Professor Jiang Donglin NUS, Chemistry	*Professor Donglin Jiang obtained a Ph.D. degree at Department of Chemistry and Biotechnology, Faculty of Engineering, The University of Tokyo in 1998. He then began his academic carrier as an assistant professor at The University of Tokyo and was involved in developing functional polymers based on dendritic architecture until 2000 when he was appointed as the group leader of The Japan Science and Technology Agency (JST), The Exploratory Research for Advanced Technology (ERATO) project on Aida Nanospace.* *In 2005, he moved to the Institute for Molecular Science, National Institutes of Natural Science as an associate professor to start his independent laboratory. He moved to Japan Advanced Institute of Science and Technology as a full professor in 2016. He joined Department of Chemistry, Faculty of Science, National University of Singapore as a tenured full professor (strategic hire) in 2018. His current research interests include two-dimensional covalent polymers and frameworks, including their chemistry, physics, and materials. In 2005 and 2009, he was awarded as a researcher for the JST PRESTO projects. He received the Wiley Award 2006 of the Society of Polymer Science, Japan, the Young Scientists' Prize 2006 of Japan, and the 34th Chemical Society of Japan Award for Creative Works (2017).*
Assistant Professor Paul Liu Wen NTU, Chemical and Biomedical Engineering	*Dr Liu Wen (Paul) is a reaction engineer specialising in reaction engineering. He completed his undergraduate and postgraduate training as a chemical engineer at University of Cambridge. During his PhD and a short postdoctoral stint in Cambridge, he pursued research in chemical looping, a novel carbon capture technology. Paul moved from Cambridge to Singapore in 2014, when he joined the Cambridge Centre for Advanced Research and Education in Singapore (CARES) as a senior research fellow affiliated with NTU. He taught chemical engineering at Newcastle University's Singapore campus since 2016 and re-joined NTU in 2018. Dr Liu's main research interests include heterogeneous catalysis, chemical looping applications for carbon capture and utilisation (CCU).*
Assistant Professor Pieremanuele Canepa NUS, Materials Science and Engineering	*Dr Piero Canepa is an Assistant Professor in the Department of Materials Science and Engineering in the Faculty of Engineering at the National University of Singapore. The nature of his research work is multidisciplinary covering the fields of materials science, chemistry, computational materials science, and incorporate foundations of thermodynamics, electrochemistry, theoretical chemistry and spectroscopy. He has received his bachelor's and master's degrees from the University of Torino (Italy) and his PhD from the University of Kent (United Kingdom). He was a Postdoctoral fellow at the Lawrence Berkeley National Laboratory and the Massachusetts Institute of Technology under the guidance of Prof. Gerbrand Ceder.*
Professor Loh Kian Ping *(talk will be presented by Dr. Li Xing)* NUS, Chemistry	*Professor Kian Ping Loh completed his Ph.D degree in Physical and Theoretical Chemistry, University of Oxford in 1996. He is currently the Provost's Chair professor in the National University of Singapore and also the Head of 2D Materials Research in the Centre for Advanced 2D Materials. He is also the associate editor of the ACS journal Chemistry of Materials and serves on the international advisory board of New Diamond and Nanocarbon conference series. His research interests are focused on 2D materials, which include graphene, nanocarbon, 2-D perovskites and 2-D inorganic material. He has established a strong research program in the optoelectronic properties of 2-D materials, particularly on the non-linear optical properties of graphene. His team was the first to demonstrate the use of atomic layer graphene as saturable absorber in mode-locked fiber laser for the generation of ultrashort soliton pulses (756 fs) at telecommunication band. In 2010, K. P. Loh's team made another pioneering contribution to graphene photonics by demonstrating broadband optical polarization in graphene for the first time, the work is published in Nature Photonics. K. P. Loh was conferred the President's Science Award in Singapore in 2014 and the American Chemical Society's ACS Nano Lecture award in 2013. He currently has a google Hirsch index of 86 and has received >42,000 citations for his publications.*

