1. Personal details

Name: Asst/P Edison Ang Huixiang
Nationality: Singaporean
Date of Birth: 28 Jul 1987
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2. Employment History

Nanyang Technological University of Singapore Jan 2021 to present
Natural Sciences and Science Education
National Institution of Education, Singapore 637616, Singapore
Assistant Professor

- Teaching graduate courses (i.e., MLS923 Separation and Analytical Chemistry and MLS924 Materials Chemistry) and undergraduate courses (i.e., AAY40C Materials Chemistry and AAY20B Analytical Chemistry)
- Doing research related to nanomaterials, energy storage, electrocatalysis, and waste-to-wealth.

Nanyang Technological University of Singapore Jul 2019 to Jan 2021
Natural Sciences and Science Education
National Institution of Education, Singapore 639798, Singapore
Post-doctoral

- Teaching graduate courses (i.e., MLS923 Separation and Analytical Chemistry and MLS924 Materials Chemistry) and undergraduate courses (i.e., AAY40C Materials Chemistry and AAY20B Analytical Chemistry)
- Doing research related to nanomaterials, energy storage, electrocatalysis, and waste-to-wealth.

Technical University of Munich Jul 2018 to Aug 2018
Department of Chemistry
Technical University of Munich, 85748 Garching, Munich
Visiting Scholar (for 2 weeks)- Supervisor: Prof Hinrichsen, Kai-Olaf

- Working on collaboration project on computational fluid dynamics and membrane distillation.
  (Supervisor Prof Hinrichsen, Kai-Olaf)
- Discussed work on the materials and application system and learnt to do computational fluid dynamics study on fluidic system.

Nanyang Technological University of Singapore Sep 2017 to Jun 2019
School of Chemical and Biomedical Engineering
Nanyang Technological University, Singapore 637459, Singapore
Research Fellow-Supervisor: Prof Chew Jia Wei

- Synthesis and characterization of two-dimensional (2D) materials for organic solvent nanofiltration

- Characterized 2D nanomaterials with TEM, SEM, AFM, XPS, contact angle, zeta potential and FTIR
- Using dead-end module for separation testing

National University of Singapore Sep 2016 to Sep 2017
Department of Chemical & Biomolecular Engineering
National University of Singapore, Singapore 117585, Singapore
Research Assistant-Supervisor: Prof Hong Liang
- Synthesis and characterization of two-dimensional materials for water purification
- Characterized 2D nanomaterials with TEM, SEM, AFM, XPS, contact angle, zeta potential and FTIR
- Using dead-end and cross-flow modules for separation testing

Nanyang Technological University of Singapore Jan 2013 to Feb 2017
School of Materials Science and Engineering
Nanyang Technological University, Singapore 639977, Singapore
PhD Researcher (PhD Program)-Supervisor: Prof Alex Yan Qingyu
- Rational-design of transition metal-based electrocatalysts for high energy storage devices
- Characterized of nanostructures using TEM, SEM, AFM, XRD, XPS, ^{1}H NMR and ICP-OES
- Worked on application on Li-O_2 batteries, Li-ion batteries, supercapacitors, and water splitting reaction

Nanyang Technological University of Singapore Jan 2013 to Jul 2016
School of Materials Science and Engineering
Nanyang Technological University, Singapore 639977, Singapore
Teaching Assistant
- Laboratory teaching in materials synthesis and characterization
- Developed projects and guided undergraduate students for their final year project

Agency for Science, Technology and Research Jun 2012 to Nov 2012
Institute of Materials Research and Engineering
3, Research Link, Singapore 117602
Student Researcher (Final Year Project)-Supervisor: Prof SUBRAMANIAN Tamil Selvan
- Development of multifunctional nanoparticles for bio-imaging and targeted drug delivery applications
- Synthesized nanocrystals that have fluorescence properties such as quantum dots and upconversion nanoparticles
- Used those nanocrystals for cancer cell testing

Agency for Science, Technology and Research Jun 2006 to Sep 2006
Institute of Chemical and Engineering Sciences
1 Pesek Road, Jurong Island, Singapore 627833
Student Researcher (Industrial Attachment)-Supervisor: Dr Armando Borgna
- Synthesized nano-catalysis and for ethanol reforming and fischer-tropsch processes. Aimed to improve the percentage product conversion at low temperature as to reduce cost in industrial processes
- Characterized the nanomaterials and reaction with TEM, FTIR, BET, XRD, XPS, XRF, GC, HPLC and TPR

3. Education

Nanyang Technological University of Singapore Jan 2013 to Feb 2017
School of Materials Science and Engineering
Nanyang Technological University, Singapore 639977, Singapore
Doctor of Philosophy of Interdisciplinary Graduate School

- Specialized in Nanomaterial Fabrication for Electrocatalysis and Energy Storage

Nanyang Technological University of Singapore Aug 2009 to Feb 2013
School of Physical and Mathematical Sciences
Nanyang Technological University, Singapore 637371, Singapore
Degree of Bachelor of Science in Chemistry and Biological Chemistry

- Concentrated in Materials Chemistry and Analytical Chemistry

Temasek Polytechnic Jul 2004 to Jun 2007
Department of Chemical Engineering
Temasek Polytechnic, Singapore 529757, Singapore
Diploma in Chemical Engineering

- Grade of qualification: cGPA 3.58/4.00

Specialized in Analytical Instrumental Analysis and Current Good Manufacturing Practice

4. Publication list

Total citation 6944; **h-index 43; i10-index 92**, 128/153 publications in **Tier 1** journals. Highest impact factor: 39.714, highest citation: 717. 2 filed TDs. ***corresponding author**.

1. Kefan Shi, Marliyana Aizudin, Meilan Pan*, & **Edison Huixiang Ang***, "Ultimate water capillary evaporation in bamboo-inspired evaporator" Materials Horizons **(Q1)**, 2025 (Just Accepted) (Impact Factor: 13.3)
2. Yujie Cui, Yueheng Tao, Jun Yang*, Houxiang Wang, Peipei Zhang, Guangxing Li, Minjie Shi*, & **Edison Huixiang Ang***, "A ladder-type organic molecule with pseudocapacitive properties enabling superior electrochemical desalination" Materials Horizons **(Q1)**, 2025 (Just Accepted) (Impact Factor: 13.3)
3. Yijie Zhang, Jichang Sun, Liansheng Li, Zuxin Long, Pengyu Meng, **Edison Huixiang Ang***, & Qinghua Liang*, "Advancements in the emerging rare-earth halide solid electrolytes for next-generation all-solid-state lithium batteries" Coordination Chemistry Reviews **(Q1)**, 2025 (Just Accepted) (Impact Factor: 20.3)
4. Huimin Ruan, Zhihao Lin, Shangshang Gao, Junbin Liao*, Arcadio Sotto, Yuyang Yao, Zhipeng Xu, Jiangnan Shen*, & **Edison Huixiang Ang***, "Grafting bis-siloxane anion-exchange membranes: investigating sulfuric acid concentration and solvent resistance" Journal of Membrane Science **(Q1)**, 2025 (Just Accepted) (Impact Factor: 8.4)
5. Qing Wang, Zehua Wu, Jiahao Shen, Lin Li, Fujian Lv, Yangyang Pan, Jingzhou Yin*, Chunjiao Lv, **Edison Huixiang Ang***, "Magnetically separable Zn2FeOx@CN microcubes derived from metal-organic frameworks for efficient tetracycline removal" Surfaces and Interfaces **(Q1)**, 2024 (Just Accepted) (Impact Factor: 5.7)
6. Huimin Ruan, Hao Lu, Jikuan Wang, Jiayun Shi, Zhibo Zhang, Junbin Liao, **Edison Huixiang Ang***, & Jiangnan Shen*, "Transforming waste into value: efficient recycling of KCl and NH_4F via electrodialysis metathesis" Desalination **(Q1)**, 2024 (Just Accepted) (Impact Factor: 8.4)

