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Education:

- ***2006-2011: Ph.D.*** Materials Science and Engineering, Northwestern University, USA Advisor: Michael J. Bedzyk
- ***2004-2006: M.S.*** Physics, McGill University, Canada
- ***2000-2004: B.S.*** Physics, Peking University, China

Background

- 2016-Present: Assistant Professor, Chemical Engineering, Oregon State University
- 2017: Callahan Faculty Scholar, Chemical Engineering, Oregon State University
- 2013-2016: Postdoctoral Fellow, Argonne National Laboratory, Advisor: Paul Fenter
- 2011-2013: Postdoctoral Associate, Massachusetts Institute of Technology, Advisor: Yang Shao-Horn

Honors

- 2016-Present Scialog Fellow, Research Corporation for Science Advancement, USA
- 2018 Scialog: Advanced Energy Storage Award, USA
- Callahan Faculty Scholar, Oregon State University, USA
- Richter Memorial Funds Scholarship, Northwestern University, USA
- Walter P. Murphy Fellowship, Northwestern University, USA
- McGill Graduate Studies Fellowship, McGill University, Canada Outstanding Graduate with Honors, Peking University, China
- Tri-A Student, Peking University, China
- President's Undergraduate Research Fellowship, Peking University, China

Synergistic Activities

- Lead Organizer, **2019** MRS Spring Meeting *Symposium ES03: Electrochemical Energy Materials Under Extreme Conditions*, Phoenix, AZ, USA
- Lead Organizer, **2018** MRS Spring Meeting *Symposium EN20: Deposition, Transformation and Reaction at Functional Interfaces for Electrochemical Energy Systems*, Phoenix, AZ, USA
- Chair, *Energy Storage 2017: Opportunities and Challenges for Electric Grid, Wave, Hydropower and Other Sustainable Energies* Conference, Corvallis, OR, USA

- Organizer for 2 Technical Symposia including: **2018** 256th ACS Fall Meeting Session *Role of Water & Solvent in Heterogeneous Catalysis*; **2018** Pacific Coast Catalysis Society Meeting in Corvallis, Oregon.
- Session Chair for 5 Technical Symposia including: **2019** MRS Spring Meeting *Symposium ES03: Electrochemical Energy Materials Under Extreme Conditions;* **2018** MRS Spring Meeting *Symposium EN20: Deposition, Transformation and Reaction at Functional Interfaces for Electrochemical Energy Systems;* **2017** MRS Fall Meeting *Symposium TC: Design, Control and Advanced Characterization of Functional Defects in Materials*; **2016** PRiME/230th ECS Meeting *A03 Lithium-Ion Batteries*; **2016** 251st ACS Spring Meeting Session *Nanomaterials for Energy Conversion & Storage*.