Professor Markus Kraft Cambridge Centre for Advanced Research and Education in Singapore	*Professor Markus Kraft is the Director of Cambridge CARES in Singapore, Cambridge University's first international research centre. He is a Fellow of Churchill College, Cambridge and Professor in the Department of Chemical Engineering and Biotechnology. Professor Kraft obtained the academic degree 'Diplom Technomathematiker' at the University of Kaiserslautern in 1992 and completed his Doctor rerum naturalium in Chemistry in 1997. Subsequently, he worked at the University of Karlsruhe and the Weierstrass Institute for Applied Analysis and Stochastics in Berlin. In 1999 he became a lecturer in the Department of Chemical Engineering, University of Cambridge. Professor Kraft's research interests include computational modelling and optimisation targeted towards developing carbon abatement and emissions reduction technologies for the automotive, power and chemical industries.*
Professor Chan Siew Hwa NTU, Mechanical & Aerospace Engineering | Energy Research Institute @ NTU | Sino-Singapore International Joint Research Institute	*Co-Director, Energy Research Institute @ NTU* *Director, Sino-Singapore International Joint Research Institute @ Guangzhou* *Professor Chan joined NTU as a Lecturer in 1991 after obtaining his PhD and subsequently working as a postdoctoral researcher at Imperial College London. He is now a Professor in the School of Mechanical and Aerospace Engineering. Professor Chan is a Director of Maz Energy Pte Ltd, where he provides technical advice to the Board since 2004. He is a member of the Management Board of Energy Studies Institute (SGP); Advisor to Total SA (France), Horizon Energy Systems (SGP) and Wuhan Koleal (China). Professor Chan's research is inclined towards Fuel Cells and Hydrogen Technology. He was the Conference Chair for both the 1st World Hydrogen Technologies Convention (WHTC) in 2005, and HYPOTHESIS XIII in 2018.* *His research has gained him a number of recognitions, such as George-Stephenson Award from the Institution of Mechanical Engineers (UK), Scientific Achievement Award from International Association of Hydrogen Energy (USA), "The World's Most Influential Scientific Minds 2014" (Thomson-Reuters), Nanyang Award (Research Excellence), Nanyang Award (Teaching Excellence), Nanyang Award (Innovation and Entrepreneurship), and most recently the "Star of Innovation Talent" from Guangzhou Government. He is also the President's Chair in Energy. He is the editorial board member of "Fuel Cells – from fundamentals to systems", "Journal of Power Technologies", "Energy Conversion and Management" and "International Journal of Energy Research". He is very active in commercializing technologies developed at his laboratories.*
Associate Professor Xu Zhichuan, Jason NTU, Materials Science & Engineering | *Solar Fuels Laboratory | Energy Research Institute @ NTU*	*Zhichuan is an associate professor in School of Materials Science and Engineering, Nanyang Technological University. He received his PhD degree in Electroanalytical Chemistry at 2008 and B.S. degree in Chemistry at 2002 from Lanzhou University, China. His PhD training was received in Lanzhou University (2002-2004), Institute of Physics, CAS (2004-2005), and Brown University (2005-2007). Since 2007, he worked in State University of New York at Binghamton as a Research Associate and from 2009 he worked in Massachusetts Institute of Technology as a Postdoctoral Researcher. Dr. Xu is member of International Society of Electrochemistry (ISE), The Electrochemistry Society (ECS), and American Association for the Advancement of Science (AAAS). He was awarded Fellow of Royal Society of Chemistry (FRSC) in Nov. 2017. He served as a guest editor for the special issue ICEI2016 of Electrochimica Acta and an associate editor for Nano-Micro Letters. He is also the development editor for Current Opinion in Electrochemistry and the vice president of ECS Singapore Section. Dr. Xu is 2018 Highly Cited Researcher by Clarivate Analytics, Web of Science. Dr. Xu has received several awards such as Chun-Tsung Endowment Outstanding Contribution Award - Excellent Scholar at 2018 and the Zhaowu Tian Prize for Energy Electrochemistry by International Society of Electrochemistry (ISE) at 2019.*

Associate Professor Yan Ning NUS, Chemical and Biomolecular Engineering	*Associate Professor Yan obtained his bachelor and PhD degrees from Peking University in 2004 and 2009, respectively. Thereafter, he worked as a Marie-Curie Research Fellow at Ecole Polytechnique Federale de Lausanne, Switzerland. He joined the National University of Singapore (NUS) as an Assistant Professor and established the Lab of Green Catalysis in 2012. He was promoted to Associate Professor with tenure in 2018. His major research interest includes catalytic conversion of renewable carbon sources, green chemistry & engineering, and catalyst development. He was recently awarded with the NUS Young Researcher Award 2019 for his contributions to the conversion of biomass to value-added chemicals and the fields of nano- and single-atom catalysis.*
