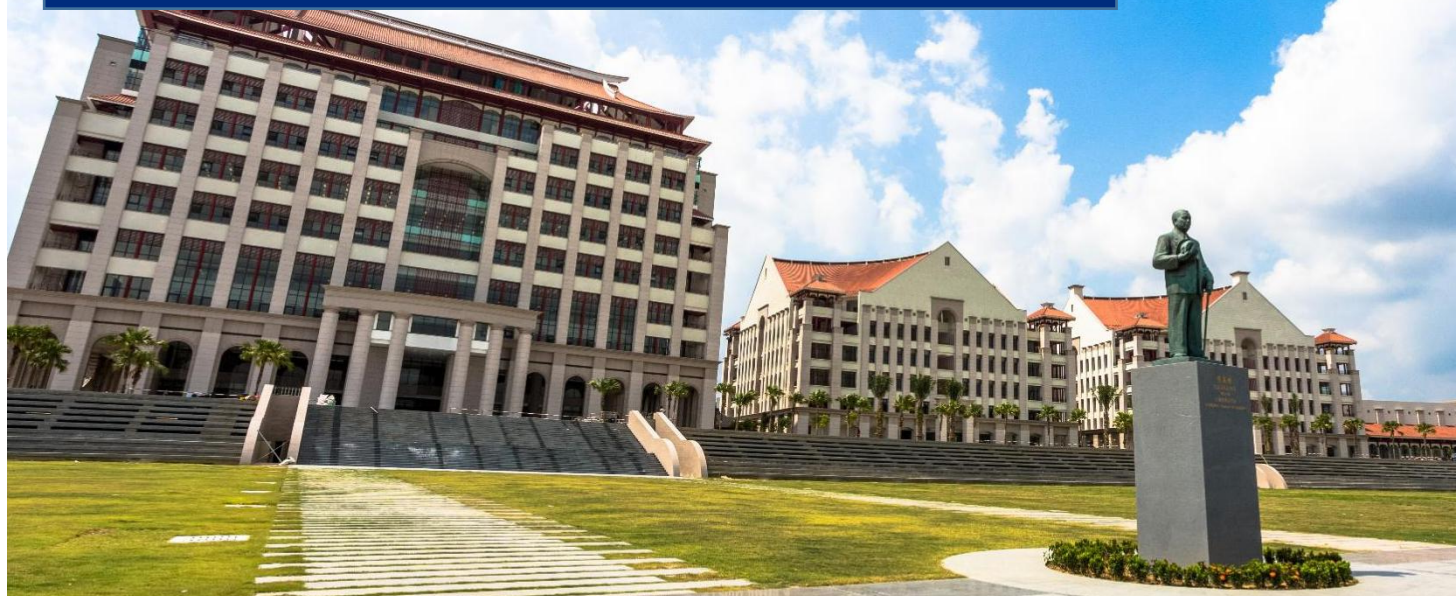


Research and Innovation Achievements: School of Energy and Chemical Engineering (2016-2021)

May 2021



NEWS HEADLINE

Established in April 2016, the School of Energy and Chemical Engineering (SECE) currently offers two bachelors programmes related to Energy and Chemical Engineering, namely: (1) *Bachelor of Engineering in New Energy Science and Engineering with Honours* and (2) *Bachelor of Chemical Engineering with Honours*.



The School has been widely recognized for its research achievements and the various awards granted to its faculty members and students. In appreciation of the dedication and accomplishments of our faculty members, we summarized the School's research and innovation achievements from 2016 to 2021. Our faculty members have published more than 235 research papers throughout the past five years, including on journals with high impact factors such as *Progress in Materials Science*, *Chem*, *Advanced Functional Materials*, *Applied Catalysis B: Environmental*, etc.