7. Guoqing Li, Hailing Ma, Yao Tong*, Hongxu Wang, Yang Luo, **Edison Huixiang Ang**, Sivasambu Bohm, Ahmed A. Ibrahim, & Ahmad Umar, "Research progress on carbon-based anode materials for sodium-ion batteries" Journal of Energy Storage **(Q1)**, 2024 (Just Accepted) (Impact Factor: 9.64)
8. Jianwei Yuan, Su Li, Zhaofei Dang, Sixia Liu, Fu Yang, Dongguang Wang, Hengcong Tao*, Shuying Gao*, and **Edison Huixiang Ang***, "Harnessing Janus structures: enhanced internal electric fields in C_3N_5 for improved H_2 photocatalysis" Materials Horizons **(Q1)**, 2024 (Just Accepted) (Impact Factor: 13.3)
9. Rongyao Ma, Jianhua Song, Huiwei Ding, Qiaofeng Han, Xin Tang, Fujian Lv*, Shizheng Wen, Jingzhou Yin*, & **Edison Huixiang Ang***, "Decoding the entropy-stabilized matrix of high-entropy layered double hydroxides: harnessing strain dynamics for peroxymonosulfate activation and tetracycline degradation" Journal of Colloid and Interface Science **(Q1)**, 2024 (Just Accepted) (Impact Factor: 9.4)
10. Fu Yang*, Shi-Qi Yang, Xiu Zhong, Hong-Yao Zhao, Meng-Ting Liu, Yan-Yun Wang, Chao Yu, Xin-Wei Zhou, Dan-Hong Shang, Qian Wang*, Yi-Yan Song*, & **Edison Huixiang Ang***, "Enabling highly concentrated tetracycline degradation with tailored FeCo nanocrystals in porous graphitic carbon fiber" Rare Metals **(Q1)**, 2024, (Just Accepted) (Impact Factor: 9.6)
11. Xiaocui Lai, Wenkai Cao, Ganggang Zhang, **Edison Huixiang Ang**, Liu Su, Cong Liu, Weihua He, Waihua Lai*, & Shengliang Deng*, "Traffic signal-inspired fluorescence lateral flow immunoassay utilizing self-assembled AIENP@Ni/EC for simultaneous multi-pesticide residue detection" Chemical Engineering Journal **(Q1)**, 2024 (Just Accepted) (Impact Factor: 13.3)
12. Yuyang Yao, Junjie Mu, Yueyue Lu, **Edison Huixiang Ang***, & Jiangnan Shen*, "Unlocking electrodialysis efficiency with spacer mesh geometry and material conductivity via finite element analysis" AIChE Journal, 2024, (Just Accepted) (Impact Factor: 3.5)
13. Chencheng Qin, Xiaodong Wu, Wenyan Zhou, Miao Li, Shuai Bi, Lin Tang, Hao Huang, Wenguang Tu, Xingzhong Yuan, **Edison Huixiang Ang**, Weiling Sun, Long Chen, Zhaoli Liu, Bing He, Lai Lyu, Yan Wu, Wen Liu, & Hou Wang*, "Urea/thiourea imine linkages provide accessible holes in flexible covalent organic frameworks and dominates self-adaptivity and exciton dissociation" Angewandte Chemie International Edition **(Q1)**, 2024, (Just Accepted) (Impact Factor: 16.6)
14. Ying Chen, Suxia Yan, Taofeng Li, Zhilong Zhang, Li Zhang, Xiaohui Song, Junfeng Liu*, Yong Wang*, & **Edison Huixiang Ang***, "Self-assembled zinc polyethylenimine shield for long-lasting zinc anodes" Journal of Power Sources **(Q1)**, 2024 (Impact Factor: 8.1)
15. Zi-Hang Xue, Hao-Jie Liang, Yong-Li Heng, Jia-Lin Yang, **Edison Huixiang Ang**, Hong-Yan Lu, Hong Yu, Dongmei Dai, Dai-Huo Liu, Chuan-Yu Zheng, Wei Guo & Xing-Long Wu*, "Anion-induced electrolyte chemistry enables high energy density primary battery for ultralow-temperature conditions" Science China Chemistry **(Q1)**, 2024. (Impact Factor: 10.4)
16. Xiaocui Lai, Shijin Huang, Ganggang Zhang*, **Edison Huixiang Ang**, Hongxin Yuan, Liu Su, Cong Liu, Shengliang Deng*, Weihua Lai*, "Efficient green synthesis of biocompatible MPN fluorescent microspheres via hydrophobic-force-driven strategy for enhanced immunochromatographic assays" Journal of Hazardous Materials **(Q1)**, 2024. (Impact Factor: 12.2)
17. Yu Guan, Guolang Zhou, Yexin Jiang, Junyuan Dong, Lin Li, Jingzhou Yin*, Suyun Huang, Lili Zhang, & **Edison Huixiang Ang***, "Lattice distortion effects in high-entropy oxides: boosting PMS activation for effective and durable pollutant

degradation" Separation and Purification Technology **(Q1)**, 2024. (Impact Factor: 8.6)