Publications

1. J. Hwang, **Z. Feng***, N. Charles, X. R. Wang, D. Lee, K. A. Stoerzinger, S. Muy, R. R. Rao, D. Lee, R. Jacobs, D. Morgan, Y. Shao-Horn*, "Tuning perovskite oxides by strain: Electronic structure, properties, and functions in (electro) catalysis and ferroelectricity", Materials Today, 2019. DOI:10.1016/j.mattod.2019.03.014
2. M. Wang, B. Han, J. Deng, Y. Jiang, M. Zhou, M. Lucero, Y. Wang, Y. Chen, Z. Yang, A. T N'Diaye, Q. Wang, Z. J. Xu, and, **Z. Feng***, "Influence of Fe Substitution into $LaCoO_3$ Electrocatalysts on Oxygen- Reduction Activity", *ACS Applied Materials & Interfaces*, 11, 5682-5686, 2019.
3. K. Liang, S. Pakhira, Z. Yang, A. Nijamudheen, L. Ju, M. Wang, C. I. Aguirre-Velez, G. E. Sterbinsky, Y. Du, **Z. Feng***, J. L. Mendoza-Cortes*, Y. Yang*, "S-Doped MoP Nanoporous Layer Towards High-Efficiency Hydrogen Evolution in pH-Universal Electrolyte", *ACS Catalysis*, 9, 651-659, 2019.
4. J. Li, M. Chen, D. A. Cullen, S. Hwang, M. Wang, B. Li, K. Liu, S. Karakalos, M. Lucero, H. Zhang, C. Lei, H. Xu, G. E. Sterbinsky, **Z. Feng**, D. Su, K. L. More, G. Wang, Z. Wang, and G. Wu, "Atomically dispersed manganese catalysts for oxygen reduction in proton-exchange membrane fuel cells", *Nature Catalysis*, 1, 935- 945, 2018.
5. Z. Weng, Y. Wu, M. Wang, J. Jiang, K. Yang, S. Huo, X.-F. Wang, Q. Ma, G. W. Brudvig, V. S. Batista, Y. Liang*, **Z. Feng***, H. Wang*, "Active Sites of Cu-Complex Catalytic Materials for Electrochemical CO_2 Reduction", *Nature Communications*, 9, 415, 2018.
6. Y. Wu, J. Jiang, Z. Weng, M. Wang, D. L. J. Broere, Y. Zhong, G. W. Brudvig*, **Z. Feng***, and H. Wang*, "Electroreduction of CO_2 Catalyzed by a Heterogenized Zn-Porphyrin Complex with a Redox-Innocent Metal Center", *ACS Central Science*, 3, 847-852, 2017.
7. **Z. Feng*,** W.T. Hong, D.D. Fong, Y.-L. Lee, Y. Yacoby, D. Morgan and Y. Shao-Horn*, "Catalytic activity and stability of oxides: the role of near-surface atomic structures and compositions", *Accounts of Chemical Research*, 49, 996-973, 2016.
8. **Z. Feng***, X. Chen, L. Qiao, A. L. Lipson, T. T. Fister, L. Zeng, C. Kim, T. Yi, N. Sa, D. L. Proffit, A. K. Burrell, J. Cabana, B. J. Ingram, M. D. Biegalski, M. J. Bedzyk, and P. A. Fenter*, "Phase-controlled electrochemical activity of epitaxial Mg-spinel thin films", *ACS Applied Materials & Interfaces*, 7, 28438- 28443, 2015.
9. **Z. Feng,** Y. Yacoby, M.J. Gadre, Y.-L. Lee, W.T. Hong, H. Zhou, M.D. Biegaski, H. M. Christen, S. B. Adler, D. Morgan and Y. Shao-Horn, "Anomalous interface/surface strontium segregation in $(La_{1-y}Sr_y)_2CoO_{4+\delta}/La_{1-x}Sr_xCoO_{3-\delta}$ heterostructured thin films", *Journal of Physical Chemistry Letters,* 5, 1027-1034, 2014.

10. **Z. Feng,** Y. Yacoby, W.T. Hong, H. Zhou, M.D. Biegaski, H. M. Christen, and Y. Shao-Horn, "Revealing the atomic structure and strontium distribution in nanometer-thick $La_{0.8}Sr_{0.2}CoO_{3-\delta}$ grown on (001)-oriented $SrTiO_3$", *Energy & Environmental Science*, 7, 1166-1174, 2014.

Selected Presentations

- 2018† "Mechanistic Studies of Fe Based LDH and Phosphosulfides for OER and HER Using *in Situ operando* Synchrotron X-Ray Spectroscopy and Scattering", *2018 AIChE Annual Fall Meeting*, Pittsburg, PA, USA
- 2018† "Insights into IrO_x-Based Oxides as Highly Efficient Oxygen Evolution Reaction Catalysts in Acidic Electrolytes", *256th ACS Fall Meeting,* Boston, MA, USA
- 2018 "The Role of Dopant Concentration and Electrolyte pH on the Performance of $LaCo_xFe_{1-x}O_3$ Catalysts", *256th ACS Fall Meeting,* Boston, MA, USA (August 19, 2018)
- 2018 "*In Situ* Study of Catalyst Reconstruction During Electrochemical CO_2 Reduction", *233th ECS Spring Meeting,* Seattle, WA, USA, (May 13, 2018)
- 2017 "Mechanistic Studies of FeS|P Electrocatalysts Using Synchrotron X-ray Spectroscopy and Scattering", *MRS Fall Meeting*, Boston, MA, USA, (November 27, 2017)

Research Interests

- More than 12 years' experience in synchrotron X-ray diffraction and spectroscopy for applications in (electro)chemical systems such as fuel cells and batteries. Interested in the development of surface X-ray diffraction and X-ray spectroscopy for time-resolved in-situ studies on energy materials.