BRIAN**CUSHING**

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EDUCATION

1994 **BS, Chemistry**
University of West Florida
Pensacola, FL

1998 **MS, Chemistry**
University of New Orleans
New Orleans, LA

1999 **PhD, Inorganic Chemistry**
University of New Orleans
New Orleans, LA
Advisor: Prof. John B. Wiley

EDITING EXPERIENCE

2005–present **Freelance Editor**

- Specialization in editing scientific manuscripts by ESL authors
- Edited manuscripts: 5000+
- Subjects: chemistry (all related subfields), chemical engineering, materials science, solid-state physics, chemical physics

RESEARCH EXPERIENCE

2002–2005 **Senior Postdoctoral Fellow**
Advanced Materials Research Institute
University of New Orleans
Advisor: Prof. Charles O'Connor

- Research topics: Nanomaterials synthesis and characterization

1999–2002 **Postdoctoral Researcher**
University of Texas at Austin
Advisor: Prof. J. B. Goodenough

- Research topics: Lithium-ion batteries, solid-oxide fuel cells

EXAMPLES OF COAUTHORED WORKS

- Zhang M, **Cushing BL**, O'Connor CJ. Synthesis and characterization of monodisperse ultra-thin silica-coated magnetic nanoparticles. *Nanotechnology* 2008; 19: 085601.
- Ban Z, **Cushing BL**, O'Connor CJ. Poly(vinylpyrrolidone) coated iron nanoparticles in polar aprotic solvents. *Journal of Nanoscience and Nanotechnology* 2008; 8: 2091.
- Lee J-C, Caruntu D, Lee J-H, Kim J-J, **Cushing B**, Golub V, Cho SH, O'Connor CJ. Chemical synthesis of nanocrystalline Ni-Zn ferrites and their magnetic characteristics. *Functional Materials* 2006; 13: 447.
- **Cushing BL**, Golub V, Henry M, Oliva BL, Cook E, Holmes CW, O'Connor CJ. Effects of annealing on the magnetic properties, size and strain of gold-coated permalloy nanoparticles. *Nanotechnology* 2005; 16: 1701.
- Caruntu D, **Cushing BL**, Caruntu G, O'Connor CJ. 2005. Attachment of gold nanograins onto colloidal magnetite nanocrystals. *Chemistry of Materials* 2005; 17: 2298.
- **Cushing BL**, Kolesnichenko V, O'Connor CJ. Recent advances in the liquid-phase syntheses of inorganic nanoparticles. *Chemical Reviews* 2004; 104: 3893.
- **Cushing BL**, Golub V, O'Connor CJ. Synthesis and magnetic properties of Au-coated amorphous $Fe_{20}Ni_{80}$ nanoparticles. *Journal of Physics and Chemistry of Solids* 2004; 65: 825.
- Piana M, **Cushing BL**, Goodenough JB, Penazzi, N. A new promising sol–gel synthesis of phospho-olivines as environmentally friendly cathode materials for Li-ion cells. *Solid State Ionics* 2004; 175: 233.
- Piana M, **Cushing BL**, Goodenough JB, Penazzi, N. New sol-gel synthetic route to phospho-olivines as environmentally friendly cathodes for Li-ion cells. *Annali di Chimica* 2003; 93: 985.

- Goodenough JB, **Cushing BL**. Oxide-based ORR catalysts. In *Handbook of fuel cells: Fundamentals, technology, applications*, Vol. 2, eds. Vielstich W, Lamm A, Gasteiger H, 520–533. West Sussex, United Kingdom: Wiley; 2003.
- **Cushing BL**, Goodenough JB. Influence of carbon coating on the performance of a $LiMn_{0.5}Ni_{0.5}O_2$ cathode. *Solid State Sciences* 2002; 4: 1487.
- **Cushing BL**, Goodenough JB. $Li_2NaV_2(PO_4)_3$: A 3.7 V lithium-insertion cathode with the rhombohedral NASICON structure. *Journal of Solid State Chemistry* 2001; 162: 176.
- **Cushing BL**, Kang S-H, Goodenough JB. Instability of brannerite cathode materials upon lithium insertion. *International Journal of Inorganic Materials* 2001; 3: 875.
- **Cushing BL**, Wiley JB. A two-step ion exchange route to the new metastable double-layered perovskite, $(Rb,Na)_{1-x}Ca_{x/2}LaNb_2O_7$ ($x \approx 0.9$). *Materials Research Bulletin* 1999; 34: 271.
- **Cushing BL**, Wiley JB. Improved synthetic routes to layered Na_xCoO_2 oxides. *Synthesis and Reactivity in Inorganic and Metal-Organic Chemistry* 1999; 29: 1199.
- Lalena JN, McIntyre RA, **Cushing BL**, Kodenkandath T, Seip CT, O'Connor CJ, Wiley JB. Low-temperature multistep topotactic routes to new mixed-valence perovskites. *Materials Research Society Symposium Proceedings* 1999; 547: 99.
- **Cushing BL**, Wiley JB. Topotactic routes to layered calcium cobalt oxides. *Journal of Solid State Chemistry* 1998; 141: 385.
- Lalena JN, **Cushing BL**, Falster AU, Simmons, Jr, WB, Seip CT, Carpenter EE, O'Connor CJ, Wiley JB. A multistep topotactic route to the new mixed-valence titanate, $Na_{2-x+y}Ca_{x/2}La_2Ti_3O_{10}$. Electron localization effects in a triple-layered perovskite. *Inorganic Chemistry* 1998; 37: 4484.
- Mahler CH, **Cushing BL**, Lalena JN, Wiley JB. Divalent ion exchange of alkaline-earth cations into the triple-layered perovskite $RbCa_2Nb_3O_{10}$. *Materials Research Bulletin* 1998; 33: 1581.
- **Cushing BL**, Falster AU, Simmons, Jr. WB, Wiley JB. A multivalent ion exchange route to lamellar calcium cobalt oxides, Ca_xCoO_2 ($x \leq 0.5$). *Chemical Communications* 1996; 2635.

EXAMPLES OF JOURNALS WHERE EDITED PAPERS HAVE BEEN PUBLISHED

- *ACS Applied Materials & Interfaces*
- *ACS Energy Letters*
- *ACS Nano*
- *Advanced Energy Materials*
- *Advanced Materials*
- *Angewandte Chemie International Edition*
- *Applied Catalysis B: Environmental*
- *Chemical Engineering Journal*
- *Chemical Reviews*
- *Chemical Society Reviews*
- *Dalton Transactions*
- *Energy & Environmental Science*
- *Environmental Science & Technology*
- *Inorganic Chemistry*
- *Journal of the American Chemical Society*
- *Journal of Applied Physics*
- *Journal of the Electrochemical Society*
- *Journal of Materials Chemistry A*
- *Journal of Organic Chemistry*
- *Journal of Physical Chemistry Letters*
- *Langmuir*
- *Nano Letters*
- *Nature*
- *Nature Catalysis*
- *Nature Communications*
- *Nature Materials*
- *Nature Nanotechnology*
- *Nature Photonics*
- *Nature Reviews Materials*
- *Physical Review B*
- *Physical Review Letters*
- *Proceedings of the National Academy of Sciences of the United States of America*
- *Science*
- *Scientific Reports*
- *Small*