

David Mackanic

Ph.D. Student in Chemical Engineering, admitted Autumn 2015

Publications

PUBLICATIONS

- **Enabling Deformable and Stretchable Batteries** *ADVANCED ENERGY MATERIALS*
Mackanic, D. G., Kao, M., Bao, Z.
2020
- **Molecular design for electrolyte solvents enabling energy-dense and long-cycling lithium metal batteries** *NATURE ENERGY*
Yu, Z., Wang, H., Kong, X., Huang, W., Tsao, Y., Mackanic, D. G., Wang, K., Wang, X., Huang, W., Choudhury, S., Zheng, Y., Amanchukwu, C., Hung, et al
2020
- **Electrode Design with Integration of High Tortuosity and Sulfur-Philicity for High-Performance Lithium-Sulfur Battery** *MATTER*
Chen, H., Zhou, G., Boyle, D., Wan, J., Wang, H., Lin, D., Mackanic, D., Zhang, Z., Kim, S., Lee, H., Wang, H., Huang, W., Ye, et al
2020; 2 (6): 1605–20
- **Stretchable electrochemical energy storage devices.** *Chemical Society reviews*
Mackanic, D. G., Chang, T., Huang, Z., Cui, Y., Bao, Z.
2020
- **Tortuosity Effects in Lithium-Metal Host Anodes** *JOULE*
Chen, H., Pei, A., Wan, J., Lin, D., Vila, R., Wang, H., Mackanic, D., Steinruck, H., Huang, W., Li, Y., Yang, A., Xie, J., Wu, et al
2020; 4 (4): 938–52
- **Decoupling of mechanical properties and ionic conductivity in supramolecular lithium ion conductors.** *Nature communications*
Mackanic, D. G., Yan, X., Zhang, Q., Matsuhisa, N., Yu, Z., Jiang, Y., Manika, T., Lopez, J., Yan, H., Liu, K., Chen, X., Cui, Y., Bao, et al
2019; 10 (1): 5384
- **A Dynamic, Electrolyte-Blocking, and Single-Ion-Conductive Network for Stable Lithium-Metal Anodes** *JOULE*
Yu, Z., Mackanic, D. G., Michaels, W., Lee, M., Pei, A., Feng, D., Zhang, Q., Tsao, Y., Amanchukwu, C., Yan, X., Wang, H., Chen, S., Liu, et al
2019; 3 (11): 2761–76
- **An Electrochemical Gelation Method for Patterning Conductive PEDOT:PSS Hydrogels.** *Advanced materials (Deerfield Beach, Fla.)*
Feig, V. R., Tran, H., Lee, M., Liu, K., Huang, Z., Beker, L., Mackanic, D. G., Bao, Z.
2019; e1902869
- **Designing polymers for advanced battery chemistries** *NATURE REVIEWS MATERIALS*
Lopez, J., Mackanic, D. G., Cui, Y., Bao, Z.
2019; 4 (5): 312–30
- **Electrochemical patterning of tissue-mimetic conductive hydrogels**
Feig, V., Tran, H., Lee, M., Huang, R., Liu, K., Baker, L., Mackanic, D., Bao, Z.
AMER CHEMICAL SOC.2019
- **A Dual-Crosslinking Design for Resilient Lithium-Ion Conductors** *ADVANCED MATERIALS*
Lopez, J., Sun, Y., Mackanic, D. G., Lee, M., Foudeh, A. M., Song, M., Cui, Y., Bao, Z.
2018; 30 (43)
- **Concentrated mixed cation acetate "water-in-salt" solutions as green and low-cost high voltage electrolytes for aqueous batteries** *ENERGY & ENVIRONMENTAL SCIENCE*

Lukatskaya, M. R., Feldblyum, J. I., Mackanic, D. G., Lissel, F., Michels, D. L., Cui, Y., Bao, Z.
2018; 11 (10): 2876–83

● **A Dual-Crosslinking Design for Resilient Lithium-Ion Conductors.** *Advanced materials (Deerfield Beach, Fla.)*

Lopez, J., Sun, Y., Mackanic, D. G., Lee, M., Foudeh, A. M., Song, M., Cui, Y., Bao, Z.
2018: e1804142

● **Crosslinked Poly(tetrahydrofuran) as a Loosely Coordinating Polymer Electrolyte** *ADVANCED ENERGY MATERIALS*

Mackanic, D. G., Michaels, W., Lee, M., Feng, D., Lopez, J., Qin, J., Cui, Y., Bao, Z.
2018; 8 (25)