NEWS HIGHLIGHTS

Research Publications

Faculty Members Awards

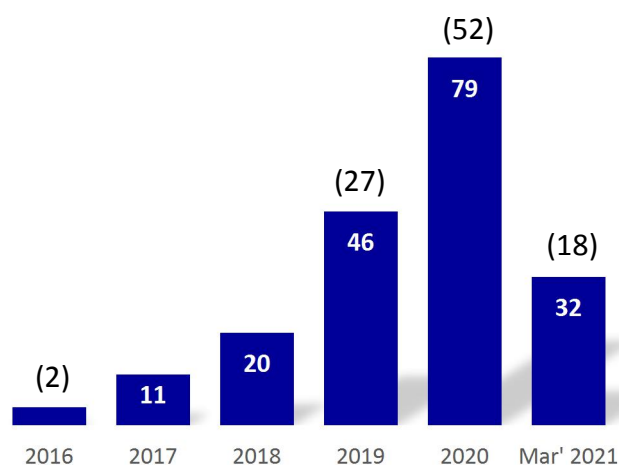
Research Funding

Student Achievements

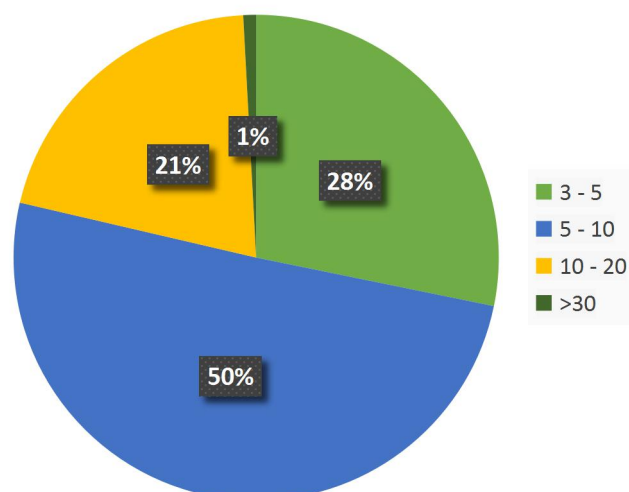
*Undergraduate Students
Publications*

RESEARCH PUBLICATIONS

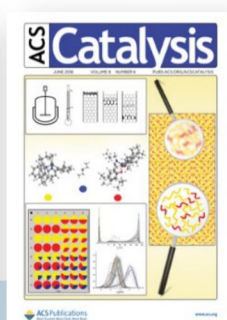
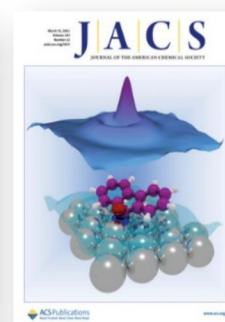
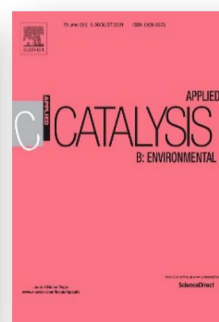
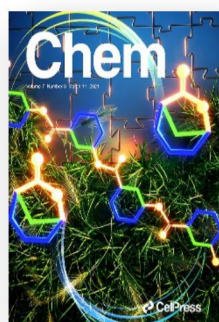
Publications on Q1 Journals



Impact Factor of 117 Q1 Publications



TOTAL PUBLICATIONS - 235



AND
MORE

Faculty Members Awards

**Assoc. Prof. Dr.
Ong Wee Jun**

2020 Global Highly Cited Researcher Award by Publons, Clarivate Analytics in November 2020

Publons Peer Review Awards – Top 1% of reviewers in the Materials Science, Chemistry, Cross-Field disciplines in September 2019

National Outstanding Educator/Reviewer Award in the field of Nanotechnology by Educoop in May 2019

69th Lindau Nobel Laureate Meeting 2019” dedicated to Physics by Lindau Nobel Laureate Meetings (Germany) and Academy of Sciences Malaysia (ASM) in March 2019

Global Highly Cited Researcher in the field of "Cross-Field" by Clarivate Analytics (Web of Science) in November 2019

