Stanford

Junyan Li

Postdoctoral Scholar, Materials Science and Engineering

Bio

STANFORD ADVISORS

- Yi Cui, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Discovering Underpotentially Deposited Crystalline Sodium Metal Nanoparticles on the Surface of Hard Carbon Anodes.** *Journal of the American Chemical Society*
  Liu, Z., Serrao, C., Li, J., Cooney, I., Pintilie, G., Lee, J. H., Lee, J. K., Shuchi, S. B., Sarkar, P., Li, Y., Xu, X., Cui, Y., Yuan, et al
  2026; 148 (44): 47856-47866

- **Discovering Underpotentially Deposited Crystalline Sodium Metal Nanoparticles on the Surface of Hard Carbon Anodes** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Liu, Z., Serrao, C., Li, J., Cooney, I., Pintilie, G., Lee, J., Lee, J. K. J., Shuchi, S., Sarkar, P., Li, Y., Xu, X., Yuan, X., Zheng, et al
  2026

- **Upcycling nanoscale fragments in industrial waste liquids for aqueous battery electrolytes** *NATURE CHEMICAL ENGINEERING*
  Chi, X., Li, Y., Zheng, Q., Zhang, P., Mao, H., Li, J., Zhang, G., Wang, J., Chen, Z., Su, H., Ravi, A., Cai, A., Liu, et al
  2026

- **Suspension Electrolyte for Protecting Aqueous Zinc Batteries From Calendar Aging** *ADVANCED ENERGY MATERIALS*
  Wang, J., Guan, X., Su, H., Li, J., Zhang, P., Chi, X., Li, Y., Chen, Y., Chen, Z., Jagadeesan, S., Ravi, A., Mao, H., Kim, et al
  2026

- **Atomic layer-deposited nucleation layers to control zinc morphology and suppress hydrogen evolution.** *Proceedings of the National Academy of Sciences of the United States of America*
  Ravi, A., Shuchi, S. B., Feng, G., Li, Y., Zhang, P., Li, J., Liu, T. L., D'Acunto, G., Cai, A., Li, T., Sanroman Gutierrez, K. M., Liu, Z., Wang, et al
  2026; 123 (22): e2533390123

- **Three-dimensional and nanoscale resolved hierarchical structure of electroplated zinc complex in aqueous zinc battery.** *National science review*
  Li, J., Guan, X., Wang, J., Zhang, G., Holoubek, J., Cui, Y., Li, Y., Wang, H., Chiu, W., Cui, Y.
  2026; 13 (9): nwag114

- **Kaolin-derived zeolite enables high-performance carbon capture with gigaton-scale potential.** *National science review*
  Li, J., Li, J., Fang, S., Zhang, G., Zhang, P., Shum, S., Zhang, Z., Cui, Y.
  2026; 13 (8): nwag064

- **Scalable Carbon Dioxide Capture Using Clay-Derived Zeolites via Atomic Rearrangement.** *Journal of the American Chemical Society*
  Li, J., Li, J., Fang, S., Lyu, H., Yuan, L., Guan, X., Feng, G., Chi, X., Mao, H., Wu, Y., Li, Y., Liu, Z., Zhang, et al
  2026

- **NiSO4-Driven In Situ Alloy Formation To Unlock Highly Reversible Iron Electrochemistry in Aqueous Batteries.** *Journal of the American Chemical Society*
  Feng, G., Liu, Z., Li, J., Li, Y., Guan, X., Ravi, A., Liu, C., Chi, X., Ai, H., Zheng, X., Cui, Y.
  2026

- **Epitaxial Electrodeposition of Fe with Controlled In-Plane Variants for a Reversible Metal Anode in an Aqueous Electrolyte.** *Nano letters*
  Sui, C., Fu, C. T., Feng, G., Li, Y., Li, J., Yan, G., Hsu, P. C., Chu, S., Cui, Y.
  2026

