

Better Living Through Chemistry



Shannon Stahl

John and Dorothy Vozza Research Professor, Chemistry

CURRENT RESEARCH

Green chemical processes and energy production

Since the Industrial Revolution, we have continued to enjoy the benefits of manufactured and processed material goods with little concern for the environmental side-effects. Environmental concerns and climate change have only recently gained widespread public attention - beginning in the early 1970's. Dr. Shannon Stahl is using his extensive training in chemistry to research the chemistry of oxygen and search for ways to maintain the enjoyable and comfortable lifestyle we have come to enjoy without sacrificing the environment's health, and therefore ultimately our existence. Nearly all non-organic materials used in industry are derived from petroleum-based feedstocks, or building blocks, through a series of chemical reactions that often produce pollution and harmful chemical waste products that require expensive techniques for cleanup or disposal. Dr. Stahl is using the chemical properties of oxygen to refine current manufacturing practices, offer greener alternative processes, and contributing to the development of renewable energy technologies, such as fuel cells. His research is offering us the ideal solution -- maintain our comfortable lifestyle while keeping the environment's health intact. The solutions being devised in Dr. Stahl's lab will allow us to uphold our manufacturing capacities while reducing pollution. Further, it will establish sustainable methods for producing goods and electricity that will alleviate pressures for future generations.

Dr. Shannon Stahl, John and Dorothy Vozza Research Professor of Chemistry, in the Chemistry Department at the University of Wisconsin-Madison, is exploring methods of utilizing the chemistry of oxygen in environmentally benign methods to produce useful...

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AFFILIATION



University of Wisconsin-Madison

EDUCATION

- Postdoctoral Fellow (NSF Postdoctoral Fellowship), in Mechanistic Enzymology of Soluble Methane Monooxygenase, 1999, Massachusetts Institute of Technology
- Ph.D., in Chemistry, 1997, California Institute of Technology
- B.S. (Summa Cum Laude), in Chemistry, 1992, University of Illinois at Urbana-Champaign

AWARDS

- Presidential Green Chemistry Challenge Award US Environmental Protection Agency, 2014
- Senior Research Award Alexander von Humboldt Foundation, 2014
- Arthur C. Cope Scholar Award American Chemical Society, 2013
- Fellow American Association for the Advancement of Science, 2010
- Environmental Chemistry Mentor (2009-2011) Camille and Henry Dreyfus
- and 2 more...

RESEARCH AREAS

Environment, Chemical, Ecology, Clean Energy

FUNDING REQUEST

Your contributions will support the costs associated with Dr. Stahl's research, focused on using oxygen as an environmentally benign oxidant in the pharmaceutical and chemical industries, exploring alternative feedstocks for material generation, and discovering new designs for platinum-free fuel cells. Donations of \$10,000-20,000 will have a meaningful impact on ongoing projects, while larger gifts can be used to initiate new projects in Dr. Stahl's lab focused on 'green chemistry'!