Highly commended Young Chemical Engineer in Research awarded IChemE Global, 2018

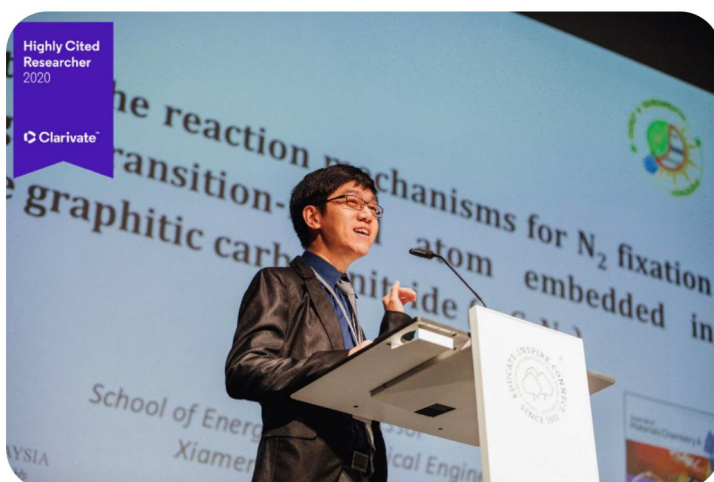
Green Talents Award organized by Federal Ministry of Education and Research in October 2018

Young Chemical Engineer in Research Award by IChemE Malaysia in October 2018

Publons Peer Review Awards – Top 1% of reviewers in the Materials Science, Chemistry discipline in September 2018

Publons Peer Review Awards – Top 10 reviewers for 'Nanotechnology' journal in September 2018

Merdeka Award Grant funded by Petronas, Shell and ExxonMobil Malaysia in December 2018.



**Assoc. Prof. Dr.
Yong Wai Fen**

Editorial Board Member for Journal of Polymer Science and Engineering in May 2020

Top 1 Journal in Materials Science Category by Progress in Materials Science in March 2020

Professional Title Chartered Engineer of Institution of Chemical Engineers (IChemE) (CEng) by IChemE in 2019

Top 50 outstanding Green Talents alumni, Green Talents Networking Conference 2019 by German Federal Ministry of Education and Research (BMBF), Germany in October 2019

Finalist for Energy Award, Institution of Chemical Engineers by IChemE, Singapore in October 2017.

Finalist for Sustainability Award, Institution of Chemical Engineers organized by IChemE, Singapore in October 2017

Dr. Woon Kok Sin

CrossCulture Programme Fellowship, German Federal Foreign Office, 2021

Best Overall Presentation during 2nd World Conference on Waste Management 2021 in March 2021

Young Researcher in Solid Waste Management by Venus International Foundation in January 2021

Top 10 Most Viewed Presentations during the 4th Sustainable Process Integration Laboratory (SPIL) Scientific Conference in November 2020

First Prize in Japanese Award for Outstanding Research on Development organized by Global Development Awards in December 2020

Best Presentation during the 6th Virtual Conference of Low Carbon on Asia & Beyond in September 2020

**Dr. Yvonne Choo
Shuen Lann**

Chemistry Subject Advisor, Curriculum Department, Education Affairs Division, United Chinese School Committees' Association of Malaysia (Dong Zong), 2018-2021

Council Member of Institut Kimia Malaysia, 2020/2021

IUPAC Periodic Table of Younger Chemists organized by International Union of Pure and Applied Chemistry in 2019

100 Scientists of Malaysia by 100 Scientists of Malaysia in 2019

Dr. Andrew Ng Kay Lup	ASEAN China Young Leaders Scholar Award by China Scholarship Council in August 2020
	Finalist of Malaysia for ASPIRE 2020 by Academy Sciences of Malaysia in June 2020
	BMBF Research Fellowship, 2020
	RSC Grant for Carer 2020, Member of Royal Society of Chemistry UK, 2020
Dr. Terri Lee Zhuan Ean	Ranked Bronze in 5th China College Students' "Internet Plus+" Innovation and Entrepreneurship Competition (international track), November 2019
	Ranked Silver in the First China-Malaysia Youth Innovation Competition in September 2019
	Ranked Bronze for Exhibition Award organized by Institute of Advanced Technology, UPM in August 2019
Dr. Chew Kit Wayne	Winner for Young Researcher Award awarded by IChemE Malaysia in August 2020
	Winner for IChemE Global Award for Young Researcher 2020
Dr. Ban Zhen Hong	Professional Title Chartered Engineer of Institution of Chemical Engineers (IChemE) (CEng) by IChemE in 2020
	Second place "Hari Inovasi Bahagian Sains Kesihatan Bersekutu" in July 2019
Prof. Huang Nay Ming	National Outstanding Researcher by Private Education Excellence Awards 2019
Dr. Chong Su Sin	Ranked Silver in Excellent Innovation and Entrepreneurship Advisor during the China Higher Education, China "Internet+" Competition in 2018
Dr. Kua Yin Leng	Ranked Silver in 5th Undergraduate Research Competition & Exhibition, October 2019
Ir. Assoc. Prof. Dr. Parthiban Siwayanan	Champion for Green Technovation Challenge in April 2018
Dr. Tan Swee Tiam	Returning Expert by Talent Corporation Malaysia in 2019



Research Funding

Our faculty members have been awarded over RM5.3 Million research funding/grants, include internal grants from the University and external fundings from the government and industries.