18. Kwame Nana Opoku, Yidan Wei, Clara Afia Amoah Dankwa, Ruiting Ni, Zhenxiao Wang, Linzhi Zhai, Jiangguang Zhang, **Edison Huixiang Ang***, & Fu Yang*, "Advances in photothermal water evaporation: synthesis, mechanisms, and coupled techniques" Energy Materials **(Q1)**, 2024 (Just Accepted) (Impact Factor: 11.8)
19. Yujie Cui, Jun Yang*, Houxiang Wang, Yueheng Tao, Peipei Zhang, Guangxing Li, Minjie Shi*, & **Edison Huixiang Ang***, "Unleashing high-efficiency proton storage: innovative design of ladder-type organic molecules" Carbon Energy **(Q1)**, 2024 (Just Accepted) (Impact Factor: 21.29)
20. Wenyan Zhou, Chencheng Qin, Aoqiang Shu, Limei Shi, Ke Li, Bo-Tao Zhang, **Edison Huixiang Ang**, & Hou Wang*, "Advances in single-crystal framework materials: design, synthesis, and applications" Results in Engineering **(Q1)**, 2024 (Just Accepted) (Impact Factor: 6.0)
21. Yundi Dong, Yangbo Qiu, Haili Wei, Chunhong Liu, Ke Wu, Junbin Liao* **Edison Huixiang Ang**, & Jiangnan Shen*, "Advanced membrane contactor coupled with electrodialysis metathesis for efficient carbon dioxide capture and waste salt remediation" Desalination **(Q1)**, 2024 (Just Accepted) (Impact Factor: 11.211)
22. Xiaohui Song*, Rui Huang, Xingyu Zhang*, Qiang Chang, Semi Kim, Daeun Jeong, Qian Hou, Juyeong Kim, **Edison Huixiang Ang**, Xiaowei Su, Xuyong Feng, & Hongfa Xiang*, "Unveiling the dynamic pathways of metal-organic framework crystallization and nanoparticle incorporation for Li-S batteries" Advanced Science **(Q1)**, 2024 (Just Accepted) (Impact Factor: 17.52)
23. Ziyi Huang, Xinjie Shen, Yuxuan Wei, Jia Wei Chew, **Edison Huixiang Ang***, Meilan Pan*, "A novel approach to chiral separation: thermal-sensitive hydrogel membranes" Materials Horizons **(Q1)**, 2024. (Just Accepted) (Impact Factor: 13.3)
24. Tianyang Cui, **Edison Huixiang Ang**, Yapeng Zheng, Wei Cai, Jingwen Wang, Yuan Hu*, and Jixin Zhu*, "Ultrahigh transparent safety film for spectrally selective photo/electro-thermal conversion via surface-enhanced plasma resonance dynamics" Nano letters **(Q1)**, 2024 (Just Accepted) (Impact Factor: 9.6)
25. Wangqin Fu, Marliyana Aizudin, Pooi See Lee*, and **Edison Huixiang Ang***, "Recent Progress in the Applications of MXene-based Materials in Multivalent Ion Batteries" Small **(Q1)**, 2024 (Just Accepted) (Impact Factor: 15.153)
26. Zhilong Zhang, Suxia Yan, Hongyu Dong, Taofeng Li, Junfeng Liu, Xiaohui Song, **Edison Huixiang Ang***, Quan Wang*, and Yong Wang*, "Investigating the role of non-ionic surfactants as electrolyte additives for improved zinc anode performance in aqueous batteries" Journal of Colloid and Interface Science **(Q1)**, 2024. (Just Accepted) (Impact Factor: 9.4)
27. Hongyao Zhao, Danhong Shang, Haodong Li, Marliyana Aizudin, Hongyang Zhu, Xiu Zhong, Yang Liu, Zhenxiao Wang, Ruiting Ni, Yanyun Wang, Sheng Tang, **Edison Huixiang Ang***, and Fu Yang*, "Monolith floatable dual-function solar photothermal evaporator: efficient cleanwater regeneration synergizing with pollutant degradation" Materials Horizons **(Q1)**, 2024. (Just Accepted) (Impact Factor: 13.3)
28. Satyajit Ratha* and **Edison Huixiang Ang***, "Horizons Community Board Collection: setting new trends in energy storage and harvesting through innovative approaches" Materials Horizons **(Q1)**, 2024. (Just Accepted) (Impact Factor: 13.3)
29. Yuyang Yao, Yueyue Lu, Jingwen Xu, Jiacheng Yu, Liang Guo, Heda Ding, Jian Li, Junbin Liao, **Edison Huixiang Ang***, Zhenlu Shen*, and Jiangnan Shen*, "Rational regulation of post-electrodialysis electrochromic anion exchange membranes via

TiO_2@Ag synergistically strengthens visible-light photocatalytic anti-contamination activity" Water Research **(Q1)**, 2024. (Just Accepted) (Impact Factor: 11.4)

30. Yuyang Yao, Yueyue Lu, Jingwen Xu, Liang Guo, Heda Ding, Yitao Chen, Yuna Shi, Junbin Liao, **Edison Huixiang Ang***, Zhenlu Shen*, & Jiangnan Shen*, "Enhancing anti-biofouling activity in electrodialysis by spraying GO@Ag nanosheets on anion exchange membranes" Separation and Purification Technology **(Q1)**, 2024. (Impact Factor: 8.6)
31. Xiaocui Lai, Ganggang Zhang, Gan Zhang, Liu Su, Cong Liu, Weihua He, **Edison Huixiang Ang***, Weihua Lai*, & Shengliang Deng*, "Polydopamine-modulated anisotropic co-growth plasmonic blackbody for efficient ultra-broad-spectrum quenching to establish multicolor fluorescent immunoassay" Chemical Engineering Journal **(Q1)**, 2024 (Just Accepted) (Impact Factor: 15.1)
32. Dahai Yang, Rui Huang, Bolin Zou, Ruoxu Wang, Yong Wang, **Edison Huixiang Ang***, & Xiaohui Song*, "Unraveling nanosprings: morphology control and mechanical characterization" Materials Horizons **(Q1)**, 2024, (Just Accepted) (Impact Factor: 13.3)
33. Chun Chen, Liansheng Li, Zuxin Long, **Edison Huixiang Ang***, & Qinghua Liang*, "Enabling stable aqueous Zn metal anodes by scandium acetate electrolyte additives" Journal of Materials Chemistry A **(Q1)**, 2024 (Just Accepted) (Impact Factor: 11.9)
34. Junbin Liao, Tongtong Wang, Yifan Xu, Qishun Zhang, Yuanyuan Tang, Junjie Mu, **Edison Huixiang Ang**, Yuyang Yao, Yanqing Xu*, Jiangnan Shen*, "Bifunctional side-chains decorating a distorted poly(aryl ether sulfone) backbone to endow an anion exchange membrane with high perm-selectivity for chloride ions" Journal of Membrane Science **(Q1)**, 2024 (Just Accepted) (Impact Factor: 9.5)
35. Taofeng Li, Suxia Yan*, Hongyu Dong, Yang Zheng, Kun Ming, Ying Chen, Haitao Li, Guochun Li, Zhixia He, Weimin Li, Quan Wang, Xiaohui Song, Junfeng Liu*, **Edison Huixiang Ang***, & Yong Wang*, "Engineering hydrophobic protective layers on zinc anodes for enhanced performance in aqueous zinc-ion batteries" Journal of Energy Chemistry **(Q1)**, 2024. (Impact Factor: 13.1)
36. Liang Guo, Yuyang Yao, Jingwen Xu, **Edison Huixiang Ang**, Getting Xu, Junbin Liao*, Arcadio Sotto, Jiangnan Shen*, "Strategies for lithium extraction from salt lakes by nanofiltration and selective-electrodialysis and analysis of differences between the two methods" Desalination **(Q1)**, 2024. (Impact Factor: 11.211)
37. Dahai Yang, Rui Huang, Bolin Zou, Xingyu Zhang, **Edison Huixiang Ang**, Yong Wang, Yi Sun, Hongfa Xiang, & Xiaohui Song*, "Investigating the expansion behavior of silicon nanoparticles and the effects of electrolyte composition using a graphene liquid cell" Nano Today **(Q1)**, 2024. (Impact Factor: 18.96)
38. Tingyan Ren, Bolin Zou, Bin Cai, Tong Liang, Junhao Chen, Rui Huang, Dahai Yang, Hongfa Xiang, **Edison Huixiang Ang**, & Xiaohui Song*, "Sustainable reprocessing of lithium iron phosphate batteries: A recovery approach using liquid-phase method at reduced temperature" Waste Management **(Q1)**, 2024. (Impact Factor: 8.1)
39. Geting Xu, Binghui Wang, Jingwen Xu, **Edison Huixiang Ang**, Junbin Liao*, & Jiangnan Shen*, "Dually-crosslinked anion exchange membranes with PVDF semi-interpenetrating polymer network for improved electrodialysis desalination" Separation and Purification Technology **(Q1)**, 2024. (Impact Factor: 8.6)
40. Xiaohui Song*, Bolin Zou, Jirui Wang, Tingyan Ren,* Bin Cai, Binghui Ge, Junhao Chen, Tong Liang, **Edison Huixiang Ang**, Xingqi Liao, & Hongfa Xiang*, "High-power ultrasound facilitation of the generality for LiFePO4 regeneration." Materials Today Chemistry **(Q1)**, 2024, 38, 102076. (Impact Factor: 7.82)
41. Shuaijun Yu, Yazhen Jiang, Geting Xu, Hongyu Liu, **Edison Huixiang Ang**, Junbin