Associate Professor Yeo Boon Siang Jason NUS, Chemistry	*Associate Professor Boon Siang Jason Yeo obtained his B.Sc. with Honors (First Class) in Chemistry, from NUS in 2001; M.Sc.in Chemistry, from NUS in 2004; and Dr. Sc. in Chemistry, from ETH Zürich (Swiss Federal Institute of Technology Zürich) in 2009. He was a Postdoctoral Fellow in the Chemical Sciences Division, Lawrence Berkeley National Laboratory and Department of Chemical and Biomolecular Engineering, University of California, Berkeley from 2009-2012. He joined NUS as an Assistant Professor in the Department of Chemistry, and is the Group Leader of the Solar Fuels Lab in the Solar Energy Research Institute of Singapore (SERIS). He was recently promoted to Associate Professor. His research interests include: Developing catalysts for the electrochemical reduction of CO2 to C2 and C3 hydrocarbons and alcohols; Catalysis of O2 and H2 evolution reactions; Use of operando spectroscopy for probing catalysts; to develop a sustainable and environmentally friendly energy economy.*
Dr. Andrew Barnabas Wong Stanford, Chemical Engineering (Current); NUS, Materials Science and Engineering | Chemical and Biomedical Engineering (Future)	*Dr. Andrew Wong received his PhD in chemistry at the University of California, Berkeley where he studied the synthesis and properties of nanostructured semiconducting materials in the group of Prof. Peidong Yang. More recently, as a postdoctoral scholar at Stanford University, his work has focused on electrochemical CO_2 reduction in the group of Prof. Thomas Jaramillo. He has recently been offered a joint appointment at NUS in MSE and ChBE.*
Associate Professor Sibudjing Kawi NUS, Chemical and Biomolecular Engineering	*Prof. Kawi received his B.A. Chem. from Univ. Texas (Austin), B.Sc. Chem. Eng. from Univ. Texas (Austin), M.Sc. Chem. Eng. from Univ. Illinois (Urbana-Champaign), and PhD in Chem. Eng. from Univ. Delaware. After 2 years of postdoc at Univ. of California (Davis), he joined Dept. Chem. & Biomolecular Eng. at National University of Singapore. In the past 10 years, his research focuses on catalysis and membrane for CO_2 capture & utilization and hydrogen production. He has published > 260 journal papers (h index = 60), 5 patents, 1 book, 3 book chapters, edited 8 special issues (as a Guest Editor of ChemCatChem, Catalysis Today, Ind. & Eng. Chem. Research, J. CO2 Utilization, Environ. Sci. & Pollution Research, Topics in Catalysis, Catalysts) and presented several Keynote Lectures at international conferences. He serves on the Editorial Board of ChemCatChem, Reactions, Waste & Biomass Valorization and as an Associate Editor of Carbon Capture, Storage and Utilization (a specialty section of Frontiers in Energy Research). He was the Chair of 2015-ICCDU (13^{th} International Conference on Carbon Dioxide Utilization) held in Singapore.*

Professor Dr. Javier Pérez-Ramírez NUS, Chemical and Biomolecular Engineering | ETH Zürich, Catalysis Engineering | Energy-X flagship program | A LEAF consortium	*Javier Pérez-Ramírez studied Chemical Engineering at the University of Alicante and received his PhD degree at Delft University of Technology in 2002. Following a period in industry at Norsk Hydro and Yara International (2002-2005), he joined the Institute of Chemical Research of Catalonia as an ICREA Professor before being appointed at the Swiss Federal Institute of Technology in Zurich as the Professor of Catalysis Engineering in 2010. His research focuses on the design of catalytic materials tackling current and future energy, resource, and environmental challenges of society. He has published over 400 articles and is co-inventor of more than 20 patents. He has been recognized by several awards, most recently the Otto-Roelen-Medal (2012), the EFCATS Young Researcher Award (2013), the Beilby Medal and Prize (2014), the RSC Sustainable Energy Award (2017), and the Paul H. Emmett Award in Fundamental Catalysis for the North American Catalysis Society (2019). He serves as the Editor-in-Chief of Catalysis Science and Technology and as President of SwissCat, the Catalysis section of the Swiss Chemical Society. He is principal investigator in key European initiatives, such as the Energy-X flagship program and the A LEAF consortium. Since 2018, Javier has a visiting appointment as Isaac Manasseh Meyer chair professor at the National University of Singapore and directs the NUS Flagship Green Energy program.*
