Yanwei Lum

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Education

2013 – 2018 Ph. D. University of California, Berkeley (Materials Science and Engineering)
2009 – 2012 B. Eng. Imperial College London (Materials Science and Engineering)

Professional Career

2021.09– Present Assistant Professor, Dpt. Chem. Eng., National University of Singapore
2019.09 – 2021.09 Staff Scientist, IMRE, A*STAR
2017.03 – 2018.06 PostDoctoral Fellow, University of Toronto, Canada

Selected Publications

(1) Zhang, J.; Huang, L.; Tjiu, W. W.; Wu, C.; Zhang, M.; Bin Dolmanan, S.; Wang, S.; Wang, M.; Xi, S.; Aabdin, Z.; **Lum, Y.** Evidence for distinct active sites on oxide-derived Cu for electrochemical nitrate reduction. *J. Am. Chem. Soc.* 2024, DOI: 10.1021/jacs.4c13219

(2) Wu, T.; Dhaka, K.; Luo, M.; Wang, B.; Wang, M.; Xi, S.; Zhang, M.; Huang, F.; Exner, K.S.; **Lum, Y.** Cooperative Active Sites on $Ag_2Pt_3TiS_6$ for Enhanced Low-Temperature Ammonia Fuel Cell Electrocatalysis. *Angewandte Chemie* 2024, DOI:10.1002/anie.202418691

(3) Wang, B.; Wang, M.; Fan, Z.; Ma, C.; Xi, S.; Chang, L. Y.; Zhang, M.; Ling, N.; Mi, Z.; Chen, S.; Leow, W. R.; Zhang, J.; Wang, D.; **Lum, Y.** Nanocurvature-induced field effects enable control over the activity of single-atom electrocatalysts. *Nat. Commun.* 2024, 15 (1), 1719.

(4) Wang, M.; Wang, B.; Zhang, J.#; Xi, S.; Ling, N.; Mi, Z.; Yang, Q.; Zhang, M.; Leow, W. R.; Zhang, J.; **Lum, Y.** Acidic media enables oxygen-tolerant electrosynthesis of multicarbon products from simulated flue gas. *Nat. Commun.* 2024, 15 (1), 1218.

(5) Ling, N.; Zhang, J.; Wang, M.; Wang, Z.; Mi, Z.; Bin Dolmanan, S.; Zhang, M.; Wang, B.; Leow, W. R.; Zhang, J.; **Lum, Y.** Acidic Media Impedes Tandem Catalysis Reaction Pathways in Electrochemical CO_2 Reduction. *Angew. Chem.* 2023, 62, e202308782.

Research Interests

1. Electrochemical CO_2 conversion
2. Electroorganic chemistry
3. Hydrogen production and storage

Awards

1. AIChE SLS Outstanding Principal Investigator Award (2024)
2. National Research Foundation Fellowship (2022)
3. MIT TR35 Innovators Under 35 Asia Pacific (2022)
4. ASEAN-ROK Next ASEAN Innovator Award (2021)