



Sidian Chen

Postdoctoral Scholar, Energy Science and Engineering

 Curriculum Vitae available Online

Bio

STANFORD ADVISORS

- Hamdi Tchelepi, Postdoctoral Faculty Sponsor

LINKS

- Research website: <https://sidianchen.github.io>

Publications

PUBLICATIONS

- **Nanoporous Carbon Coating of Separator Boosts Rate Capability of Cathodes in Lithium-Ion Batteries.** *Advanced materials (Deerfield Beach, Fla.)*
Murphy, S. P., Leuenberger, N. M., Chen, S., Crooks, E., Jung, M. S., Tchelepi, H., Ji, X.
2026; e73871
- **Mathematical Modeling and Experimental Investigations of the Charge-Discharge Mechanisms in Aqueous Batteries** *JOURNAL OF THE ELECTROCHEMICAL SOCIETY*
Chen, S., Catalina, S. K., Chueh, W. C., Tchelepi, H. A.
2026; 173 (8)
- **Coupled two-phase flow and surfactant/PFAS transport in porous media with angular pores: From pore-scale physics to Darcy-scale modeling** *ADVANCES IN WATER RESOURCES*
Chen, S., Guo, B., Zheng, T.
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- **Semi-analytical solutions for nonequilibrium transport and transformation of PFAS and other solutes in heterogeneous vadose zones with structured porous media** *ADVANCES IN WATER RESOURCES*
Chen, S., Guo, B.
2025; 206
- **Pore-Scale Modeling of PFAS Transport in Water-Unsaturated Porous Media: Air-Water Interfacial Adsorption and Mass-Transfer Processes in Thin Water Films** *WATER RESOURCES RESEARCH*
Chen, S., Guo, B.
2023; 59 (8)