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**Education and Training:**

University of Alberta, Edmonton, Alberta	B.S.	1995	Chemistry
McMaster University, Hamilton, Ontario	Ph.D.	2002	Chemistry
University of Liverpool, Liverpool, UK	Postdoc	2002-2006	Chemistry
McMaster University, Hamilton, Ontario	Postdoc	2007	Chemistry

**Research and Professional Experience:**

2007-present Research Staff, Oak Ridge National Laboratory, Oak Ridge, USA  
2007-2007 Post-Doctoral Research, McMaster University, Hamilton, ON  
2002-2006 Post-Doctoral Research, University of Liverpool, Liverpool, UK  
1996-2002 Ph.D. Research, McMaster University, Hamilton, ON

**10 Recent Publications:**

Jiang, B; Bridges, CA; Unocic, RR; Pitike, KC; Cooper, VR; Zhang, YP; Lin, DY; Page, K “Probing the Local Site Disorder and Distortion in Pyrochlore High-Entropy Oxides.” *J. Am. Chem. Soc.* **2021**, 143, 4193-4204. DOI: 10.1021/jacs.0c10739

Bridges, CA; Martins, ML; Jafta, CJ; Sun, XG; Paranthaman, MP; Liu, J; Dai, S; Mamontov, E. “Dynamics of Emim(+) in [Emim][TFSI]/LiTFSI Solutions as Bulk and under Confinement in a Quasi-liquid Solid Electrolyte” *J. Phys. Chem. B* **2021**, 125, 5443-5450. DOI: 10.1021/acs.jpcc.1c02383

Jafta, CJ; Sun, XG; Lyu, HL; Chen, H; Thapaliya, BP; Heller, WT; Cuneo, MJ; Mayes, RT; Paranthaman, MP; Dai, S; Bridges, CA “Insight into the Solid Electrolyte Interphase Formation in Bis(fluorosulfonyl)Imide Based Ionic Liquid Electrolytes.” *Adv. Functional Mater.* **2021**, 31, 2008708. DOI: 10.1002/adfm.202008708 (**Journal Cover**)

Pitike, K.; Santosh, K.C.; Eisenbach, M.; Bridges, C. A.; Cooper, V.R. “Predicting the phase stability of multi-component high entropy compounds” *Chem. Mater.* **32**,7507 (2020)  
DOI:10.1021/acs.chemmater.0c02702

Vitoriano, N.O.; de Larramendi, I.R.; Sacci, R.L.; Lozano, I.; Bridges, C.A.; Arcelus, O.; Enterría, M.; Carrasco, J.; Rojo, T.; Veith, G.M.; “Goldilocks and the Three Glymes: How Na<sup>+</sup> Solvation Controls Na-O<sub>2</sub> Battery Cycling.” *Energy Storage Mater.* **2020**, 29 235–245. DOI: 10.1016/j.ensm.2020.04.034

Jafta, C.J.; Sun, X.-G.; Veith, G.M.; Jensen, G.V.; Mahurin, S.M.; Paranthaman, M.P. Dai, S.; Bridges, C.A. “Probing Microstructure and Electrolyte Concentration Dependent Cell Chemistry Via Operando Small Angle Neutron Scattering.” *Energ. Environ. Sci.* **2019**, 12, 1866-1877. DOI: 10.1039/C8EE02703J. (**Journal Front Cover**)

Thapaliya, B.P.; Jafta, C.J.; Lyu, H.; Xia, J.; Meyer, III, H.M.; Paranthaman, M.P.; Sun, X-G.; Bridges, C.A.; Dai, S. “Fluorination of MXene by Elemental F<sub>2</sub> as Electrode Material for Lithium-Ion Batteries.” *ChemSusChem* **2019**, 12, 1316-1324. DOI: 10.1002/cssc.201900793 (**Journal Front Cover**)

Lyu, H.; Lia, Y.; Jafta, C.J.; Bridges, C.A.; Meyer III, H.M.; Borisevich, A.; Paranthaman, M.P.; Dai, S.; Sun, X-G. “Bis(trimethylsilyl) 2-fluoromalonate Derivatives as Electrolyte Additives for High Voltage Lithium Ion Batteries.” *J. Power Sources* **2019**, 412, 527–535. DOI: 10.1016/j.jpowsour.2018.11.083

May, A.F.; Bridges, C.A.; McGuire, M.A.; “Physical Properties and Thermal Stability of Fe<sub>5-x</sub>GeTe<sub>2</sub> Single Crystals.” *Phys. Rev. Mater.* **2019**, 3, 104401. DOI: 10.1103/PhysRevMaterials.3.104401

Chen H, Wenwen L, Zhang L, Jie K, Mullins DR, Sang X, Yang S, Jafta CJ, Bridges CA, Hu X, Unocic RR, Fu J, Zhang P, Dai S, “Mechanochemical Synthesis of High Entropy Oxide Materials under Ambient Conditions: Dispersion of Catalysts via Entropy Maximization,” *ACS Mater. Letters* **2019**, *1*, 83-88. DOI: 10.1021/acsmaterialslett.9b00064

**Synergistic Activities and Awards:**

2020-present **Chair** of the ORNL Distinguished Staff Fellowship Committee (Member 2018)

2015-current **Reviewer** of proposals for the Structural Sciences panel at the Advanced Photon Source, Argonne National Laboratory

2011-2020 **Session organizer/Chair** for ACA conferences in New Orleans(2011, 2017), Boston(2012), Honolulu(2013), Albuquerque(2014), Toronto(2018), Covington (2019), San Diego (2020)

2016 **UT-Battelle Director’s award for Team Accomplishment**

2018-2019 **Chair** of the American Crystallographic Association (ACA) Neutron Scattering SIG

**Collaborators and Co-editors:**

A. Manthiram, University of Texas at Austin; Frank Johnson, GE Global Research (now Niron Magnetics); J. Goodenough (University of Texas at Austin); N. Ortiz Vitoriano, (CIC energiGUNE); Greta V. Jensen (NIST Center for Neutron Research, now Teknologisk Institut in Denmark); Jung-Hyun Kim (Ohio State University) Ying Shirley Meng (UCSD); R. Moessner, Max Planck Institute (Dresden, Germany); Johannes Knolle (Imperial College London); Loic Baggetto, Cea Leti (Grenoble, France)

**Graduate and Postdoctoral Advisors:**

M.J. Rosseinsky, University of Liverpool, UK

J.E. Greedan, McMaster University, Canada