The most convenient is taxi as it is direct. It's about a 25-35 minute drive (30kilometres) and costs around A\$ 60-70.

Option 2: Ride Share from Melbourne Airport (MEL- Tullamarine) – Recommended

Uber, DIDI, Ola are available in Melbourne to book through App. It's about a 30-40 minute drive. (30kilometres) and costs around A\$ 50-60.

Option 3: Skybus + Tram - Cheapest

Take the Skybus from Melbourne Airport and take the option that drops one off for free at the major hotels (Cost A\$ 20).

Ask to be dropped off at the Westin Hotel, corner of Swanston Street and Collin Street, which is officially known as City Square.

Buy a Myki ticket [public transport ticket] from any of the numerous 7-11 stores, and load about \$10 on it.

Then catch any of the following trams on the same side as the Westin along Swanston Street:

3,5,6,16,64 or 67. With 6 trams routes, one would only have to wait a minute or two.

Get off at the High Street stop (opposite the Deaf School).

Cross the street and walk along Lorne Street for 50 metres and one can see the back entrance to the Pullman/Mecure Albert Park.

Total Time is about 60 Minutes.

Option 4: Skybus + Taxi

Take the Skybus from Melbourne Airport and get down in Southern Cross station (Cost A\$ 20/person) and take taxi/Ride Share to the hotel (Cost A\$ 15-20). Total Time is about 45-50 Minutes.

Part VIII City Tour

Schedule

- 13:30 Depart from the Conference Venue
- 13:30-16:00 Explore the City by Bus Charter
- 16:00-16:15 Refreshment
- 16:15-19:00 Continue the Exploration
- 19:00 Back to the Conference Venue

Spotlight on Melbourne Melbourne's charm is characterised by its enchanting laneways, stunning waterfront precincts and trendy neighbourhoods, and provides an endless choice of shopping hot spots and culturally-diverse, award-winning restaurants, cafés and bars in weird and wonderful locations. There are plenty of things to do in Melbourne. Easily navigated on foot, the city's confidence and success are infectious; whether closing a deal or relaxing with colleagues and new friends, Melbourne is the perfect destination.

The following are places covered during city tour.



Royal Exhibition Building



Melbourne Cricket Ground



Melbourne Star



Brighton Beach



St. Kilda Little Penguins

Contact Details

Mr. Rakshith Kumar - Conference Manager

Email: rakshith.kumar@materialsoceania.com

Phone Number: +61 405539272 (Available in WhatsApp also)

Mr. Raghav Gupta – Director, Prism Scientific Services

Email: raghavgupta@scientificprism.com

Phone Number: +61 416000202

Conference Secretariat

Prism Scientific Services Pty Ltd

Level 14, 380 St Kilda Road, Melbourne

VIC 3004, Australia

