

# Stanford

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## Peter Benedek

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### Bio

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#### STANFORD ADVISORS

- Thomas Jaramillo, Postdoctoral Faculty Sponsor
- Thomas Jaramillo, Postdoctoral Research Mentor

### Publications

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#### PUBLICATIONS

- **Calcium-mediated nitrogen reduction for electrochemical ammonia synthesis.** *Nature materials*  
Fu, X., Niemann, V. A., Zhou, Y., Li, S., Zhang, K., Pedersen, J. B., Saccoccio, M., Andersen, S. Z., Enemark-Rasmussen, K., Benedek, P., Xu, A., Deissler, N. H., Mygind, et al  
2023
- **Quantifying Influence of the Solid-Electrolyte Interphase in Ammonia Electrosynthesis** *ACS ENERGY LETTERS*  
McShane, E. J., Niemann, V. A., Benedek, P., Fu, X., Nielander, A. C., Chorkendorff, I., Jaramillo, T. F., Cargnello, M.  
2023
- **Development of a versatile electrochemical cell for in situ grazing-incidence X-ray diffraction during non-aqueous electrochemical nitrogen reduction.** *Journal of synchrotron radiation*  
Blair, S. J., Nielander, A. C., Stone, K. H., Kreider, M. E., Niemann, V. A., Benedek, P., McShane, E. J., Gallo, A., Jaramillo, T. F.  
2023
- **Sol-Gel Barium Titanate Nanohole Array as a Nonlinear Metasurface and a Photonic Crystal** *SMALL*  
Talts, U., Weigand, H. C., Saerens, G., Benedek, P., Winiger, J., Wood, V., Leuthold, J., Vogler-Neuling, V., Grange, R.  
2023: e2304355
- **Mechanistic Insights into Aldehyde Production from Electrochemical CO<sub>2</sub> Reduction on CuAg Alloy via Operando X-ray Measurements** *ACS CATALYSIS*  
Qiao, Y., Kastlunger, G., Davis, R. C., Rodriguez, C., Vishart, A., Deng, W., Xu, Q., Li, S., Benedek, P., Chen, J., Schroder, J., Perryman, J., Lee, et al  
2023: 9379-9391
- **Combined, time-resolved, in situ neutron reflectometry and X-ray diffraction analysis of dynamic SEI formation during electrochemical N<sub>2</sub> reduction** *ENERGY & ENVIRONMENTAL SCIENCE*  
Blair, S. J., Doucet, M., Niemann, V. A., Stone, K. H., Kreider, M. E., Browning, J. F., Halbert, C. E., Wang, H., Benedek, P., McShane, E. J., Nielander, A. C., Gallo, A., Jaramillo, et al  
2023
- **A Versatile Li<sub>0.5</sub>FePO<sub>4</sub> Reference Electrode for Nonaqueous Electrochemical Conversion Technologies** *ACS ENERGY LETTERS*  
McShane, E. J., Benedek, P., Niemann, V. A., Blair, S. J., Kamat, G. A., Nielander, A. C., Jaramillo, T. F., Cargnello, M.  
2022: 230-235
- **Self-assembled materials for electrochemical energy storage** *MRS BULLETIN*  
Chen, H., Benedek, P., Fisher, K., Wood, V., Cui, Y.  
2020; 45 (10): 815-22