Liao*, & Jiangnan Shen*, "PVDF-HFP-based pioneering anion exchange membranes for advanced sulfuric acid enrichment with reduced water mobility" Industrial & Engineering Chemistry Research **(Q1)**, 2024, (Just Accepted) (Impact Factor: 4.1)

42. Liu Yang, Yisha Wang, Jingwen Wang, Yapeng Zheng, **Edison Huixiang Ang**, Yuan Hu, Jixin Zhu*, "Imidazole-intercalated cobalt hydroxide enabling the Li^+ desolvation/diffusion reaction and flame-retardant catalytic dynamics for lithium ion batteries" Angewandte Chemie International Edition **(Q1)**, 2024, (Just Accepted) (Impact Factor: 16.6)
43. Mengting Liu, Wanyu Zhang, Ruiting Ni, Zhenxiao Wang, Hongyao Zhao, Xiu Zhong, Yanyun Wang, Danhong Shang, Zengjing Guo, **Edison Huixiang Ang***, Fu Yang*, "Construction of phase-separated Co/MnO synergistic catalysts and integration onto sponge for rapid removing multiple contaminants" Materials Horizons (Q1), 2024, (Just Accepted) (Impact Factor: 13.3)
44. Vaiyapuri Soundharrajan, Subramanian Nithiananth, Ghalib Alfaza, Junji Piao, Duong Tung Pham, **Edison Huixiang Ang**, Johannes Kasnatscheew, Martin Winder, Jung Ho Kim, and Jaekook Kim, "Decoding the manganese-ion storage properties of $Na_{1.25}V_3O_8$ nanorods" Journal of Materials Chemistry A (Q1), 2024, (Just Accepted) (Impact Factor: 11.9)
45. Hao Qian, Getting Xu, Shanshan Yang, **Edison Huixiang Ang**, Quan Chen. Chenfei Lin, Junbin Liao*, and Jiangnan Shen*, "Advancing lithium-magnesium separation: pioneering swelling-embedded cation exchange membranes based on sulfonated poly(ether ether ketone)" ACS Applied Materials & Interfaces (Q1), 2024, (Just Accepted) (Impact Factor: 9.5)
46. Meng-Yuan Su, Kai-Yang Zhang, **Edison Huixiang Ang**, Xue-Li Zhang, Yan-Ning Liu, Jia-Lin Zhang, Zhen-Yi Gu, Faaz A. Butt, and Xing-Long Wu*, "Structural regulation of coal-derived hard carbon anode for sodium-ion batteries via pre-oxidation" Rare Metals (Q1), 2024, (Just Accepted) (Impact Factor: 8.8)
47. Chencheng Qin, Yi Yang, Guoxi Zhou, **Edison Huixiang Ang**, Hou Wang*, and Yan Wu*, "Harnessing interfacial π-d conjugation in covalently linked COFs with amine-$Zn_{0.4}Cd_{0.6}S$ strengthens photoinduced charge transfer for photocatalysis" Chemical Engineering Journal (Q1), 2024, (Just Accepted) (Impact Factor: 15.1)
48. Kai-Yang Zhang, Han-hao Liu, Meng-Yuan Su, Jia-Lin Yang, Xiao-Tong Wang, **Edison Huixiang Ang**, Zhen-Yi Gu, Shuo-Hang Zheng, Yong-Li Heng, Hao-Jie Liang, Yinglin Wang, Shuying Li*, and Xing-Long Wu*, "Defect engineering unveiled: enhancing potassium storage in expanded graphite anode" Journal of Colloid and Interface Science (Q1), 2024, 664, 607-616. (Impact Factor: 9.9)
49. Shuaijun Yu, Yazhen Jiang, Geting Xu, **Edison Huixiang Ang**, Zhipeng Xu, Junbin Liao*, and Jiangnan Shen* "Innovative low-energy enrichment of sulfuric acid using PVDF-HFP anion exchange membranes with acid-blocking properties", Desalination (Q1), 2024 (Just Accepted) (Impact Factor: 9.9)
50. Yazhen Jiang, Binghui Wang, Hongyu Liu, Junbing Liao*, Shuaijun Yu, **Edison Huixiang Ang**, Jiangnan Shen* "Advancing electrodialysis with dually cross-linked PVDF-based anion exchange membranes having semi-interpenetrating networks", Journal of Membrane Science (Q1), 2024 (Just Accepted) (Impact Factor: 9.5)
51. Hongyang Zhu, Rongrong Du, Hongyao Zhao, Mengting Liu, Yanyun Wang, Chao Yu, Zengjing Guo, Sheng Tang, **Edison Huixiang Ang***, and Fu Yang*, "Constructing multivalent Co-confined N-doped C-Si hybrid hollow nanoreactor for synchronous pollutant mineralization and solar-driven interfacial water regeneration, Journal of Materials Chemistry A (Q1), 2024 (Just Accepted) (Impact Factor: 11.9)