Grant	Recipients
Governmental Grant	
MOHE (Malaysia Rising Star Award)	Prof. Huang Nay Ming
Fundamental Research Grant Scheme (FRGS)	Assoc. Prof. Dr. Ong Wee Jun, Dr. Chong Woon Gie, Dr. Vincent Woon Kok Sin, Dr. Tan Jian Ping, Dr. Lai Sin Yuan
Industrial Funding	
Hengyuan International Sdn Bhd	Prof. Chen Binghui
Durian Garden Sdn Bhd	Dr. Tan Khang Wei
Pentas Flora Sdn Bhd	Dr. Foo Chuan Yi
Fujian Shanghui Runde New Material Technology Co., Ltd.	Dr Andrew Ng Kay Lup
Global Development Network, Inc (GDN)	Dr. Vincent Woon Kok Sin
Universiti Putra Malaysia (UPM)	Prof. Huang Nay Ming
Crest NanoSolutions (M) Sdn Bhd; Kumpulan ABEX Sdn Bhd; LMS Scientific Solution Sdn Bhd	Dr. Gan Wee Chen
Enovate PLT	Dr. Ban Zhen Hong
Quan Zhou Source Membrane Science & Technology Development	Assoc. Prof. Dr. Yong Wai Fen

On 24 October 2019, XMUM has signed a Memorandum of Agreement (MoA) with Hengyuan International Sdn Bhd (HISB), securing a total of RM2.0 million of research funding for the School of Energy and Chemical Engineering. The MoA was signed by the Dean of SECE, Prof. Chen Binghui, and President of the Hengyuan Group, Mr. Wang Youde. The Ceremony was witnessed by President of XMUM - Prof. Wang Ruifang, Assistant President - Assoc. Prof. Dr. Zhang Ying, Director of Innovation Center - Prof. Zheng Jin Cheng, Director of RMC – Prof. Wang Hui-Qiong, as well as NESE's Head of Department and Programme Coordinators of CME, NESE, and Chemistry.



From Left to Right:
 Prof. Zheng Jincheng,
 Prof. Wang Hui-Qiong,
 Assoc. Prof. Dr. Zhang
 Ying, Prof. Wang Ruide,
 Prof. Chen Binghui, Ms.
 Peng Wen Lin, Mr.
 Wang Youde, Prof.
 Huang Nay Ming, Dr.
 Haw Choon Yian, Dr.
 Lim Su Pei, Dr. Gan
 Wee Chen