Professor Zeng Hua Chun NUS, Chemical and Biomolecular Engineering	*Professor Hua Chun Zeng obtained his B.Sc. in Chemistry from Xiamen University in 1982 and Ph.D. in Physical Chemistry (with Professor Keith A.R. Mitchell) from University of British Columbia in 1989. Following postdoctoral work (with Professor John C. Polanyi, Nobel Laureate in Chemistry, 1986) at University of Toronto, he joined the faculty at National University of Singapore in 1991. His research interests are, at present, focused on the exploratory design and synthesis of inorganic nanostructures, with an emphasis on energy and sustainability applications.*
Assistant Professor Li Hong (Colin) NTU, Mechanical & Aerospace Engineering | Electrical and Electronic Engineering	*Dr. Hong Li is currently an Assistant Professor in Nanyang Technological University (NTU) Singapore. Before he joined NTU in June 2016, he was a postdoc in Stanford University in United States. Dr. Li's research focuses on catalysis for electrochemical energy conversion/storage including hydrogen generation from water electrolysis, waste-to-energy/chemical, etc. Dr. Li has published more than 40 peer-reviewed papers (with over 7900 citations) in international journals including Nature Materials, Nature Communications, Journal of American Chemical Society etc.*
Associate Professor Liu Bin NTU, Chemical and Biomedical Engineering	*Associate Professor Bin Liu received his B.Eng. (1st Class Honors) and M.Eng. degrees in Chemical Engineering from the National University of Singapore, and obtained his Ph.D. degree in Chemical Engineering from University of Minnesota in 2011. Thereafter, he moved to University of California, Berkeley and worked as a postdoctoral researcher in Department of Chemistry during 2011 – 2012, before joining School of Chemical and Biomedical Engineering at Nanyang Technological University as an Assistant Professor in 2012. He is now an Associate Professor at NTU. His main research interests are electrocatalysis, photovoltaics and photoelectrochemistry.*
Associate Professor Chen Wei NUS, Chemistry | NUS, Physics	*Dr Wei Chen is currently an associate professor in both the Chemistry Department and Physics Department at the National University of Singapore (NUS). He received his Bachelor degree in Chemistry from Nanjing University (China) in 2001 and his PhD degree from the Chemistry Department at NUS in 2004. His current research interests include molecular-scale interface engineering for organic, graphene and 2D materials based electronics and optoelectronics, and interface-controlled nanocatalysis for energy and environmental research.*

Assistant Professor He Qian NUS, Materials Science and Engineering	*A/Professor He Qian obtained his PhD in Materials Science and Engineering from Lehigh University, USA, in 2013. From 2013-2016, he did a postdoctoral research in the STEM group, Oak Ridge National Lab. He then joined Cardiff Catalysis Institute, Cardiff University as a staff scientist, between 2016-2019. In July 2019, he joined the Dept of MSE in NUS as an assistant professor and an NRF fellow. Qian's research focus on developing and applying electron microscopy methods for nanomaterial characterisation.*
Assistant Professor Sergey Kozlov NUS, Chemical and Biomolecular Engineering	*Dr. Sergey Kozlov studies chemical and physical interactions in nanostructured catalysts by using electronic structure simulations. He obtained MSc degree in Physics from Novosibirsk State University (Russia) and PhD in Chemistry from the University of Barcelona (Spain), where he studied nanostructured alloy catalysts and nanoparticle-support interactions. He also worked on MOFs, electrochemistry and atomically precise nanoclusters at KAUST (Saudi Arabia) and graphene at the University of Erlangen-Nürnberg (Germany).*
Professor Dr. Gonzalo Guillén Gosalbez ETH Zürich - Institute for Chemical and Bioengineering	*Dr. Gonzalo Guillén-Gosálbez completed his MEng in Chemical Engineering from Universidad de Murcia (Spain), following which he received his PhD in Process Systems Engineering at Universitat Politècnica de Catalunya (Spain), spending afterwards two years as Fulbright Scholar at Prof. Ignacio Grossmann's group at Carnegie Mellon University (US). He then joined the Department of Chemical Engineering at Universitat Rovira i Virgili (Spain) in 2008, before becoming Associate Professor in the School of Chemical Engineering and Analytical Science at The University of Manchester (UK) in 2014. In 2016, he moved to Imperial College London (UK), where he worked as Associate Professor until January 2019. In February 2019, he joined the Institute for Chemical and Bioengineering of ETH Zürich (Switzerland) as Professor in Chemical Systems Engineering.