52. Hailong Cui, Huimin Ruan, Haili Wei, **Edison Huixiang Ang**, Yudi Dong, Hao Lu, Hongyu Liu, Junbin Liao*, Yanqing Xu, Jiangnan Shen*, "Innovative sodium acrylate wastewater resource recovery through electrodialysis with integrated bipolar membranes" Journal of Environmental Chemical Engineering (Q1), 2024 (Just Accepted) (Impact Factor: 7.7)
53. Meilan Pan, Cong Li, Xiuzhen Wei, Guanyu Liu, **Edison Huixiang Ang**, and Bingjun Pan*, "Pioneering piezoelectic-driven atomic hydrogen for efficient dehalogenation of halogenated organic pollutants" Environmental Science & Technology (Q1), 2024 (Just Accepted) (Impact Factor: 11.4)
54. Huimin Ruan, Shangshang Gao, Yeyang Li, Shuaijun Yu, Junbin Liao*, **Edison Huixiang Ang**, Yanqing Xu, Jiangnan Shen*, "Optimization of the mass ratio of siloxane crosslinkers for poly(2,6-dimethyl-1,4-phenylene oxide) anion exchange membranes to improve acid enrichment by electrodialysis" Journal of Membrane Science (Q1), 2024, 695, 122487. (Impact Factor: 9.5)
55. Yuyang Yao, Yueyue Lu, Yuan Li, Yanjing Ma, **Edison Huixiang Ang**, Jingwen Xu, Heda Ding, Yuna Shi, Yitao Chen, Junbin Liao, Zhenlu Shen*, Jiangnan Shen*, "Eco-infused interfacial enhancement of the anti-biofouling activity in anion exchange membranes for electrodialysis desalination" Chemical Engineering Journal (Q1), 2024, 482, 149071. (Impact Factor: 15.1)
56. Shizheng Wen, Xin Tang, Guolang Zhou, Jianhua Song, Rongyao Ma, Guangxiu Mao*, Lili Zhang, Jingzhou Yin*, **Edison Huixiang Ang***, "Gas-phase self-assembly: converting 2D graphitic carbon nitride into 1D nanotubes for improved photocatalytic tetracycline degradation" Ceramic International (Q1), 2024 (Just Accepted) (Impact Factor: 5.2)
57. Junhua Li, Zhipeng Xu, Junbin Liao*, **Edison Huixiang Ang**, Xuanhua Chen, Junjie Mu, Jiangnan Shen*, "Revolutionary MOF-enhanced anion exchange membrane for precise monovalent anion separation through structural optimization and doping" Desalination (Q1), 2024, 576, 117352. (Impact Factor: 9.9)
58. Xiaohui Song*, Yijian Xu, Lixun Cheng, Tingyan Ren*, Bin Cai, Dahai Yang, Junhao Chen, Tong Liang, Rui Huang, Edison Huixiang Ang, Xingqi Liao, Binghui Ge*, Hongfa Xiang*, "Exploring a sustainable and eco-friendly high-power ultrasonic method for direct regeneration of lithium iron phosphate" Journal of Energy Storage (Q1), 2024, 82, 110578. (Impact Factor: 9.4)
59. Yangyang Sun, Xingyu Zhang, Rui Huang, Dahai Yang, Juyeong Kim, Jun hao Chen, **Edison Huixiang Ang**, Mufan Li, Lin Li, Xiaohui Song*, "Revealing microscopic dynamics: in situ liquid-phase TEM for live observations of soft materials and quantitative analysis via deep learning" Nanoscale (Q1), 2024, 16, 2945-2954. (Impact Factor: 6.7)
60. Wenhao Ding, Guolang Zhou, Xiangjie Guo, Cheng Liu, Tianshi Wang, Yongsheng Fu, Jingzhou Yin*, Lili Zhang*, **Edison Huixiang Ang***, "Revolutionizing aqueous Zn-ion batteries: precision control of H_2O activity and Zn deposition through ammonium oxalate additive" Chemical Engineering Journal (Q1), 2023, 481, 148544. (Impact Factor: 15.1)
61. Yu Guan, Guolang Zhou, Lin Li, Yexin Jiang, Jingzhou Yin*, Cheng Liu, Lili Zhang*, Qiaofeng Han*, **Edison Huixiang Ang***, "Cu-doped oxygen-rich vacancy MOFs derived perovskite for enhanced mineralization of refectory organics through synergistic non-radical species effects" Separation and Purification Technology (Q1), 2023, 335, 126072. (Impact Factor: 8.6)
62. Rongyao Ma, Guolang Zhou*, Mingrui Gu, Xin Tang, Wenhao Ding, Yu Guan, Yexin Jiang, Jingzhou Yin*, Lili Zhang, **Edison Huixiang Ang***, "Cobalt leaching

inhibition: transforming coordination polymers into spherical Co_3O_4@NC catalysts for accelerated tetracycline degradation via enhanced PMS activation" Applied Surface Science (Q1), 2023 (Just Accepted) (Impact Factor: 6.7)

63. Mengting Liu, Xuexue Dong, Xiu Zhong, Zhenxiao Wang, Juanjuan Gong, Heng Song, Chao Yu, Aihua Yuan, Fu Yang*, **Edison Huixiang Ang***, "Enhancing reductive C-N coupling of nitrocompounds through interfacial engineering of MoO_2 in thin carbon layers" Chemical Communications (Q2), 2023, 59, 12443-12446. (Impact Factor: 4.9) **(Invited as Emerging Investigators Themed Collection)** Science communication
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146. Guilue Guo, Xin Yao, **Huixiang Ang**, Huiteng Tan, Yu Zhang, Yuanyuan Guo, Eileen Fong*, and Qingyu Yan* "Using Elastin Protein to Develop Highly Efficient Lithium-O_2 Battery Cathodes", Nanotechnology, 11/12/2015, **(Impact Factor 3.551)**.
147. **Huixiang Ang**, Hui Teng Tan, Zhi Min Luo, Yu Zhang, Yuan Yuan Guo, Guilue Guo, Hua Zhang, and Qingyu Yan* "Hydrophilic Nitrogen and Sulfur Co-doped Molybdenum Carbide Nanosheets for Electrochemical Hydrogen Evolution" Small, 3/11/2015. **(Impact Factor: 11.459)**
148. **Huixiang Ang**, Wenyu Zhang, Hui Teng Tan, Hongyu Chen, Qingyu Yan* "Copper oxide supported on platinum nanosheets array: High performance carbon-free cathode for lithium-oxygen cells" Journal of Power Sources, 30/10/2015. **(Impact Factor: 8.247)**
149. Guilue Guo, Thi Hong Anh Truong, Huiteng Tan, **Huixiang Ang**, Wenyu Zhang, Chen Xu, Xianghong Rui, Zhaolong Hu, Eileen Fong,* and Qingyu Yan* "Platinum and Palladium Nanotubes Based on Genetically Engineered Elastin–Mimetic Fusion Protein-Fiber Templates: Synthesis and Application in Lithium-O_2 Batteries" Chemistry An Asian Journal, 24/6/2014. **(Impact Factor: 3.690)**
150. Wenyu Zhang, Jixin Zhu, **Huixiang Ang**, Haibo Wang, Huiteng Tan, Dan Yang, Chen Xu, Ni Xiao, Bing Li, Wei Ling Liu, Xin Wang, Huey Hoon Hng, and

Qingyu Yan* "Fe-based metallopolymer nanowallbased composites for Li-O_2 battery cathode" ACS Applied Materials & Interfaces, 28/5/2014. **(Impact Factor: 8.758)**

