

Jeff Withers
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Education

M.S. Chemistry 2009, University of Missouri-St Louis

B.S., Chemistry 2001, Morehead State University, Morehead, KY

Professional Experience

May 2016-Present Battelle Memorial Institute

- Analyze air samples using GC/MS and GC/FPD at a chemical weapons destruction plant.

March 2011-August 2015 Chemist, Alltech, Inc., Lexington, KY

- Synthesis of organic compounds, molecularly imprinted polymers, monosaccharides, polysaccharides.
- Analytical method development, HPLC (Waters, Empower) and FTIR Quantitative Analysis

April 2010- February 2011 Analytical Chemist, Covidien, Inc. St Louis, MO

- Quantitative analysis of in-process, finished products and stability samples by HPLC, UPLC, GC, UV-Vis, KF, FTIR and wet methods per USP, EP, JP and FCC in a cGMP API plant.

Sept 2008-Dec 2009 Research Assistant, University of Missouri-St Louis.

- Synthesized coordination compounds and organic compounds up to 1 kg scale.
- Characterize products by NMR, FTIR, X-Ray Crystallography and Magnetometer.

Aug 2002-May 2007 Research Assistant, University of Kentucky

- Synthesized coordination compounds and organic compounds up to 1kg scale.
- Characterized products by NMR, FTIR, X-Ray Crystallography and Magnetometer.
- Lab safety coordinator and equipment maintenance.

Jan 2002-July 2002 Research Scientist I, University of Kentucky College of Pharmacy, Center for Pharmaceutical Science and Technology

- Tested raw materials for purity and identification.
- Used USP/NF testing methods including wet chemistry and instrumental methods.
- Tested in-process and finished product samples for content, viscosity, pH etc.
- Performed stability testing using HPLC/UV-Vis.

Jun 1999-Jan 2002 Quality Control Chemist, International Processing Corporation, Inc., Winchester, KY.

- Tested raw materials used in the manufacture of solid dosage drugs for purity and identification.
- Used USP/NF testing methods including wet chemistry, dissolution and instrumental methods (AA, GFAA, HPLC, FTIR, UV-Vis and GC).

Languages

Spanish advanced conversation. German: basics, Mandarin: intermediate, Visayan: beginner

Publications

One- and three-dimensional octacyanometalate(IV) networks constructed via a building block approach , Withers, J.R.; Ruschman, C.; Parkin , S.; and Holmes, S.M.; *Polyhedron* **2005** p1845

“A Two-Dimensional Octacyanomolybdate(V)-Based Ferrimagnet: $\{[Mn^{II}(DMF)_4]_3[Mo^V(CN)_8]_2\}_n$ ”; Withers, J. R., Li, D.F.; Ruschman, C.; Triplett, J.; Parkin, S.; Wang, G.; Yee, G.T.; and Holmes, S.M.; *Inorganic Chemistry*, **2006** p4307.

“Synthesis and characterization of one- and two-dimensional octacyanometalate(V) networks: $\{[trans-M^{II}(DMF)_4][cis-M^{II}(DMF)_4]_2[M^V(CN)_8]_2\}_n$ ($M^{II} = Mn, Fe, Ni$; $M^V = Mo, W$)”, Withers, J. R., Li, D.F.; Ruschman, C.; Triplett, J.; Parkin, S.; Wang, G.; Yee, G.T.; and Holmes, S.M.; *Polyhedron*, **2007** p2353.

“Synthesis and Structural Characterization of Bi- and Trimetallic Octacyanometalate(IV) Complexes: $[\Delta, \Lambda-M^{II}(en)_3][cis-M^{II}(en)_2(OH_2)][M^{IV}(CN)_8] \cdot 2H_2O$ and $[cis-M^{II}(en)_2(OH_2)]_2[(\mu-NC)_2M^{IV}(CN)_6] \cdot 4H_2O$ ($M^{II} = Mn, Co, Ni$; $M^{IV} = Mo, W$)”, Withers, J. R.; Ruschman, C.; Bojang, P.; Parkin, S.; and Holmes, S. M.; *Inorganic Chemistry*, **2005** p352.

Patents

“Aflatoxin templates, molecularly imprinted polymers and methods of making and using the same”

Patent numbers

10472484	November 12, 2019
210180163011	June 14, 2018
9902830	February 27, 2018
20160347923	December 1, 2016
20160221983	August 4 2016