

## INTERCOUNTRY LECTURESHIP QUESTIONNAIRE 2009

NAME: David Dixon

GRANT PERIOD: 9/16/2009 – 7/15/1010

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BORN: 18Jan56

PRESENT POSITION US: Professor, SDSMT, USA

LANGUAGES: English

### GERMAN HOST INSTITUTION

(please provide links to homepages, if available)

Technische Universität Darmstadt

### ACADEMIC DISCIPLINE

Chemical Engineering

### AREAS OF RESEARCH

Supercritical fluids used to modify polymers and biomass; modified polymer membranes for barrier applications, pretreatment of biomass, arsenic removal using native limestone

### POSSIBLE LECTURE TOPICS

- Integration of AspenPlus simulation throughout the BS Chemical Engineering curriculum
- Novel Design-Build-Test chemical engineering laboratory experiments
- NSF Industry/University Cooperative Research Center for BioEnergy Research and Development
- Characterization of Tri-Block Copolymer Membranes for their Perm-Selective Transmission of Water Vapor and Gaseous Proxy Chemical Warfare Agents
- Pretreatment of Biomass Using CO<sub>2</sub> or High Shear Mixing to Enhance Cellulose Hydrolysis

### ACADEMIC TRAINING AND DEGREES

SD School of Mines & Technology	B.S.	1978	Chemical Engineering
SD School of Mines & Technology	M.S.	1986	Chemical Engineering
University of Texas at Austin	Ph.D.	1992	Chemical Engineering

### PREVIOUS POSITIONS

2006 - 2009	Chair, Dept. of Chemical and Biological Engineering, SDSM&T
1987 - 1989	Process Development Engineer, Dow Corning Corporation, MI
1978 - 1982	Captain, Corps of Engineers, United States Army; USA, Germany

### PUBLICATIONS (selected)

Davis, A.D., Webb, C.J., Dixon, D.J., Sorensen, J.L., and Dawadi, S., Arsenic removal from drinking water by limestone-based material: Mining Engineering, v. 59, no. 2, p. 71-74 (2007).

"Pretreatment of Biomass for Ethanol Production", US Patent Application, D. Litzen, D. Dixon, P. Gilcrease, R. Winter, 29 June 2006.

"Method and Composition to Reduce the Amounts of Arsenic in Water", CIP Patent Application, A. Davis, D. Dixon, and C. Webb, 21 November 2005.

"Supercritical Fluids", D. Dixon and K. Johnston, in Encyclopedia of Chemical Technology, 4th ed., Kirk, Othmer, Eds., John Wiley and Sons, NY, 23, 452-477 (1997).

Roland Bodmeier, Hui Wang, David J. Dixon, Simon Mawson, and Keith P. Johnston, "Polymeric Microspheres Prepared by Spraying into Compressed Carbon Dioxide", Pharmaceutical Research, 12, 1211 (1995).

Dixon, D.J., G. Luna-Barcenas, and K.P. Johnston, "Microcellular Microspheres and Microballoons by Precipitation with a Compressed Fluid Antisolvent", Polymer, 35, 3998 (1994).

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