

## Hongchang Hao

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 Curriculum Vitae available Online

### Publications

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#### PUBLICATIONS

- **Coupling Anionic Oxygen Redox with Selenium for Stable High-Voltage Sodium Layered Oxide Cathodes** *ADVANCED FUNCTIONAL MATERIALS*  
Xue, Z., Bothra, N., Meng, D., Feng, G., Li, Y., Cui, T., Hao, H., Lee, S., Liu, Y., Bajdich, M., Nanda, J., Zheng, X.  
2024
- **Alumina - Stabilized SEI and CEI in Potassium Metal Batteries.** *Angewandte Chemie (International ed. in English)*  
Liu, P., Hao, H., Singla, A., Vishnugopi, B. S., Watt, J., Mukherjee, P. P., Mitlin, D.  
2024: e202402214
- **Mechanical Milling - Induced Microstructure Changes in Argyrodite LPSCI Solid-State Electrolyte Critically Affect Electrochemical Stability** *ADVANCED ENERGY MATERIALS*  
Wang, Y., Hao, H., Naik, K. G., Vishnugopi, B. S., Fincher, C. D., Yan, Q., Raj, V., Celio, H., Yang, G., Fang, H., Chiang, Y., Perras, F. A., Jena, et al  
2024; 14 (23)
- **Tuned Reactivity at the Lithium Metal-Argyrodite Solid State Electrolyte Interphase** *ADVANCED ENERGY MATERIALS*  
Hao, H., Liu, Y., Greene, S. M., Yang, G., Naik, K. G., Vishnugopi, B. S., Wang, Y., Celio, H., Dolocan, A., Tsai, W., Fang, R., Watt, J., Mukherjee, et al  
2023; 13 (46)
- **Intermetallics Based on Sodium Chalcogenides Promote Stable Electrodeposition-Electrodissolution of Sodium Metal Anodes** *ADVANCED ENERGY MATERIALS*  
Wang, Y., Dong, H., Katyal, N., Vishnugopi, B. S., Singh, M. K., Hao, H., Liu, Y., Liu, P., Mukherjee, P. P., Henkelman, G., Watt, J., Mitlin, D.  
2023; 13 (27)
- **Stable Anode-Free All-Solid-State Lithium Battery through Tuned Metal Wetting on the Copper Current Collector** *ADVANCED MATERIALS*  
Wang, Y., Liu, Y., Nguyen, M., Cho, J., Katyal, N., Vishnugopi, B. S., Hao, H., Fang, R., Wu, N., Liu, P., Mukherjee, P. P., Nanda, J., Henkelman, et al  
2023; 35 (8): e2206762
- **Phase Engineering of Defective Copper Selenide toward Robust Lithium-Sulfur Batteries** *ACS NANO*  
Yang, D., Li, M., Zheng, X., Han, X., Zhang, C., Jacas Biendicho, J., Llorca, J., Wang, J., Hao, H., Li, J., Henkelman, G., Arbiol, J., Ramon Morante, et al  
2022; 16 (7): 11102-11114
- **Molybdenum Carbide Electrocatalyst In Situ Embedded in Porous Nitrogen-Rich Carbon Nanotubes Promotes Rapid Kinetics in Sodium-Metal-Sulfur Batteries** *ADVANCED MATERIALS*  
Hao, H., Wang, Y., Katyal, N., Yang, G., Dong, H., Liu, P., Hwang, S., Mantha, J., Henkelman, G., Xu, Y., Boscoboinik, J., Nanda, J., Mitlin, et al  
2022; 34 (26): e2106572
- **Review of Multifunctional Separators: Stabilizing the Cathode and the Anode for Alkali (Li, Na, and K) Metal-Sulfur and Selenium Batteries** *CHEMICAL REVIEWS*  
Hao, H., Hutter, T., Boyce, B. L., Watt, J., Liu, P., Mitlin, D.  
2022; 122 (9): 8053-8125
- **Multifunctional Separator Allows Stable Cycling of Potassium Metal Anodes and of Potassium Metal Batteries** *ADVANCED MATERIALS*

Liu, P., Hao, H., Celio, H., Cui, J., Ren, M., Wang, Y., Dong, H., Chowdhury, A., Hutter, T., Perras, F. A., Nanda, J., Watt, J., Mitlin, et al  
2022; 34 (7): e2105855

- **A Sodium-Antimony-Telluride Intermetallic Allows Sodium-Metal Cycling at 100% Depth of Discharge and as an Anode-Free Metal Battery** *ADVANCED MATERIALS*  
Wang, Y., Dong, H., Katyal, N., Hao, H., Liu, P., Celio, H., Henkelman, G., Watt, J., Mitlin, D.  
2022; 34 (1): e2106005
- **Selenium infiltrated hierarchical hollow carbon spheres display rapid kinetics and extended cycling as lithium metal battery (LMB) cathodes** *JOURNAL OF MATERIALS CHEMISTRY A*  
Wang, Y., Hao, H., Hwang, S., Liu, P., Xu, Y., Boscoboinik, J., Datta, D., Mitlin, D.  
2021; 9 (34): 18582-18593
- **Stable Potassium Metal Anodes with an All-Aluminum Current Collector through Improved Electrolyte Wetting** *ADVANCED MATERIALS*  
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2020; 32 (49): e2002908
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- **Photocatalytic Hydrogen Evolution Coupled with Efficient Selective Benzaldehyde Production from Benzyl Alcohol Aqueous Solution over ZnS-Ni<sub>x</sub>S<sub>y</sub> Composites** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*  
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- **High Selective Oxidation of Benzyl Alcohol to Benzaldehyde and Benzoic Acid with Surface Oxygen Vacancies on W<sub>18</sub>O<sub>9</sub>/Holey Ultrathin g-C<sub>3</sub>N<sub>4</sub> Nanosheets** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*  
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Hao, H., Zhang, L., Wang, W., Zeng, S.  
2018; 11 (16): 2810-2817
- **Enhanced H<sub>2</sub> evolution from photocatalytic cellulose conversion based on graphitic carbon layers on TiO<sub>2</sub>/NiO<sub>x</sub>** *GREEN CHEMISTRY*  
Zhang, L., Wang, W., Zeng, S., Su, Y., Hao, H.  
2018; 20 (13): 3008-3013
- **Modification of heterogeneous photocatalysts for selective organic synthesis** *CATALYSIS SCIENCE & TECHNOLOGY*  
Hao, H., Zhang, L., Wang, W., Zeng, S.  
2018; 8 (5): 1229-1250
- **Hydrogen evolution based on the electrons/protons stored on amorphous TiO<sub>2</sub>** *PHYSICAL CHEMISTRY CHEMICAL PHYSICS*  
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