151. Cheng Chao Li, Wenyu Zhang, **Huixiang Ang**, Hong Yu,Bao Yu Xia, Xin, Wang,Yan Hui Yang, Yang Zhao,Huey Hoon Hng and Qingyu Yan* "Compressed hydrogen gas-induced synthesis of Au-Pt core/shell nanoparticle chains towards high performance catalysts for Li-O_2 batteries" Journal of Materials Chemistry A, 8/5/2014. **(Impact Factor: 14.511)**
152. Chen Xu, Shengjie Peng, Chaoliang Tan, **Huixiang Ang**, Huiteng Tan, Hua Zhang and Qingyu Yan* "Ultrathin S-doped $MoSe_2$ nanosheets for efficient hydrogen evolution" Journal of Material Chemistry A, 11/2/2014. **(Citation: 254; Impact Factor: 14.511)**
153. Wenyu Zhang,Jixin Zhu, **Huixiang Ang**,Yi Zeng, Ni Xiao, Yiben Gao, Weiling Liu, Huey Hoon Hng and Qingyu Yan* "Binder-free graphene foams for O_2 electrodes of Li-O_2 batteries" Nanoscale, 1/8/2013. **(Impact Factor: 7.790)**

5. Book Chapters

1. Book Title: Electrochemical Energy Storage Technologies Beyond Li-ion Batteries (1st Edition), 2025, Elsevier, Paperback ISBN: 9780443155147, eBook ISBN: 9780443155154. Edited by Guanjie He. Book Chapter: Lithium-air batteries. Authors: Edison Huixiang Ang, Vaiyapuri Soundharrajan, Subramanian Nithiananth, Aninditya Arifiadi, Marliyana Aizudin, Wangqin Fu, Johannes Kasnatscheew, and Martin Winter.
2. Book Title: Resource Recovery in Drinking Water Treatment (1st Edition), 2023, Elsevier, Paperback ISBN: 9780323993449, eBook ISBN: 9780323993456. Edited by Mika Sillanpaa, Ali Khadir, Khum Gurung. Book Chapter: Polymeric/ceramic membranes for water use. Authors: Nur Hashimah Alias, Mohd Haiqal Abd Aziz, Mohd Ridhwan Adam, Marliyana Aizudin, and **Edison Huixiang Ang***.

6. Intellectual Properties

1. Marliyana BINTE AIZUDIN and **Edison Huixiang Ang*** "Method For Producing Conductive Ink With Two-Dimensional Graphite-Based Composite" Technical Disclosure (NTU Ref: 2023-431) (Filed on 10th Nov 2023)
2. Marliyana BINTE AIZUDIN and **Edison Huixiang Ang*** "Sustainable Production Of Molybdenum Carbide (Mxene) From Fruit Waste For Improved Solar Evaporation" Technical Disclosure (NTU Ref: 2023-111) (Filed on 15th Mar 2023)

7. Research Grants

2024

- (PI) Additive Manufacturing of High-Performance Electrodes for Rechargeable Li-CO2 batteries. NIE AcRF (S$100,000.00) Project ID: RI 3/23 EAH (Awarded 1st May 2024 to 30th April 2026)
- (PI) Metallic Lithium Recycling from Spent Lithium-ion Batteries via Selective Lithium-ion Conducting Membrane. Funded by MOE Tier 1 (S$140,812.00) Project ID: RG88/23 (Awarded 1st Mar 2024 to 28th Feb 2026)

2023

- (Co-PI) A 3D-printed Early Disease AIoT Detector for both Indoor and Outdoor Agri-food. Funded by NAMIC (S$77,706) Project ID: M22N2K0014 (Awarded 1st Aug 2023 to 31st Jul 2024)

2022

- (PI) Sustainable Development of Two-Dimensional-based Membrane through Upcycling of Plastics Wastes. Funded by MOE AcRF Tier 1 (S$99,895.20) Project ID: RG10/22 (Awarded 1st Nov 2022 to 31st Oct 2024)
- (PI) Membrane Disinfection of Water. Funded by NRF (S$246,400.00) Project ID: NRF-MP-2022-0001 (Awarded 19th Sep 2022 to 18th Sep 2024)
- (PI) Development of Low-Cost Carbon-based Membrane Separator for Zinc-Sulfur Batteries. Funded by NIE AcRF (S$99,990.00) Project ID: RI 1/21 EAH (Awarded 3rd Feb 2022 to 1st Mar 2025)

2021

- (PI) 3D Printed Micro-thermoelectric Module for Urban Farming Applications. Funded by NAMIC/NTUitive (S$17,610.00) Project ID: 2020050 (Awarded on 7th Dec 2021 to 31st March 2022)
- (PI) Zinc-ion Batteries: A Quest Beyond Conventional Lithium-ion Batteries – Funded by NIE (S$44,536.16) Project ID: NIE-SUG4/20AHX (Awarded on 19th Apr 2021 to 18th Apr 2023)
- (Co-PI) Development of an Online Teaching, Learning and Assessment Cell Culture Laboratory Practical Package for Undergraduate and Graduate Students – Funded by I3G (S$98,370.00) Project ID: I3G 15/21/PL (Awarded on 29th Nov 2021 to 31st May 2023)
- (PI) 3D-Printed Electrode for High-Energy Rechargeable Batteries – Funded by NAMIC/NTUitive (S$24,000.00) Project ID: NAMIC 3/20 EAH (2020043) (Awarded on 1st Jan 2021 to 31st Mar 2021)
- (PI) 3D Printing Membrane for Industrial Wastewater Treatment – Funded by NAMIC/NTUitive (S$24,000.00) Project ID: NAMIC 2/20 EAH (2020042) (Awarded on 1st Jan 2021 to 31st Mar 2021)

2020

- (Co-PI) 3D-Printing Technology for Flexible Rechargeable Batteries – Funded by NAMIC/NTUitive (S$24,960.00) Project ID: 2020027 (Awarded on 18th Aug 2020 to 31st Mar 2021)

8. Awards and Honors

1. Young Scientist Award, Global Conference for Decarbonization of Energy and Materials, 2024.
2. ISE-Elesevier Prize in Applied Electrochemistry, 2024. The accomplishments of a younger electrochemist in the field of applied electrochemistry are honored with this prize.
3. Emerging Investigators of Royal Society of Chemistry Publisher, Materials Horizons (Impact factor: 12.2), 2024. This theme issue features exceptional work by early-career researchers working in the field of materials science.
4. Early-Career Researchers of Proceedings of the National Academy of Sciences Publisher, PNAS (Impact factor: 12), 2023. PNAS is dedicated to featuring outstanding original research conducted by early-career researchers (ECRs) in diverse fields, encompassing biological, physical, and social sciences, mathematics, as well as computer science.
5. Emerging Investigators of Royal Society of Chemistry Publisher, Chemical Communications (Impact factor: 4.9), 2023. This annual special collection showcases research carried out by internationally recognised, up-and-coming scientists in the early stages of their independent careers, and who are making outstanding contributions to their respective fields.

