

## DOUGLASS S. KALIKA, Ph.D.

**POSITION TITLE:** Professor and Chair; Department of Chemical and Materials Engineering, University of Kentucky

### PROFESSIONAL PREPARATION:

Massachusetts Inst. of Technology	B.S.	Chemical Engineering	1984
University of California at Berkeley	Ph.D.	Chemical Engineering	1988
IBM Almaden Research Center	(post-doc)	Polymer Physics	1989-90

### PROFESSIONAL APPOINTMENTS:

2009-2019	Chair, Department of Chemical & Materials Engineering, Univ. Kentucky
2007-present	Professor, Department of Chemical & Materials Engineering, Univ. Kentucky
2001-2003	Acting Dean, The Graduate School, University of Kentucky
1998-2001	Senior Associate Dean, The Graduate School, University of Kentucky
1996-2007	Associate Professor, University of Kentucky
1990-1996	Assistant Professor, University of Kentucky
1990- present:	Faculty Associate, Center of Membrane Sciences, University of Kentucky

### PUBLICATIONS:

Over 50 publications and book chapters related to polymer crystallization and blends, polymer relaxation dynamics and synthetic polymeric membranes.

### SELECTED PUBLICATIONS:

D.S. Kalika\*, *ChE Educator – Dibakar “DB” Bhattacharyya*. *Chemical Engineering Education*, 50, 90-96 (2016).

V.S. Patil, T.D. Dziubla and D.S. Kalika\*, “*Static and Dynamic Properties of Biodegradable Poly(antioxidant  $\beta$ -amino ester) Networks Based on Incorporation of Curcumin Diacrylate*”. *Polymer*, 75, 88-96 (2015).

C.P. Ribeiro, B.D. Freeman\*, D.S. Kalika and S. Kalakkunnath, “*Pervaporative Separation of Aromatic/Aliphatic Mixtures with Poly(Siloxane-co-Imide) and Poly(Ether-co-Imide) Membranes*”. *Industrial and Engineering Chemistry Research*, 52, 8906-8916 (2013).

A.C. Comer, C.P. Ribeiro, B.D. Freeman, S. Kalakkunnath and D.S. Kalika\*, “*Dynamic Relaxation Characteristics of Thermally Rearranged Aromatic Polyimides*”, *Polymer*, 54, 891-900 (2013).

A.C. Comer, A.L. Heilman and D.S. Kalika\*, “*Dynamic Relaxation Characteristics of Polymer Nanocomposites Based on Poly(ether imide) and Poly(methyl methacrylate)*”. *Polymer*, 51, 5245-5254 (2010).

A.C. Comer, D.S. Kalika\*, B.W. Rowe, B.D. Freeman and D.R. Paul, “*Dynamic Relaxation Characteristics of Matrimid Polyimide*”. *Polymer*, 50, 891-897 (2009).

J.J. Richards, M.K. Danquah, S. Kalakkunnath, D.S. Kalika\*, V.A. Kusuma, S.T. Matteucci and B.D. Freeman, "Relation Between Structure and Gas Transport Properties of Polyethylene Oxide Networks Based on Crosslinked Bisphenol A Ethoxylate Diacrylate". *Chemical Engineering Science*, **64**, 4707-4718 (2009).

M.A. Borns, S. Kalakkunnath, D.S. Kalika\*, V.A. Kusuma, and B.D. Freeman, "Dynamic Relaxation Characteristics of Crosslinked Poly(ethylene oxide) Copolymer Networks: Influence of Short Chain Pendant Groups", *Polymer*, **48**, 7316-7328 (2007).

S. Kalakkunnath, D.S. Kalika\*, H. Lin, R.D. Raharjo and B.D. Freeman, "Molecular Dynamics of Poly(ethylene glycol) and Poly(propylene glycol) Copolymer Networks by Broadband Dielectric Spectroscopy", *Macromolecules*, **40**, 2773-2781 (2007).

S. Kalakkunnath and D.S. Kalika\*, "Dynamic Mechanical and Dielectric Relaxation Characteristics of poly(trimethylene terephthalate)", *Polymer*, **47**, 7085-7094 (2006).

D.S. Kalika, "Viscoelastic Characterization of Polymer Blends", in *Polymer Blends: Formulation and Performance*, D.R. Paul and C.B. Bucknall, editors. John Wiley and Sons (2000); pp. 291-317.

D.S. Kalika, "Dielectric Spectroscopy of Crystalline Polymers and Blends", in *Handbook of Low and High Dielectric Constant Materials and Their Applications*, H.S. Nalwa, editor. Academic Press (1999); pp. 275-327.

#### **SYNERGISTIC ACTIVITIES:**

AIChE Fellow (elected 2012); ABET Program Evaluator for Chemical Engineering (2012-present); 2013-2014 SEC Academic Leadership Development Program Fellow.

AIChE Education and Accreditation (E&A) Committee (2018-present); AIChE Admissions Committee (2016-present). Secretary/Treasurer; Materials Engineering and Sciences Division, American Institute of Chemical Engineers (2007-2015). Chair, Materials Engineering and Sciences Division (2003-2004); Vice-Chair (2001-2003).

#### **GRADUATE & POST-DOCTORAL ADVISORS:**

Prof. Morton M. Denn                      City College of New York, emeritus (formerly at U. California)  
Prof. Do Y. Yoon                              Seoul National University, emeritus (formerly at IBM Almaden)

#### **GRADUATE STUDENT AND POST-DOCTORAL ADVISEES:**

Rajendra Krishnaswamy, M.S. (1992), Ph.D. (1995); Joseph Bristow, Ph.D. (1996); Renhe Lin, Ph.D. (1996, co-chair); Rajesh Shinde, Ph.D. (1996); Rakesh Mehta, Ph.D. (1996); Mark Greenfield, Ph.D. (1999, co-chair); Sumod Kalakkunnath, Ph.D. (2007); Anthony Comer, Ph.D. (2011); Vinod Patil, Ph.D. (2017, co-chair); Nicholas Linck (2018, co-chair)

Melissa Hepler, M.S. (1995, co-chair); Juan Ibieta, M.S. (1997, co-chair); Wendell Lake, M.S. (2001); Michael Danquah, M.S. (2007); Andrew Placido, M.S. (2010)

Scott S. Wu, post-doc (1995)