- **High Pressure-Based Synthesis of Nanoporous Metal-Organic Framework ZIF-93 Giving Rise to a Phase for Proton Conduction** *ACS APPLIED NANO MATERIALS*
  Perez-Miana, M., Fernandez de Luis, R., Fidalgo-Marijuan, A., Li, J., Mayoral, A., Coronas, J.
  2025; 8 (43): 20713-20725

- **Capacity recovery by transient voltage pulse in silicon-anode batteries.** *Science (New York, N.Y.)*
  Yang, Y., Biswas, S., Xu, R., Xiao, X., Xu, X., Zhang, P., Gong, H., Zheng, X., Peng, Y., Li, J., Ai, H., Wu, Y., Ye, et al
  2024; 386 (6719): 322-327

- **Silanol-Stabilized Atomically Dispersed Pt^{δ+}-O_x-Sn Active Sites in Protozeolite for Propane Dehydrogenation** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Li, J., Zhang, Q., He, G., Zhang, T., Li, L., Li, J., Hao, D., Zhang, W., Terasaki, O., Mei, D., Yu, J.
  2024; 146 (35): 24358-24367

- **Cu-OFF/ERI Zeolite: Intergrowth Structure Synergistically Boosting Selective Catalytic Reduction of NO_x with NH₃** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Han, J., Li, J., Zhao, W., Li, L., Chen, M., Ge, X., Wang, S., Liu, Q., Mei, D., Yu, J.
  2024; 146 (11): 7605-7615

- **Complete Metal Recycling from Lithium-Ion Batteries Enabled by Hydrogen Evolution Catalyst Reconstruction** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*
  Zhang, Y., Li, J., Zhao, W., Yan, T., Zhang, L., Zhang, W., Mei, D., Yu, J.
  2023; 145 (50): 27740-27747

- **Can NbO Keep nbo Topology under Electrons? -Unveiling Novel Aspects of Niobium Monoxide at the Atomic Scale** *CHEMISTRY-A EUROPEAN JOURNAL*
  Li, C., Li, J., Zhou, Y., Zhang, Q., Mayoral, A., Li, G., Terasaki, O.
  2023; 29 (33): e202300614

- **In Situ Three-Dimensional Electron Diffraction for Probing Structural Transformations of Single Nanocrystals** *CHEMISTRY OF MATERIALS*
  Wu, S., Li, J., Ling, Y., Sun, T., Fan, Y., Yu, J., Terasaki, O., Ma, Y.
  2022

- **Andersson-Magneli Phases Ti_nO_{2n-1}: Recent Progress Inspired by Swedish Scientists** *ZEITSCHRIFT FUR ANORGANISCHE UND ALLGEMEINE CHEMIE*
  Zhang, Q., Liu, W., Zhou, Y., Li, J., Sun, T., Liu, Q., Ma, Y., Wang, J., Li, J., Zhao, R., Sui, Y., Matsumoto, T., Muroyama, et al
  2021; 647 (2-3): 126-133

- **Electron Microscopy Studies of Local Structural Modulations in Zeolite Crystals** *ANGEWANDTE CHEMIE-INTERNATIONAL EDITION*
  Zhang, Q., Mayoral, A., Li, J., Ruan, J., Alfredsson, V., Ma, Y., Yu, J., Terasaki, O.
  2020; 59 (44): 19403-19413

- **A Green Selective Water-Etching Approach to MOF@Mesoporous SiO₂ Yolk-Shell Nanoreactors with Enhanced Catalytic Stabilities** *MATTER*
  Bao, S., Li, J., Guan, B., Jia, M., Terasaki, O., Yu, J.
  2020; 3 (2): 498-508

- **Structure Solution and Defect Analysis of an Extra-Large Pore Zeolite with UTL Topology by Electron Microscopy** *JOURNAL OF PHYSICAL CHEMISTRY LETTERS*
  Li, J., Zhang, C., Jiang, J., Yu, J., Terasaki, O., Mayoral, A.
  2020; 11 (9): 3350-3356