Thursday, 1 August 2019

TIME	EVENT
8.45 AM	**Registration**
9.10 AM	**Opening Welcome** **Professor Liu Bin** NUS, Chemical and Biomolecular Engineering
CHAIRPERSON: PROFESSOR LIU BIN	
	CO_2 CAPTURE
9.20 – 9.55 AM	**Pore surface engineering of covalent organic frameworks for creation of tailor-made interfaces** **Professor Jiang Donglin** NUS, Chemistry
9.55 – 10.30 AM	**Tailoring redox properties of oxygen carriers for chemical looping applications in carbon capture** **Assistant Professor Paul Liu Wen** NTU, Chemical and Biomedical Engineering
10.30 – 11.00 AM	**Interaction and Tea Break** Group Photography
11.00 – 11.35 AM	**Understanding the CO_2 adsorbtion in metal formates $M(HCOO)_3$ with M = Al, Fe Ga and In with first-principles calculations** **Assistant Professor Pieremanuele Canepa** NUS, Materials Science and Engineering
11.35 – 12.10 PM	**Capturing CO_2 and Converting into Energy using Covalent Organic Frameworks (COF)** **Professor Loh Kian Ping** *(talk will be presented by Dr. Li Xing)* NUS, Chemistry
12.10 – 12.45 PM	**Carbon capture/ offset for transportation fuels** **Professor Markus Kraft** Cambridge CARES
12.45 – 1.45 PM	**Lunch**
CHAIRPERSON: PROFESSOR DR. JAVIER PÉREZ-RAMÍREZ	
	H_2 PRODUCTION, AND CO_2 CONVERSION
1.45 – 2.20 PM	**Hydrogen Production using Solid Oxide Electrolysis Cell** **Professor Chan Siew Hwa** NTU, Mechanical & Aerospace Engineering | Energy Research Institute @ NTU | Sino-Singapore International Joint Research Institute @ Guangzhou
2.20 – 2.55 PM	**Oxygen Electrocatalysis on Transition Metal Spinel Oxides** **Associate Professor Xu Zhichuan, Jason** NTU, Materials Science & Engineering

2.55 – 3.30 PM	**Direct and indirect (through biomass) conversion of CO_2 into chemicals** **Associate Professor Yan Ning** NUS, Chemical and Biomolecular Engineering
3.30 – 3.50 PM	**Interaction and Tea Break**
3.50 – 4.25 PM	**Electrochemical Activation of Small Molecules** **Associate Professor Jason Yeo Boon Siang** NUS, Chemistry
4.25 – 5.00 PM	**Opportunities to Apply Electrochemistry to Transform CO_2 into Value-Added Products** **Dr. Andrew Barnabas Wong** Stanford, Chemical Engineering (Current) NUS, Materials Science and Engineering | Chemical and Biomedical Engineering (Future)
5.00 – 5.35 PM	**Catalytic Membrane Reactor for CO_2 Hydrogenation to Methanol** **Associate Professor Sibudjing Kawi** NUS, Chemical and Biomolecular Engineering
5.35 – 6.00 PM	**Panel discussion** Session will be facilitated by: Professor Liu Bin & Professor Dr. Javier Pérez-Ramírez
6.30 PM	**Dinner at Privé Grill** (The University Club) for invited speakers

Friday, 2 August 2019

TIME	EVENT
CHAIRPERSON: ASSOCIATE PROFESSOR YAN NING	
	CO_2 CONVERSION, AND H_2 PRODUCTION
9.00 – 9.35 AM	**Frontiers in Catalyst Design for Sustainable Technologies** **Professor Dr. Javier Pérez-Ramírez** NUS, Chemical and Biomolecular Engineering | ETH Zürich, Catalysis Engineering | Energy-X flagship program | A LEAF consortium
9.35 – 10.10 AM	**Development of Novel Catalysts for CO_2 Utilization** **Professor Zeng Hua Chun** NUS, Chemical and Biomolecular Engineering
10.10 – 10.45 AM	**Hybrid Alkaline Water Electrolysis for Safe and Cost-Effective Production of Hydrogen** **Assistant Professor Li Hong (Colin)** NTU, Mechanical & Aerospace Engineering | Electrical and Electronic Engineering
10.45 – 11.10 AM	**Interaction and Tea Break**

11.10 – 11.45 AM	**A Design Strategy Towards Oxygen Electrocatalysts** **Associate Professor Liu Bin** NTU, Chemical and Biomedical Engineering
	TOOLS - CHARACTERIZATION & MODELLING
11.45 – 12.20 PM	**Probing the surface reactions at the atomic scale** **Associate Professor Chen Wei** NUS, Chemistry | NUS, Physics
12.20 – 12.55 PM	**Electron Microscopy for Catalyst Innovation** **Assistant Professor He Qian** NUS, Materials Science and Engineering
12.55 – 1.45 PM	**Lunch**
1.45 – 2.20 PM	**Accelerating catalyst discovery by atomistic simulations** **Assistant Professor Sergey Kozlov** NUS, Chemical and Biomolecular Engineering
CHAIRPERSON: PROFESSOR DR. JAVIER PÉREZ-RAMÍREZ	
	SYSTEMS INTEGRATION & SUSTAINABILITY STUDIES
2.20 – 2.55 PM	**Sustainable Process Systems Engineering for Energy and the Environment** **Professor Dr. Gonzalo Guillén Gosalbez** ETH Zürich, Institute for Chemical and Bioengineering
2.55 – 3.30 PM	**The Quest for Economic Technologies for the Production of Sustainable Fuels and Chemicals** **Professor George W Huber** University of Wisconsin-Madison, Chemical and Biological Engineering
3.30 – 3.50 PM	**Interaction and Tea Break**
3.50 – 4.25 PM	**Analysis of a Green Methanol Production Process** **Professor Shamsuzzaman Farooq** NUS, Chemical and Biomolecular Engineering
4.25 – 5.00 PM	**Routes to Green Energy Society: life cycle sustainability and planetary boundaries analysis** **Assistant Professor Wang Xiaonan** NUS, Chemical and Biomolecular Engineering
5.00 – 5.35 PM	**Panel discussion & Closing remarks** Session will be facilitated by: Professor Dr. Javier Pérez-Ramírez & Professor Liu Bin