

## Institute of Chemical & Engineering Sciences (ICES)

### Nano Science and Technology

Name	Project	Degree By
Prof Reginald Tan reginald_tan@ices.a-star.edu.sg	Nano Science and Technology Material Sciences Pharmaceutical Science and Technology, and Environmental Life Cycle Assessment	NUS

### Environmental Life Cycle Assessment

Name	Project	Degree By
Prof Reginald Tan reginald_tan@ices.a-star.edu.sg	Nano Science and Technology Material Sciences Pharmaceutical Science and Technology, and Environmental Life Cycle Assessment	NUS

### Chemical and Pharmaceutical Processing, reactor design, formulation processes

Name	Project	Degree By
Dr Charles William Johannes charles_johannes@ices.a-star.edu.sg	Synthesis of functional molecules. Homogeneous catalysis. Development of green and sustainable methodologies. Chemical Biology.	NTU
Dr Chen Luwei chen_luwei@ices.a-star.edu.sg	Heterogeneous Catalysis. Biomass conversion. C1 chemistry.	NUS
Dr Ng Wai Kiong ng_wai_kiong@ices.a-star.edu.sg	Pharmaceutical design and particle technology. (Chemical and Pharmaceutical Processing). (Formulation processes). (Pharmaceutical Science and Technology).	NUS
Dr Paul Sharratt paul_sharratt@ices.a-star.edu.sg	Chemical and Pharmaceutical Processing, reactor design, formulation processes.	
Dr Teo Peili Teo_Peili@ices.a-star.edu.sg	Catalyst design for olefin hydroamination and hydration (Chemical and Pharmaceutical Processing, reactor design, formulation processes). Catalyst design for polymer chain-end functionalization.	NUS

Dr Wu Jinchuan wu_jinchuan@ices.a-star.edu.sg	Green, clean & cost-effective pretreatment of lignocellulose (Chemical and Pharmaceutical Processing, reactor design, formulation processes). Fermentation of hemicellulose sugars to optically pure L- and D-lactic acids (Material Sciences). Engineering thermophilic Bacillus coagulans for lactic acid production from lignocelluloses (Material Sciences & Alternate Energy).	
Prof Ashwin M Khambadkone ashwinmk@ices.a-star.edu.sg	Alternate Energy. Power Electronics. Electrical Drives and Control. Power Engineering. Power Systems Stability and Control. Smart Grids. Microgrids and their control. Condition Monitoring and Diagnosis.	NUS
Dr LIU Yan, Senior Scientist II Liu_yan@ices.a-star.edu.sg	Materials development for photocatalysis and electrocatalysis Heterogeneous catalysis Functional porous materials Single site / nano-structural catalysts Biomass conversion Catalytic activation, conversion and utilization of CH4 and CO2 Solid acid/base catalysts	NTU/NUS

### Alternate Energy

Name	Project	Degree By
Dr Armando Borgna Armando_Borgna@ices.a-star.edu.sg	Material Sciences Alternate Energy Development of Catalyst & Catalytic Processes C1 Chemistry Biomass Conversion	NUS

### Pharmaceutical Science and Technology

Name	Project	Degree By
Prof Reginald Tan reginald_tan@ices.a-star.edu.sg	Nano Science and Technology Material Sciences Pharmaceutical Science and Technology, and Environmental Life Cycle Assessment	NUS

Material Sciences

Name	Project	Degree By
Dr Armando Borgna Armando_Borgna@ices.a-star.edu.sg	Material Sciences Alternate Energy Development of Catalyst & Catalytic Processes C1 Chemistry Biomass Conversion	NUS

Dr Keith Carpenter Keith_Carpenter@ices.a-star.edu.sg	Chemical and Pharmaceutical Processing, reactor design, formulation processes.	NUS
Prof Reginald Tan reginald_tan@ices.a-star.edu.sg	Nano Science and Technology Material Sciences Pharmaceutical Science and Technology, and Environmental Life Cycle Assessment	NUS

### Industrial Biotechnology

<b>Name</b>	<b>Project</b>	<b>Degree By</b>
Dr Li Qingxin li_qingxin@ices.a-star.edu.sg	Conversion of oil palm empty fruit bunch to Rhamnolipids and exploring diverse applications of the produced biosurfactants (Chemical and Pharmaceutical Processing, reactor design, formulation processes, material sciences)	
Dr Zhao Hua zhao_hua@ices.a-star.edu.sg	Reconstruction of E. coli for overproduction of 1,2-pentanediol/1,2-hexanediol (Chemical and Pharmaceutical Processing, reactor design, formulation processes, material sciences)	

### Process Science and Modelling

<b>Name</b>	<b>Project</b>	<b>Degree By</b>
Dr Shaik Salim Shaik_Salim@ices.a-star.edu.sg	Process and industrial safety including runaway reactions and dust explosions, as well as management of safety and safety culture	