

# Making Technology Safe



Sheila Baker

Assistant Professor, Department of Chemical Engineering and Department of Chemistry

## CURRENT RESEARCH

### Alleviating the harmful by-products of industry for healthier technological advancement

There has been a long standing belief between environmentalists and proponents of industry that environmental health and technological advancement are mutually exclusive principles. Dr. Sheila Baker of the University of Missouri is proving the flaw in this logic by bridging the gap through technological progress. Technological advancement is improving quality of life and the efficiency and functionality of the world, but we cannot afford it to come with a high price tag, such as environmental devastation. Alternatively, we do not want to miss out on the extraordinary benefits that technology provides to our society because of an inability to mitigate any negative effects. Dr. Baker's research is promising to find a necessary median between technological advancement and environmental health to ensure sustainable and healthy growth.

Dr. Sheila Baker, Assistant Professor in the Departments of Chemistry and Chemical Engineering at the University of Missouri, is using science and technology to find solutions to the missing links so that technology can and will equal progress. Technological advancement is no longer forward progress if the effects of that advancement are more environmentally detrimental than the benefits received. Carbon dioxide and a number of water-concentrated contaminants are threatening environmental health, but simply reducing output is not a viable long-term solution because to do so we must reduce industry output as well. Dr. Baker is developing new materials and methods that reduce or eliminate pollution and correct the negative effects of technological advancement. Beyond atmospheric pollution, she is investigating ways to recycle rare earth metals in electronic devices and is developing...

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## AFFILIATION

 University of Missouri-Columbia

## EDUCATION

- Ph.D., in Chemistry, 2002, State University of New York, University of Buffalo
- B.S., in Chemistry, 2002, Georgia Southern University

## AWARDS

- Oak Ridge Associated Universities (UROA) Ralph E. Powe Junior Faculty Enhancement Seed Grant, 2011

## RESEARCH AREAS

Environment, Clean Energy, Clean Energy

## FUNDING REQUEST

Your contributions will enable the development of new technology solutions by purchasing valuable materials essential for the creation of nanomaterials and nano-fluids. Testing and discovering ways to implement these technologies is a crucial step of the design process, and funding direct materials, graduate and postdoc student support, computer and instrument systems will guarantee safe and expedited implementation of world-changing technology.