Student Achievements

Competition	Students	Award	News Link
3rd China College Students "Internet+" Innovation and Entrepreneurship Competition, 2017	Ong Sui Chang (NESE), Yu Xinnan (CME), Chong Suzanne (DMT), Jiang Naiyu (ACC), Wu Dayong (DMT), Zhou Tianyu (MBT)	Silver Medal	https://www.edu.cn/info/xy/cxcy/201711/t20171116_1566888.shtml
4th China College Students "Internet+" Innovation and Entrepreneurship Competition, 2018	Chooi Di Shan (NESE), Luo Hongjian (NESE), He Zhanning (NESE)	Silver Medal	http://www.xmu.edu.my/2018/1031/c18694a355797/page.htm
Alliance Bank Eco-Biz Dream Project Competition, 2019	Tan Jen Yen (SECE), Lye Kit Wing, Eric Chan Kah Wai (China ASEAN College of Marine Sciences), Michelle Lau Yu Ling (SECE), Tay Yi Jiun (School of Electrical and Computer Engineering)	4 th Place	
14th Challenge Cup "University Students' Extracurricular Academic Science and Technology Works Competition of Fujian Province", 2019	Ren Yijie (CME)	2 nd Place	http://www.xmu.edu.my/2019/0719/c18694a375456/page.htm
1st China "Artificial Intelligence Plus" College Students Innovation and Entrepreneurship Competition, 2019	Rong Zhixiang (ACT), Ding Tingting (ACT), Ren Yijie (CME), Zheng Ziyue (DMT)	Grand Prize	http://www.xmu.edu.my/2019/1105/c18694a385713/page.htm
1st China-Malaysia Youth Innovation and Entrepreneurship Competition, 2019	Rong Zhixiang (ACT), Ren Yijie (CME), Huo Jiaqi (CME), Lye Kit Wing (MBT), Zheng Ziyue (DMT)	1 st Prize	http://www.xmu.edu.my/2019/1105/c18694a385958/page.htm
5th China College Students' "Internet+" Innovation and Entrepreneurship Competition, 2019	Rong Zhixiang (ACT), Ren Yijie (CME), Huo Jiaqi (CME), Lye Kit Wing (MBT), Zheng Ziyue (DMT)	Bronze Medal	http://www.xmu.edu.my/2019/1105/c18694a385712/page.htm
	Zhao Xuanyu (ACT), Cai Jialing, Liu Ya (ACT), Wang Jingyi (DMT), Hong Seang Uyin (CME)	Bronze Medal	
	Tang Xueqi (NESE), Lin Ruichen (FIN), Jia Ru (FIN), Zhou Jinqin (NESE), Feng Yichen (NESE), Lin Xin (NESE), Zhang Jianghong (NESE)	Bronze Medal	
Contemporary Undergraduate Mathematical Contest in Modeling, 2019	Zheng Ziyue (DMT), Wu Dayong (DMT), Ren Yijie (CME)	National 2 nd Prize	http://www.xmu.edu.my/2019/1205/c18694a389325/page.htm
FLTRP Cup English Public Speaking Contest (Xiamen University In-Campus Selection Competition), 2020	Li Kunlin (NESE)	Public Speaking Third Prize	http://www.xmu.edu.my/2020/1002/c18694a415084/page.htm
Citizen Entrepreneurship	Gabrielle Tania (IBU), Vania Christy	Grand Prize	http://www.xmu.edu

Competition, 2020	(IBU), Teh Jia Leang (CME), Tan Kok Wei (CME)		.my/2020/1218/c18694a424327/page.htm
6th China International College Students' "Internet+" Innovation and Entrepreneurship Competition, 2020	Jiang Xinnian (CME), Zhou Luxiao (ADT), Li Zeyi (ACT), Goh Shu Hua (CME), Lau Hui Shen (CME)	Bronze Medal	http://www.xmu.edu.my/2020/1229/c18694a424749/page.htm
	Wu Xinzhaoh (FIN), Wang Yida (CME), Zhang Keze (IBU), Jin Yushu (ACT), Li Yunjia (CME), He Siqian (FIN)	Bronze Medal	
	Gabrielle Tania (IBU), Vania Christy (IBU), Tan Kok Wei (CME), Teh Jia Leang (CME)	Bronze Medal	
4th Sustainable Process Integration Laboratory (SPIL) Scientific Conference, 2020	Phuang Zhen Xin (NESE)	Merit for Best Presenter Award	http://www.xmu.edu.my/2020/1125/c16257a422310/page.htm
MaGic Start-Up Business Competition	Gabrielle Tania (IBU), Vania Christy (IBU), Teh Jia Leang (CME), Tan Kok Wei (CME)	2nd Prize for Public Voting Award	
AsianInvent Singapore Challenge 21 (AiSC 21), 2021	Ruan Xinyi (ACT), Zhu Zhixuan (NESE), Liu Lian (ACT), Wang Huiru (ACT), Zhu Yuxin (ACT)	Gold Award	http://www.xmu.edu.my/2021/0408/c16257a430382/page.htm



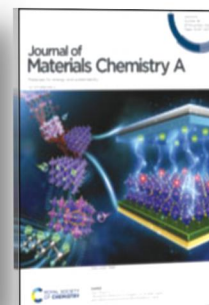
Undergraduate Students Publications



Dr. Gan Wee Chen and Students Publish in SCI Tier 1 Journal

2020-11-23

The Research Management Center congratulates undergraduate Jason Koay Soon Chye and Assistant Professor Dr. Gan Wee Chen from Department of New Engineering Science and Engineering (NESE), School of Energy and Chemical Engineering, on publishing a research article entitled "An Overlapped Electron-Cloud Model for the Contact Electrification in Piezo-Assisted Triboelectric Nanogenerators via Control of Piezoelectric Polarization", as first author and corresponding author, respectively. This paper was published in *Journal of Materials Chemistry A*, a SCI Tier 1 journal with an impact factor of 11.09.



