

## Eder Giovanni Lomeli

Ph.D. Student in Materials Science and Engineering, admitted Autumn 2020

### Publications

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#### PUBLICATIONS

- **Electronic Structure of the Alternating Monolayer-Trilayer Phase of La<sub>3</sub>Ni<sub>2</sub>O<sub>7</sub>** *PHYSICAL REVIEW LETTERS*  
Abadi, S., Xu, K., Lomeli, E. G., Puphal, P., Isobe, M., Zhong, Y., Fedorov, A., Mo, S., Hashimoto, M., Lu, D., Moritz, B., Keimer, B., Devereaux, et al  
2025; 134 (12)
- **Time-Resolved X-Ray Spectroscopy from the Atomic Orbital Ground State Up** *PHYSICAL REVIEW X*  
Jost, D., Lomeli, E. G., Tang, T., Kas, J. J., Rehr, J. J., Lee, W., Jiang, H., Moritz, B., Devereaux, T. P.  
2025; 15 (1)
- **Predicting Reactivity and Passivation of Solid-State Battery Interfaces.** *ACS applied materials & interfaces*  
Lomeli, E. G., Ransom, B., Ramdas, A., Jost, D., Moritz, B., Sendek, A. D., Reed, E. J., Devereaux, T. P.  
2024
- **Electrolyte Coatings for High Adhesion Interfaces in Solid-State Batteries from First Principles.** *ACS applied materials & interfaces*  
Ransom, B., Ramdas, A., Lomeli, E., Fidawi, J., Sendek, A., Devereaux, T., Reed, E. J., Schindler, P.  
2023
- **A Solution-Processable High-Modulus Crystalline Artificial Solid Electrolyte Interphase for Practical Lithium Metal Batteries** *ADVANCED ENERGY MATERIALS*  
Yu, Z., Seo, S., Song, J., Zhang, Z., Oyakhire, S. T., Wang, Y., Xu, R., Gong, H., Zhang, S., Zheng, Y., Tsao, Y., Mondonico, L., Lomeli, et al  
2022
- **Correlative image learning of chemo-mechanics in phase-transforming solids.** *Nature materials*  
Deng, H. D., Zhao, H., Jin, N., Hughes, L., Savitzky, B. H., Ophus, C., Fraggadakis, D., Borbely, A., Yu, Y., Lomeli, E. G., Yan, R., Liu, J., Shapiro, et al  
2022
- **Correlative analysis of structure and chemistry of Li<sub>x</sub>FePO<sub>4</sub>(4) platelets using 4D-STEM and X-ray ptychography** *MATERIALS TODAY*  
Hughes, L. A., Savitzky, B. H., Deng, H. D., Jin, N. L., Lomeli, E. G., Yu, Y., Shapiro, D. A., Herring, P., Anapolsky, A., Chueh, W. C., Ophus, C., Minor, A. M.  
2022; 52: 102-111
- **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  
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