6. PIERS Young Scientists Award, 2023. The PIERS Young Scientists Award recognizes early-career researchers, typically under the age of 40, who have demonstrated exceptional research achievements and potential in the field of electromagnetics.
7. The Rising Stars of Wiley (Advanced Science), 2023. The Rising Stars series collects outstanding research articles on studies conceptualized and supervised by recognized early career researchers from around the world.
8. Young Editorial Board Member of Elsevier Publisher, Journal of Energy Chemistry (Impact Factor: 13.599), 2023. Young Editorial Board to recognize outstanding early career researchers and engage them in a path towards editorial work.
9. Emerging Investigators of Royal Society of Chemistry Publisher, Nanoscale (Impact factor: 8.307), 2023. This theme issue highlighting 2023's rising stars of materials chemistry research and gathers the very best work from materials chemists in the early stages of their independent career.
10. AIChE SLS Young Faculty Award, 2022. This award accords the awardee for their outstanding contribution to the chemical engineering society and chemical industry.
11. NIE/NTU Excellence in Research Award, 2022. This award accords the highest recognition within the Institute to individuals or teams who have made outstanding contributions in extending the frontiers of research and knowledge.
12. Young Chemists of Wiley Publisher, Chemistry-A European Journal (Impact Factor 5.020), 2022. This theme issue features young and emerging scientists from around the world in 2022.
13. SNIC-Prof Lee Soo Ying Early Career Research Award, 2022. Recognize early-career researchers for outstanding contributions to chemistry field.
14. Sabic Young Professional Award 2022. Recognize outstanding and internationally recognized contributions in particle technology by a young professional under 45 years old.
15. Emerging Investigators of Royal Society of Chemistry Publisher, Journal of Materials Chemistry A (Impact factor: 14.511), 2022. This theme issue highlighting 2022's rising stars of materials chemistry research and gathers the very best work from materials chemists in the early stages of their independent career.
16. Young Scientist Award. Awarded by International Association of Advanced Materials to outstanding early career scientists in the field of science, engineering, and technology, 2022.
17. Vebleo Fellow Award. Awarded to researcher or scientist who has prominence and leadership in the field of science, engineering, and technology, 2021.
18. Outstanding ASIAN Science Diplomat Award. Awarded to Outstanding Scientists and Engineers in Southeast Asia, 2021.

9. Editorial Board Member

1. Young Editorial Board Member for eScience (**IF: 42.9**)
2. Early Career Researchers Editorial Board of Energy & Environmental Materials (**IF: 13.0**)
3. Youth Editorial Board Member for Carbon Energy (**IF: 19.5**)
4. Early Career Advisory Board Member of Materials Horizons (**IF: 12.2**)
5. Early Career Editorial Board of Chemical Engineering Journal (**IF: 13.4**)
6. Young Editorial Board Member of Journal of Energy Chemistry (**IF: 14.0**)

7. Young Editorial Board Member of Collagen and Leather
8. Young Editorial Board Member of Carbon Neutrality.
9. Associate Editor of Scientific Reports
10. Associate Editor of Frontiers in Chemistry
11. Associate Editor of Frontiers in Environmental Chemistry
12. Associate Editor of Frontiers in Electronic Materials

10. Keynote Speaker/Invited Talk/Contributed Talk/Poster

1. 2024 2nd Global Conference for Decarbonization of Energy and Materials (GC-DEM) "Enhanced 2D MXene Nanomaterials: Unlocking Superior Hydrogen Production through Metal and Heteroatom Doping" (Invited Talk)
2. 2024 Spring Meeting European Materials Research Society on "Transforming Water Purification: Harnessing Waste-based 2D Nanosheet Membranes for Enhanced Light-to-Heat Energy Conversion" (Contributed Talk)
3. 2023 TEDxYouth@GIISSMARTCampus on "Transforming 2D Nanomaterials into 3D Marvels" (Invited Guest Speaker)
4. 2023 MSESA-UASR Materials Science and Application Academic Exchange Conference on "Powering the Future: Unleashing the Potential of Two-Dimensional Nanomaterials in Energy Storage" (Invited Talk)
5. 2023 Progress In Electromagnetics Research Symposium on "Engineering Two-dimensional Plasmonic Nanosheets Arrays as Spacer for Enhanced Solar Membrane Distillation of Seawater" (Contributed Talk)
6. 2023 5th Chemistry National Meeting Singapore (ChnmSG5) on "Sustainable Production of Molybdenum Carbide (MXene) from Fruit Wastes for Improved Solar Evaporation" (Contributed Poster)
7. 2022 American Institute of Chemical Engineers Meeting on "Strategies for Engineering Two-Dimensional Nanomaterials for Efficient Water Transportation" (Contributed Talk)
8. 2022 International Association of Advanced Materials Young Scientist Medal Lecture on "Chemistry of Two-Dimensional Nanomaterials for Energy Storage and Membrane Technology" (Invited Talk)
9. 2021 Vebleo Fellow Seminar on "Chemistry of Two-Dimensional Nanomaterials for Energy Storage and Membrane Technology" (Keynote Speaker)
10. 2020, 12th International Congress On Membranes and Membrane Process on "Tunable affinity separation enables ultrafast solvent permeation through layered double hydroxide membranes" (Contributed Poster)

11. Media Coverage

1. The following news featured on the development of graphitic nanofiber for efficient degradation of organic pollutants.

- https://mp.weixin.qq.com/s/twoJjOFCHV76S1WyagF7vQ

2. The following news featured on the development of nanocatalyst for wastewater treatment

- https://www.nanowerk.com/nanotechnology-news3/newsid=65698.php
- https://www.techexplorist.com/turning-tide-how-new-nanocatalyst-cleans-water-like-never-before/88724/
- https://www.ntu.edu.sg/nie/news-events/news/detail/turning-the-tide-how-a-new-

nanocatalyst-cleans-water-like-never-before

3. The following news featured on the review of using MXene-based materials as supercharge batteries materials
- https://mp.weixin.qq.com/s/RwD1cFtNWmHsCP_SXSaNmA
- https://www.nanowerk.com/nanotechnology-news3/newsid=65680.php

4. The following news featured on a new 2-in-1 floating solar device for water purification
- https://mp.weixin.qq.com/s/GnSloLw4RW1v-uWWGneCZg
- https://www.nanowerk.com/nanotechnology-news3/newsid=65687.php
- https://www.techexplorist.com/game-changer-2-in-1-floatable-solar-device-cleans-water-and-tackles-pollutants/88372/
- https://www.ntu.edu.sg/nie/news-events/news/detail/game-changer-2-in-1-floatable-solar-device-cleans-water-and-tackles-pollutants

5. The following news featured on Dr Edison's journey from academic challenges.
- https://havily.com/resilience-and-revelation-dr-edison-angs-journey-from-academic-challenges-to-scientific-eminence/
- https://www.todayonline.com/gen-y-speaks/gen-y-speaks-science-dunce-school-refused-give-now-science-professor-2457311
- https://www.channelnewsasia.com/listen/daily-cuts/letter-myself-how-setbacks-are-part-dr-edison-angs-success-formula-4557146

6. The following news featured on the innovation of NASICON materials for sodium ion batteries.
- https://www.technologynetworks.com/applied-sciences/articles/supercharging-batteries-with-improved-material-design-387624 (Technology Network, United Kingdom, 2024)

7. https://timesofrising.com/dr-edison-ang-pioneering-energy-storage-solutions-for-a-sustainable-tomorrow-2/
8. https://www.nanowerk.com/spotlight/spotid=65347.php (Nanowerk – Top Ten Spotlights, Germany, 2024)

