

Stanford



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Ph.D. Student in Chemistry, admitted Autumn 2019

Publications

PUBLICATIONS

- **Solvation-property relationship of lithium-sulphur battery electrolytes.** *Nature communications*
Kim, S. C., Gao, X., Liao, S., Su, H., Chen, Y., Zhang, W., Greenburg, L. C., Pan, J., Zheng, X., Ye, Y., Kim, M. S., Sayavong, P., Brest, et al
2024; 15 (1): 1268
- **Recovery of isolated lithium through discharged state calendar ageing.** *Nature*
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2024; 626 (7998): 306-312
- **High-entropy electrolytes for practical lithium metal batteries** *NATURE ENERGY*
Kim, S., Wang, J., Xu, R., Zhang, P., Chen, Y., Huang, Z., Yang, Y., Yu, Z., Oyakhire, S. T., Zhang, W., Greenburg, L. C., Kim, M., Boyle, et al
2023
- **Environmentally stable and stretchable polymer electronics enabled by surface-tethered nanostructured molecular-level protection.** *Nature nanotechnology*
Zheng, Y., Michalek, L., Liu, Q., Wu, Y., Kim, H., Sayavong, P., Yu, W., Zhong, D., Zhao, C., Yu, Z., Chiong, J. A., Gong, H., Ji, et al
2023
- **Dissolution of the Solid Electrolyte Interphase and Its Effects on Lithium Metal Anode Cyclability.** *Journal of the American Chemical Society*
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- **Revealing the Multifunctions of Li3N in the Suspension Electrolyte for Lithium Metal Batteries.** *ACS nano*
Kim, M. S., Zhang, Z., Wang, J., Oyakhire, S. T., Kim, S. C., Yu, Z., Chen, Y., Boyle, D. T., Ye, Y., Huang, Z., Zhang, W., Xu, R., Sayavong, et al
2023
- **Correlating the Formation Protocols of Solid Electrolyte Interphases with Practical Performance Metrics in Lithium Metal Batteries** *ACS ENERGY LETTERS*
Oyakhire, S. T., Zhang, W., Yu, Z., Holmes, S. E., Sayavong, P., Kim, S., Boyle, D. T., Kim, M., Zhang, Z., Cui, Y., Bent, S. F.
2023: 869-877
- **Investigating the Cyclability and Stability at the Interfaces of Composite Solid Electrolytes in Li Metal Batteries.** *ACS applied materials & interfaces*
Holmes, S. E., Liu, F., Zhang, W., Sayavong, P., Oyakhire, S. T., Cui, Y.
2022
- **Correlating Kinetics to Cyclability Reveals Thermodynamic Origin of Lithium Anode Morphology in Liquid Electrolytes.** *Journal of the American Chemical Society*
Boyle, D. T., Kim, S. C., Oyakhire, S. T., Vila, R. A., Huang, Z., Sayavong, P., Qin, J., Bao, Z., Cui, Y.
2022

• **Resolving Current-Dependent Regimes of Electroplating Mechanisms for Fast Charging Lithium Metal Anodes.** *Nano letters*

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