

USYD – Yonsei Virtual Research Roundtable II on “Functional Energy Materials”

Thursday 10 June 2021

1:30pm-3:30pm Seoul, 2:30pm-4:30pm Sydney

Zoom Meeting ID: 870 7410 9879

<https://uni-sydney.zoom.us/j/87074109879?from=addon>

Purpose:

- This roundtable will carry on the discussion of the virtual research roundtable on Functional Energy Materials held in 2020 which has showcased the research strength and interest of both universities.
- The discussion today will aim to work out a practical plan to support our collaboration in joint research and industry engagement (see discussion questions below).

Co-Chairs:

- Chair, Professor Philip Gale, Head of School of Chemistry, Faculty of Science, University of Sydney
- Chair, Professor Injae Shin, Head, Department of Chemistry, College of Science, Yonsei University

Participants:

Sydney

1. Dr Lauren Macreadie, School of Chemistry
2. Professor Chris Ling, Theme Leader for Functional Energy Materials, School of Chemistry
3. Professor Brendan Kennedy, School of Chemistry
4. Professor Cameron Kepert, School of Chemistry
5. Dr Girish Lakhwani, School of Chemistry
6. Dr Alexander Yuen, School of Chemistry
7. Mr Andrew Kemp, Business Development Manager, Faculty of Science, Research Portfolio
8. Dr Joyce Parker, Manager, Research Development International, Research Portfolio
9. Ms Susan Saretzki, Business & Government Relations, Office of Global Engagement
10. Ms Xiaohui Fu, Partnership Officer, Office of Global Engagement

Yonsei

1. Professor Dongil Lee, Department of Chemistry
2. Professor Hyun S. Ahn, Department of Chemistry
3. Professor Byeong-Su Kim, Department of Chemistry
4. Professor Sang-Yong Ju, Department of Chemistry
5. Professor Woo dong Jang, Department of Chemistry
6. Professor Yong-Sun Bahn, Vice President of University-Industry Foundation, Vice President of Yonsei University Technology Holdings
7. Ms Jung Lim Chae, Head, Research Strategy Team, Office of Research Affairs, Yonsei University
8. Mr Hunseok Son (Chris), Yonsei Frontier Lab & Research Strategy Team, Office of Research Affairs

Program

Seoul Time	Sydney Time	Activities
1:30-1:40pm (10 min)	2:30-2:40pm (10min)	Welcome • Professor Philip Gale, Head of School of Chemistry, Faculty of Science, University of Sydney • Professor Injae Shin, Head, Department of Chemistry, College of Science, Yonsei University
1:40-2:15pm (35 min) (7 speakers @ 5min, 2 PPT slides each)	2:40-3:15pm (35 min) (7 speakers @ 5min, 2 PPT slides each)	Recap of previous research presentations, research expertise and interest 1. Professor Byeong-Su Kim, Department of Chemistry, College of Science, Yonsei University (Previous Presentation: Designer Carbon Nanodots: Synthesis and Applications in Energy)

		2. Dr Lauren Macreadie, School of Chemistry, Faculty of Science, University of Sydney (Previous presentation: <i>Functional MOF materials for hydrocarbon separations for hydrogen delivery applications</i>) 3. Professor Chris Ling, Theme Leader for Functional Energy Materials, School of Chemistry, Faculty of Science, University of Sydney (Previous presentation: <i>In situ/operando X-ray and neutron scattering studies of high-voltage solid-state battery materials at high voltage</i>) 4. Professor Dongil Lee, Department of Chemistry, College of Science, Yonsei University (Previous presentation: <i>Electrocatalytic CO₂ Conversion on Metal Nanoclusters</i>) 5. Professor Brendan Kennedy, School of Chemistry, Faculty of Science, University of Sydney (Previous Presentation: <i>Beyond Batteries. Uncoupling local and long-range structures in complex oxides.</i>) 6. Assistant Professor Hyun S. Ahn, Department of Chemistry, College of Science, Yonsei University (Previous Presentation: <i>Ruthenium-based Trimetallic μ-oxo Cluster Compounds and Their Application in Redox Flow Batteries</i>) 7. Professor Cameron Kepert, School of Chemistry, University of Sydney (Research interest: <i>Materials chemistry, Molecular framework materials, X-ray diffraction, Nanoporosity, Electronic and magnetic properties of solids, Phase transitions (structural, electronic and magnetic)</i>)
2:15-2:40pm (25 min) (2 speakers @12 min each)	3:15-3:40pm (25 min) (2 speakers @12 min each)	Industry engagement opportunities Potential industry collaboration opportunities • Prof Yong-Sun Bahn, Vice President of University-Industry Foundation, Vice President of Yonsei University Technology Holdings • Mr Andrew Kemp, Business Development Manager, Faculty of Science, Research Portfolio, University of Sydney Topics 1. Overview of academic-industry collaboration 2. Successful example of the university-industry collaboration in Chemistry 3. Sydney's opportunity to engage with Korean industries 4. Yonsei's opportunity to engage with Australian industries 5. How to work together in the industry collaboration
2:40-3:20pm (40 min)	3:40-4:20pm (40 min)	Discussion of collaboration plans led by • Professor Chris Ling, Theme Leader for Functional Energy Materials, School of Chemistry, University of Sydney • Professor Hyun S. Ahn, Department of Chemistry, College of Science, Yonsei University Questions 1. What research areas/projects we could work on together?

		2. Which funding program we could potentially apply for? 3. Ideas to encourage international research collaboration and industry engagement? 4. Activities that can be linked to SDG goals (Especially SDG 7: Affordable & Clean Energy, SDG 9: Industry, Innovation and Infrastructure, and SDG 12: Responsible Consumption and Production) 5. What are our next steps? • Regular meetings between individual catch ups? • Other initiatives?
3:20-3:30 (10 min)	4:20-4:30 (10 min)	Conclusion of next steps • Professor Philip Gale, Head of School of Chemistry, University of Sydney • Professor Injae Shin, Head, Department of Chemistry, College of Science, Yonsei University

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