9. The following news featured on the innovation of 3D graphene ink for advanced 3D Printing Technologies
- https://nykdaily.com/2024/02/dr-edison-ang-pioneering-graphene-based-ink-for-advanced-3d-printing-technologies/

10. The following news featured on the pioneering innovation in secondary amine synthesis
- https://techmoduler.com/dr-edison-ang-pioneering-innovation-in-secondary-amine-synthesis/
- https://www.nanowerk.com/spotlight/spotid=64716.php (Nanowerk – Top Ten Spotlights, Germany, 2023)

11. The following news featured on the supercharging of ammonia production using fixing oxygen gap techniques
- https://nybpost.com/electrochemical-innovation-paving-the-way-for-sustainable-ammonia-production/ (New York Business Post, USA, 2023)
- https://mp.weixin.qq.com/s/ZFfj_Yxktwm_RCVFYzCPJg (Weixin - China, 2023)
- Tailored nanograins enable greener ammonia production (nanowerk.com) (Nanowerk – Top Ten Spotlights, Germany, 2024)
- Revolutionizing Ammonia Production: Groundbreaking Green Catalyst Sparks Hope for Sustainable Future | Asia Research News (Asia research news, 2024)
- Green Revolution in Ammonia Production Unveiled (techexplorist.com)

(Techexplorist, India, 2024)

- https://www.ntu.edu.sg/nie/news-events/news/detail/revolutionizing-ammonia-production-groundbreaking-green-catalyst-sparks-hope-for-sustainable-future (NIE/NTU, Singapore, 2024)
- https://www.ntu.edu.sg/nie/news-events/news/detail/green-revolution-in-ammonia-production-unveiled (NIE/NTU, Singapore, 2024)
- https://www.ntu.edu.sg/nie/news-events/news/detail/tailored-nanograins-enable-greener-ammonia-production (NIE/NTU, Singapore, 2024)
- https://www.ntu.edu.sg/nie/news-events/news/detail/electrochemical-innovation-paving-the-way-for-sustainable-ammonia-production (NIE/NTU, Singapore, 2024)
- https://www.growkudos.com/publications/10.1073%25252Fpnas.2306673120/reader

12. The following news featured on the review of using graphene-based materials as supercharge batteries materials

- https://mp.weixin.qq.com/s/NrMttc3l3Wkh0twre1ibOw
- https://www.growkudos.com/publications/10.1002%25252Fsmll.202305217/reader

13. The following news featured on the use of covalent organic framework for generation of H_2O_2

- https://mp.weixin.qq.com/s/HwsW5HZdiHTvOftRAOVaNA

14. The following news featured on the development of water purifier from fruit wastes:

- www.straitstimes.com/singapore/ntu-scientist-turns-fruit-waste-into-material-that-can-be-used-in-water-purifier (The Straits Times, Singapore, 2023)
- https://mothership.sg/2023/07/ntu-fruit-peels-mxenes-purify-water/ (Mothership, Singapore, 2023)
- www.seithi.mediacorp.sg/singapore/banana-peel-purify-water-648921 (Seithi Mediacorp, Singapore, 2023)
- www.theonlinecitizen.com/2023/02/17/singapore-scientist-develops-method-to-produce-ultra-thin-material-from-fruit-waste-for-solar-powered-water-purification/ (TOC Asia, Singapore)
- www.eco-business.com/videos/fruit-peels-to-the-rescue/ (Eco-business, Singapore, 2023)
- www.ntu.edu.sg/news/detail/turning-fruit-and-plastic-wastes-into-useful-materials-for-water-purification (NTU News, Singapore, 2023)
- www.nie.edu.sg/about-us/news-events/news/news-detail/ntu-scientist-turns-plastic-waste-into-material-that-can-be-used-in-water-purifier (NIE News, Singapore, 2023)
- www.interestingengineering.com/innovation/fruit-waste-to-purify-water (Interesting Engineering, United States, 2023)
- www.technologynetworks.com/applied-sciences/articles/how-do-you-make-a-water-purifier-from-fruit-waste-370664 (Technology Network, United Kingdom, 2023)
- www.nanowerk.com/spotlight/spotid=62411.php (Nanowerk – Top Ten Spotlights, Germany, 2023)
- www.trendsderzukunft.de/trinkwasser-dank-obstabfaellen/ (Trends Der Zukunft, Germany, 2023)
- www.change.inc/energie/bijzondere-ontdekking-water-zuiveren-met-behulp-

van-fruitschillen-39663 (Change Inc, Netherlands, 2023)
- www.newatlas.com/good-thinking/fruit-waste-mxene-water-purifying-solar-still/ (New Atlas, Australia, 2023)
- www.sohuutritue.net.vn/giai-phap-huu-ich-moi-bien-vo-dua-kho-thanh-vat-lieu-loc-nuoc-gia-re-d157337.html (So Huu Tri Tuw, Vietnam, 2023)
- www.inceptivemind.com/turning-fruit-waste-useful-materials-water-purification/29846/ (Inceptive Mind, India, 2023)
- www.aftabnews.ir/fa/news/828142/تصفیه-آب-با-پوست-میوه (Aftanb news, Iran, 2023)
- https://www.asiaresearchnews.com/content/recycling-fruit-waste-solar-absorber-water-desalination (Asia research news, 2023)

15. The following news featured on the development of new graphene ink for additive manufacturing:
- www.philstar.com/other-sections/education-and-home/2022/09/28/2209443/how-singapore-professor-revolutionized-manufacturing-technology-nanomaterials (Philstar, Philippine, 2022)
- www.thehighereducationreview.com/magazine/nie-professor-revolutionising-manufacturing-technology-with-his-passion-in-nanomaterials-NDNK673788235.html (Higher Education Review, Singapore, 2022)

16. The news featured the unique engineering method of using joule heat to prepare a novel metal-organic nanosheets composite, which can be applied in rechargeable batteries:https://mp.weixin.qq.com/s/HbPV-zpfaQeFsnfJuOh9Vw (Weixin, China, 2022)

17. The news featured Dr Edison Ang from doing poorly in science to become science professor: https://youthopia.sg/read/impact-0560-from-doing-poorly-in-science-to-becoming-a-science-professor/

18. The news featured the effective construction of structurally stable carbon-based hybrid materials for high-performance lithium-ion batteries: https://mp.weixin.qq.com/s/5rYf4254m_Er_lVjRw0MIA (Weixin, China, 2021)

19. The news featured on the recycling technology of waste lithium battery materials:https://mp.weixin.qq.com/s/TtT7l_nWexeIMjP64t2dyA (Weixin, China, 2021)

20. The news featured on the design of next-generation high voltage zinc-ion batteries:https://mp.weixin.qq.com/s/Lb0zwbLOxPdCS6HR0DoNYQ (Weixin, China, 2021)

21. The news featured on the development of carbon-based materials in solid-state zinc-air batteries:https://mp.weixin.qq.com/s/jd5dnXn5cjHAAd8Z1u46Bw (Weixin, China, 2020)