<http://www.xmu.edu.my/2020/1123/c16257a422156/page.htm>

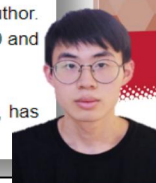
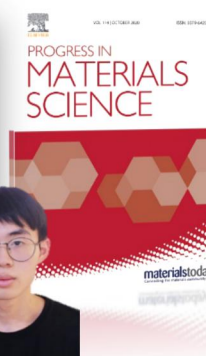


Dr. Yong Wai Fen and CME Student Publish in Top Journal (Progress in Materials Science)

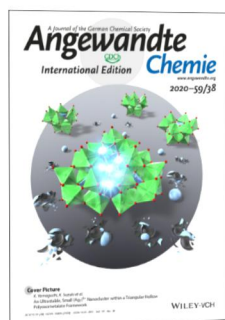
2020-07-30

Research Management Center congratulates Associate Prof. Dr. Yong Wai Fen from School of Energy and Chemical Engineering, Xiamen University Malaysia (XMUM) on publishing a review article entitled "Recent Advances in Polymer Blend Membranes for Gas Separation and Pervaporation" in *Progress in Materials Science* as the first and the corresponding author. *Progress in Materials Science* is a peer reviewed Q1 journal with an impact factor of 31.560 and ranks as the Top 1 journal in Materials Science category.

Her Final Year Project (FYP) student, Zhang Hao from Chemical Engineering Programme, has been named as the second author due to his active contribution to the work.



<http://www.xmu.edu.my/2020/0730/c18050a414946/page.htm>



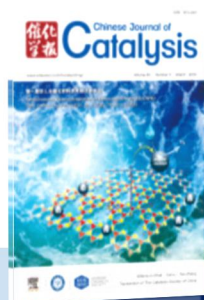
Chemical Engineering Undergraduate Publishes in Angewandte Chemie as First Author

2020-04-24

Research Management Center congratulates undergraduate student Zhang Wenhao and Assoc. Prof. Dr. Ong Wee Jun, both from XMUM Chemical Engineering Programme, School of Energy and Chemical Engineering, on their success in publishing the review entitled "Z-Scheme Photocatalytic Systems for Carbon Dioxide Reduction: Where Are We Now?", as the first author and the corresponding author respectively, in *Angewandte Chemie International Edition*.

With an impact factor of 12.257, *Angewandte Chemie International Edition* is a peer reviewed Q1 journal, ranking in the top 10% of chemistry and multidisciplinary category.

<http://www.xmu.edu.my/2020/0424/c18050a400479/page.htm>



XMUM Undergraduate Student Publishes in Q1-Indexed Journal as First Author

2019-03-12

The Office of Research and Innovation congratulates second-year student Ren Yijie and [Asst. Prof. Dr. Ong Wee Jun](#), both from the School of Energy and Chemical Engineering, on their success in publishing the paper entitled "[Interfacial engineering of graphitic carbon nitride \(g-C₃N₄\)-based metal sulfide heterojunction photocatalysts for energy conversion: A review](#)", as first author and corresponding author, respectively. This paper was published on 5 March 2019 in *Chinese Journal of Catalysis*, an international peer reviewed Q1 journal, which indicates that the journal is in the top 25% of its subject category.

<http://www.xmu.edu.my/2019/0312/c18050a364152/page.htm>



Summary

The School would like to thank all our extraordinary faculty members for their active engagements in teaching and research. We hope our faculty members continue to enhance their knowledge base, and extend the boundaries of their chosen research areas. The School would also like to send our best wishes for the centenary celebration of XMU and the 5th anniversary of XMUM.