

## **Dr. Thomas L. Robl**

### ***TECHNICAL EXPERTISE AND MANAGEMENT SKILLS***

- Management and utilization of coal combustion products.
- Process development for waste material beneficiation.
- Development of low energy cements.
- Environmental geochemistry.
- Development of, and participation in, multidisciplinary research and education programs.

### ***PROFESSIONAL EXPERIENCE***

**1990 - Present**

**Associate Director**

Center for Applied Energy Research  
University of Kentucky

Responsible for the development and management of a research group focusing on the following areas of interest:

- Development of beneficiation technologies for coal combustion by-products.
- Research into the utilization potential of conventional and clean coal combustion products in concrete and concrete product applications including the synthesis of low energy/low CO<sub>2</sub> cement.
- Investigation of the environmental and utilization characteristics of solid wastes from conventional and advanced clean coal technologies, including research into the reclamation, water pollution potential, and geotechnical characteristics of the materials.
- Development and management of an international symposium series on coal combustion product utilization.

### ***PUBLICATIONS AND PATENTS***

Author of more than 150 technical reports and publications, as well as three patents on coal combustion ash beneficiation.

### ***RESEARCH GRANTS, AWARDS AND CONTRACTS (1995-Present).***

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| 2009-2011 | Center for Coal-Derived Low Energy Materials for Sustainable Construction, U.S. DoE. \$913,985, Kentucky Energy and Environmental Cabinet, (\$114,248).  |
| 2009-2011 | Rapidly Deployable System for the Structural Stabilization of Shock Damaged Structures, Department of Homeland Security/NIHS, (\$991,408).   |
| 2006-2007 | The Fabrication of Value Added Cement Products from Circulating Fluidized Bed Combustion Ash. Kentucky Commerce Cabinet, Office of Energy Policy, Division of Energy Research, Development & Demonstration (\$250,532), East Kentucky Power Cooperative (\$100,000). |
| 2003-2007 | Advanced Multi-Product Coal Utilization By-product Processing Plant. U.S. DoE, \$4,450,162, LG&E Energy/CEMEX Inc/UKCAER \$4,466,576.  |
| 2003-2006 | Pilot Demonstration of Technology for the Production of High Value Materials from the Ultra-Fine (PM <sub>2.5</sub> ) Fraction of Coal Combustion Ash. U.S. Department of Energy (\$750,000), LG&E Energy, Inc. (\$379,000).   |
| 2001      | NATO Science for Peace, Planning Grant, (300,000 BEF).   |
| 2001-2005 | Recovery of Fuels and Adsorbent Carbons from Coal Burning Utility Ash Ponds and  |

- Landfills: Phase II. U.S. Department of Energy (\$861,000) and Western Kentucky Energy, Inc. (\$500,000), Co-PI with John Groppo.
- 2000-2002 A Study of the Effects of Post-Combustion Ammonia Release on Fly Ash Quality: Characterization of Ammonia Release from Concrete and Mortars Containing Fly Ash as a Pozzolanic Admixture. Co-P.I. with Robert Rathbone, U.S. Department of Energy, Southern Company, ISG, Inc., Boral, Inc. and Mineral Solutions (\$300,326)
- 1999 - 2000 Recovery of Fuels and Adsorbent Carbons from Coal Burning Utility Ash Ponds and Landfills. Phase I: U.S. Department of Energy (\$369,000) and Santee Cooper, (\$20,000), Co-PI with John Groppo.
- 1998 Morphological Characteristics of Fly Ashes and Associated Carbon Materials Derived from AEP Power Plants (\$22,000) (Co-P.I. with Uschi Graham)
- 1996 - 1997 Beneficiation of Fly Ash for Concrete Applications and High Value Product Recovery/Phase II: Pilot Studies. Co-P.I. with John Groppo, Advanced Pozzolan Technologies, Atlanta, Georgia (\$197,937).
- 1993 - 1998 High Volume - High Value Usage of Dry Gas Desulfurization (FGD) By-Products in Underground Mines. U. S. Department of Energy (\$1,260,465)

### ***EDUCATION***

Ph.D., Geology, 1977 University of Kentucky;  
M.S., Geology, 1974, University of Kentucky;  
B.S., Geology, 1971, University of Wisconsin at Oshkosh.

### ***PROFESSIONAL AFFILIATIONS AND ACTIVITIES***

American Coal Ash Association, Director.  
World of Coal Ash International Symposium, Co-Chairman, 2003, 2005, 2007, 2009  
Distinguished Lecturer, Gorden Energy Research Center, Tel Aviv University, Israel, 2000.  
ACS National Meeting, Chicago IL, Co-Organizer and Moderator, Technologies for the Utilization/Disposal of Waste Materials, Fuel Division, 1995.  
ACS Outstanding Symposium Award, Geochemistry Division, 1994.  
Senior Lecturer, NATO Advanced Study Institute, Akcay, Turkey, 1993.