

1. John R. Sowa, Jr.

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contact information

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3. Professional Preparation

B.S., Chemistry Manhattan College, Bronx, NY, 1985, *cum laude*
Ph.D., Chemistry Iowa State University, Ames, IA, 1991
Postdoctoral Fellow, University of Minnesota, Department of Chemistry, 1991-1994

4. Undergraduate, Graduate and Postdoctoral Advisors

Prof. John D. Mahony, Manhattan College (Undergraduate)
Prof. Robert J. Angelici, Iowa State University (Graduate)
Prof. Paul G. Gassman (deceased), University of Minnesota (Postdoctoral)
Prof. Kent R. Mann, University of Minnesota (Postdoctoral)

5. Chronology

2015 – present **Professor, Department of Chemistry, Governors State University, University Park, IL**
2015-2017 **Chair & Professor, Division of Chemistry and Biological Sciences, Governors State University, University Park, IL**
2015 **Visiting Research Scientist, Department of Chemistry, The Scripps Research Institute, La Jolla, CA**
2014 **Associate Scientific Director, Gibraltar Laboratories, Fairfield, NJ**
2010-2014 **Professor, Department of Chemistry and Biochemistry, Seton Hall University**
2009-2014 **Associate Chair and Director of Undergraduate Studies, Department of Chemistry and Biochemistry, Seton Hall University**
2002 **Associate Dean, College of Arts and Sciences**
2001-2009 **Associate Professor, Department of Chemistry and Biochemistry, Seton Hall University**
1994-2000 **Assistant Professor, Department of Chemistry, Seton Hall University**
1993-1994 **Lecturer, Department of Chemistry, University of Minnesota**
1991-1994 **Postdoctoral Research Associate, Department of Chemistry, University of Minnesota**
1986-1991 **Graduate Research Assistant, Department of Chemistry, Iowa State University**
1985 **Teaching Assistant, Department of Chemistry, Iowa State University**
1982-1985 **Undergraduate Researcher, Department of Chemistry, Manhattan College**

6. Research Interests

Organic, Organometallic, Environmental and Analytical Chemistry, Green and Sustainable Chemistry

My research aims to develop a fundamental and practical understanding of how transition metal catalysts work in organic synthesis. Additional areas of research include development of ATR-IR technology for dissolution studies, method development and mechanistic studies for HPLC, and cross-disciplinary research in environmental science. New and exciting work in Green and Sustainable Chemistry has been initiated with a leading discovery of the polyol induced extraction (PIE) of water from organic liquids.

7. Current and Past Courses Taught at GSU

Special Topics, Graduate Lecture, Organic Synthesis, (Fall 2016)
Physical Chemistry II, Undergraduate Lecture and Laboratory (Spring 2016)
Spectroscopic Characterization, Graduate Lecture and Laboratory, new course (Spring, Fall 2018)
Introduction to Organic and Biochemistry, Undergraduate Lecture and Laboratory, new general course (Spring, Fall 2018)

8. Honors and Awards

2001 Honor Scroll Award, New Jersey Institute of Chemists
2008 John van Geuns Lecture, University of Amsterdam, The Netherlands

- 2009 Co-recipient, American Chemical Society ChemLuminary Award for Outstanding Regional Meeting
2015 Friend of Nursing, Sigma Theta Tau International Society of Nursing, Governors State University Chapter

9. Membership in Professional Organizations

American Association for the Advancement of Science
American Chemical Society
Sigma Xi, Scientific Research Honor Society
Chicago Catalysis Club
Homewood Science Center, Volunteer and Member, Board of Directors

10. Summary of Publications: 37 peer-reviewed publications, 5 U.S. Patents, 1 Book

Selected Publications:

- (1) *Asymmetric Transfer Hydrogenation of Secondary Allylic Alcohols*, Shoola, C. O., DelMastro, T., Wu R.-Q., Sowa Jr., J. R. *Eur. J. Org. Chem.*, **2015**, 1670-1673; <http://dx.doi:10.1002/ejoc.201500075>.
- (2) *Detection of Polycyclic Aromatic Hydrocarbons (PAHS) in Raw Menhaden Fish Oil Using Fluorescence Spectroscopy: Method Development*, Pena, E. A., Ridley, L. M., Murphy, W. R., Sowa, J. R., Bentivegna, C. S. *Environ. Toxicol. Chem.*, **2015**, 34(9), 1946-1958; <http://onlinelibrary.wiley.com/doi/10.1002/etc.3015/pdf>
- (3) *Special Issue: Metal Hydrides*, J. R. Norton, J. R. Sowa, Guest Eds., *Chem. Rev.*, **2016**, 116, 8315 – 9000; <http://pubs.acs.org/toc/chreay/116/15>.
- (4) *Polyol-induced extraction of water from organic liquids*, U.S. Patent: 9,545,583, Sowa Jr., J. R., Murphy, W. R., Deshpande, M., January 17, **2017**; <https://patentimages.storage.googleapis.com/19/a1/d4/620fa6c69e6c19/US9545583.pdf>.
- (5) *Polyol-induced partitioning of essential oils in water/acetone solvent mixtures*, DelMastro, T., Snow, N. H., Murphy, W. R., Sowa, J. R. *J. Liq. Chromatogr. Rel. Technol.*, **2017**, 40(7), 376-383; <http://dx.doi.org/10.1080/10826076.2017.1308379>.
- (6) *Polyol-induced extraction of water from organic liquids*, U.S. Patent: 9,950,276, Sowa Jr., J. R., Murphy, W. R., Deshpande, M., April 24, **2018** (Note: this is a continuation of U.S. 9,545,583); <https://patentimages.storage.googleapis.com/b7/cb/45/71908ed4186bca/US9950276.pdf>
- (7) *Quantitative Analysis of Polycyclic Aromatic Hydrocarbons at Part Per Billion Levels in Fish Oil by Headspace Solid-phase Microextraction and Gas Chromatography-mass spectrometry (HS-SPME-GC-MS)*, Snow, N., Chopra, S., Ridley, L., Murphy, W., Sowa, J., Bentivegna, C. *J. Chromatogr. Sci.*, **2018**, in press.

11. Grants Submitted at GSU

Intellectual Life Grant, Division of Student Affairs, BCS Seminar Series, \$500, submitted 10/16/16, Awarded!
Sreena Annem (Fall 2016, graduated August 2018; employed at TestAmerica Laboratories, Inc., University Park IL)
Ramesh Ambari (Spring 2017; graduated August 2018; employed at TestAmerica Laboratories, Inc., University Park IL)
Enas El-Khatib (Spring 2017)

12. Service Since Joining GSU

Department/College/University Service

- a. Member, By-laws Committee, Division of Science, Mathematics and Technology, Spring 2018 – present.
- b. College Representative, GSU Scholarship Dinner, April 2017, 2018.

Professional Service

- a. Peer Reviewer for the following journals:
Chemical Reviews, Frontiers in Organic Chemistry, International Journal of Environmental Analytical Chemistry
- b. GSU Outreach
 - i. Co-hosted with Dr. Katy Hisrich, Foundations-4-Advancement, K – 5 students from Steger IL, tour of GSU and STEM Activity “Measure This – Measure That”, November 2015, November 2016.
 - ii. Directed Summer 2016 STEAM Camp, Governors State University, <http://www.govst.edu/cas/stem-camp/>.

Community Service

- a. Participant, National Audubon Society, Spring Bird Count, Will County, May 2017, 2018.
- b. Volunteer Homewood Science Center, Homewood IL, 2016 – present. Activities include: Celebration of Film (June 6, 2017, organization committee and presentation on Science of Film), Solar eclipse viewing (August 21, 2017, *camera obscura* activity lead), Metal Mania Pop-up Science (June 9, 2018, organizing committee, magic and metals demo), Cocktails and Chemistry Challenge (July 19, 2018, judge), <https://www.homewoodsciencecenter.org/>.
- c. Member, Board of Directors, Homewood Science Center, Homewood IL, August 2018 – present, <https://www.homewoodsciencecenter.org/our-leadership>.
- d. Member (electric guitar, acoustic guitar, tambourine, cowbell), Melody Mart Adult Jam Band. Homewood, IL, March 2017 – present.