* *Dr. Guillén-Gosálbez is an expert on Sustainable Process Systems Engineering, with strong focus on the simultaneous optimisation of the environmental and economic performance of process industries. He has published more than 100 research articles in international journals and received several awards that recognise his academic and research accomplishments, including the Top Chemical Engineering Student Award (highest GPA in Spain), the Top Doctoral Student Award (Universitat Politècnica de Catalunya, Spain), the Fulbright Postdoctoral Scholarship, and the Young Investigator Award of the Spanish Royal Academy of Engineering, among others. He is also Chair for Programming for the Sustainability Section of the AIChE Annual Meeting and Associate Editor of the journal Sustainable Production and Consumption.*
Professor George W Huber University of Wisconsin-Madison, Chemical and Biological Engineering	*George Willis Huber is the Richard Antoine Professor of Chemical Engineering at University of Wisconsin-Madison. His research focus is on developing new catalytic processes for the production of renewable liquid fuels and chemicals. He has won several awards including the AICHE Colburn award, 2015-17 Thomson Reuters "highly cited researcher" and has been named one of the top 100 people in Bioenergy by Biofuels Digest. He is co-founder of Anellotech (www.anellotech.com) and Pyran. George did a post-doctoral stay with Avelino Corma at the Technical Chemical Institute at the Polytechnical University of Valencia, Spain (UPV-CSIC). He obtained his Ph.D. in Chemical Engineering from University of Wisconsin-Madison (2005). He obtained his B.S. (1999) and M.S.(2000) degrees in Chemical Engineering from Brigham Young University.*

Professor Shamsuzzaman Farooq NUS, Chemical and Biomolecular Engineering	*Shamsuzzaman Farooq is a Professor in the Department of Chemical and Biomolecular Engineering at the National University of Singapore (NUS). His research and teaching interests are in design, development, modelling and optimization of separation processes. He specializes in adsorption science and its application in gas separation technology with 30 years of experience in these areas spanning both academic and industrial projects including pilot plant studies. He has been involved with several energy related externally funded (both Singapore and overseas agencies) projects both as PI and co-PI. Besides publishing in premier Chemical Engineering journals and speaking at International Conferences, he is a co-author of the book, Pressure Swing Adsorption. He is currently the Editor in Chief of Adsorption – journal of the International Adsorption Society. He is a registered Professional Engineer in Singapore. He has served in various Faculty and University level committees on Promotion and Tenure, Teaching Excellence and Educational Policy. He also has several teaching awards to his credit and completed a 9-year term as a Fellow of the NUS Teaching Academy.*
Assistant Professor Wang Xiaonan NUS, Chemical and Biomolecular Engineering	*Dr Xiaonan Wang is an assistant professor in the Department of Chemical and Biomolecular Engineering, National University of Singapore (NUS). She is leading a Smart Systems Engineering research group of more than 15 team members as PI at NUS and also the deputy director of the Accelerated Materials Development programme in Singapore. Her team has built a systematic planning platform for smart city and engineering development that combines model-based and data-driven approaches for overall economic, environmental and social benefits improvements. She has published more than 35 peer-reviewed journal and conference proceeding papers, organized several conferences and chaired sessions, and delivered more than 30 presentations/invited talks at international conferences and universities on five continents. Besides academic research and teaching, she has led an education series on Artificial Intelligence, Machine Learning and Optimization in Science & Engineering to disseminate knowledge and public understanding. Xiaonan and her students have developed novel machine learning and artificial intelligence technologies applied in biomedical, nano-materials, energy, environment and sustainability related research. She was recognized as an IChemE Global Awards 2017 Young Researcher finalist and several best paper awards at IEEE Conferences.*