

Edward B. Kolodka

Associate Professor

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EDUCATION AND PROFESSIONAL EXPERIENCE

Education

2002 Ph.D., Chemical Engineering, McMaster University
1996 B.S., Chemical Engineering, University of North Dakota

Professional Experience

2008-Present Associate Professor, University of North Dakota
2003-2008 Assistant Professor, University of North Dakota
1997-2002 Research Associate, McMaster University

Professional Associations / Service

Member, American Institute of Chemical Engineers
Member, American Society for Engineering Education
Member, Society of Plastics Engineers
Journal Reviewer, *Journal of Applied Polymer Science*
Journal Reviewer, *Polymer*
National Reviewer, USDA CREES
National Reviewer, NSF SBIR

UND Service

2006-Present Director, ChE Distance Engineering Degree Program

2010 SEM Tenure and Promotion Committee

2008 SEM Representative, Canadian Taskforce

2008 Geology and Environmental Science Curriculum Review Committee

2003-2008 Advisor, Society of Women Engineers

COURSES DEVELOPED AND TAUGHT

Undergraduate Level

- ChE 201 Chemical Engineering Fundamentals
- ChE 232 Chemical Engineering Laboratory I
- ChE 303 Chemical Engineering Thermodynamics
- ChE 331 Chemical Engineering Laboratory II
- ChE 435 Materials and Corrosion
- Engr 460 Engineering Economy

Graduate Level

- ChE 593A Polymer Engineering
- ChE 535 Metallic Corrosion and Polymer Degradation

RESEARCH

Specialty Fields

Synthesis and characterization of polymers; Synthesis of bio-sourced, biodegradable polymers, Polyolefin synthesis with single-site catalysts, Influence of molecular architecture on polymer's rheological and mechanical properties.

Research Advisees

M.S. Students

- Blake Hofferber 2005
- Sachit Chopra 2005
- Suman Sannigrahi 2005
- Hongbo Wang 2006
- Dharmender Kumar 2007
- Lu Zhang 2007
- Pratik Bhandari
- Shashidhar Illendula
- Autumn Dockter
- Kirtipal Barse 2009
- Hai Wang
- Eric Schmid

Peer Reviewed Publications

Publications

- Sannagrahi, S.; Kolodka, E. B.; "Degradation Performance of Poly(L-Lactide) - Poly(Vinyl Pyrrolidone) Block Copolymers", accepted in *Journal of Applied Polymer Science*.
- Zhamu, A.; Jana, S.; Salehi-Khojin, A.; Kolodka, E. B.; Gan, Y.; Zhong, W.; "Chemorheology of Reactive Graphitic Nanofiber-Reinforced Epoxy as a Composite Matrix", *Composite Interfaces*, 2007, Vol. 14, 177.
- Kumar, D.; Moon, R. J.; Frihart, C. F.; Kolodka, E. B.; "Determination of Strains in Wood / Epoxy Resin Bondlines Using Ink Microcapsules" submitted to the *Journal of Adhesion*.
- Bhandari, P.; Kolodka, E. B.; "Properties of PLLA / PLLA-Graft-EPR Copolymer Blends", submitted to the *Journal of Applied Polymer Science*.

Conference Presentations

- Wang, H.; Kolodka, E. B.; "Synthesis of PLLA-Graft-PE Copolymers as Impact Modifiers", ANTEC 2008.
- Moon, R. J.; Brandon, R.; Frihart, C. R.; Hofferber, B.; Kolodka, E. B.; "Effects of Swelling Forces on the Durability of Wood Adhesive Bonds", submitted to the Adhesion Society 2006 Conference.