

Curriculum Vitae

Alec B. Scranton

Department of Chemical and Biochemical Engineering
University of Iowa
Iowa City, IA 52242

Education:

Ph.D. (Chemical Engineering), Purdue University, May 1990. Advisor: Dr. N.A. Peppas
B.S. (Chemical Engineering), University of Iowa, December 1984.

Professional Experience:

University of Iowa, College of Engineering Dean, April 2012 to date
University of Iowa, College of Engineering Interim Dean, Oct. 2010 to April 2012
University of Iowa, College of Engineering Associate Dean for Academic Programs, 2003 to 2010
University of Iowa, Professor and Chair of Chemical and Biochemical Engineering, 2000 - 2003
Michigan State University, Associate Professor, 1995 - 2000.
Michigan State University, Assistant Professor, 1990 - 1995.
Purdue University, Graduate Research Assistant, 1985 - 1990.
Argonne National Laboratory, Research Associate, Jan. 1985 - Aug. 1985.

Awards and Honors:

University of Iowa Foundation Distinguished Professorship, 2008
Regents Award for Faculty Excellence, 2007
Cooperative Research Award, American Chemical Society, March 2007
Best Conference Paper Award, Radtech International North America Annual Conference, 2004
University of Iowa College of Engineering Research Award, 2003
Elected, Director of AIChE Materials Engineering and Science Division, 2002
J.J. Martin Award from the ASEE, 2000
Johansen Crosby Endowed Professorship, 1998
AIChE Outstanding Professor Award, 1995-96
Michigan State University Teacher-Scholar Award, 1995
Dow Chemical Company Environmental Enhancement Award, 1995
Elected to the Executive Committee of the American Chemical Society, Division of Polymeric Materials:
Science and Engineering, 1994, re-elected 1996
Withrow Teaching Excellence Award, 1993
Contributing Editor of Polymer News, 1993 - 1998
AIChE Outstanding Professor Award, 1991-92
Du Pont Young Faculty Award, 1990, 1991
Donnon Fellowship, 1989
National Science Foundation Graduate Fellowship, 1985-1987
Purdue University Graduate Fellowship, 1985-1987
American Institute of Chemists Student Award, 1984
Archie Alexander Scholarship, 1983-1984
3M Scholarship, 1982-1983
American Institute of Chemical Engineers Scholarship Award, 1982
Melville F. Clemmets Scholarship, 1981-1982
Chemical Engineering Alumni Scholarship, 1980-1981

Technical Sessions Chaired:

Smart, Active, and Responsive Polymers, AIChE Annual Meeting, Los Angeles, Nov. 1991.

Polymer Spectroscopy, AIChE Annual Meeting, Miami, November, 1992.

Polysiloxanes; Cyclic Polymers; Photoactive Polymers and Stabilizers, ACS Fall National Meeting, Chicago, August 23 1995.

Polymeric Thin Films (2 sessions), AIChE Annual Meeting, Miami, November, 1995.

Young Faculty Forum, AIChE Annual Meeting, Miami, November, 1995 (selected as the Outstanding Session of the AIChE 1995 Annual Meeting based upon highest overall session quality rating).

Advances in Photopolymerizations, (4 sessions) ACS Spring Meeting, New Orleans, March 1996.

Young Faculty Forum, AIChE Annual Meeting, Chicago, November, 1996.

Polymer Reaction Engineering, AIChE National Meeting, Los Angeles, November, 1997.

Spectroscopic Characterization of Polymers, ACS Fall Meeting, New Orleans, August, 1999.

Polymerization Kinetics and Reaction Engineering, AIChE National Meeting, Dallas, November, 1999.

New Concepts in Polymeric Materials, ACS Spring Meeting, San Francisco, March, 2000.

Materials for Information Storage, ACS Fall Meeting, Washington DC, August, 2000.

New Concepts in Polymeric Materials, ACS Spring Meeting, San Diego, April, 2001.

Department Chairs Forum, AIChE Annual Meeting, San Francisco, November, 2003.

Advances in Photoinitiated Polymerization, ACS Fall Meeting, Philadelphia, PA, August, 2004

Department Chairs Forum, AIChE Annual Meeting, Austin, November, 2004.

Wilhelm Award Session, AIChE Annual Meeting, Salt Lake City, Utah, November, 2007.

Cationic Chemistry, Radtech UV and EB Technology Conference, Chicago, IL, May 5, 2008.

Advances in Photopolymerization, ACS Midwest Regional Meeting, Iowa City, IA, October 21, 2009.

Polymerizations and Polymer Modifications that Utilize Thiol-X Click Reactions, ACS Fall Meeting, Boston, August 24, 2010.

ASEE Workshop on *Educating Engineering for the Grand Challenges*, (break-out session co-chair) National Academy of Engineers, Washington DC, April 30, 2014.

Publications (1990 to date):

A.B. Scranton and N.A. Peppas, "A Statistical Model of Free-Radical Copolymerization /Crosslinking Reactions," *Journal of Polymer Science, Polymer Chemistry*, **28**, 39 (1990).

A.B. Scranton, A.G. Mikos, L.C. Scranton, and N.A. Peppas, "The Physical Mechanism for the Production of Hydrophilic Polymer Microparticles from Aqueous Suspensions," *Journal of Applied Polymer Science*, **40**, 997 (1990).

A.B. Scranton, J. Klier, and N.A. Peppas, "Soluble Chain Fractions in Hydrophilic Polymer Networks: Origin and Effect on Dynamic Uptake Overshoots," *Polymer*, **31**, 1288 (1990).

J. Klier, A.B. Scranton, and N.A. Peppas, "Self Associating Networks of Poly(Methacrylic Acid-g-Ethylene Glycol)," *Macromolecules*, **23**, 4944 (1990).

Publications, continued:

A.B. Scranton, J. Klier, and N.A. Peppas, "Complexation Thermodynamics of Free and Graft Oligomers with Complementary Polymers," *Journal of Polymer Science, Polymer Physics*, **29**, 211 (1991).

A.B. Scranton, J. Klier, and N.A. Peppas, "Statistics of Free Radical Polymerizations: Reaction Directionality and Multiple Termination Mechanisms," *Macromolecules*, **24**, 1412 (1991).

A.B. Scranton, C.N. Bowman, J. Klier, and N.A. Peppas, "Polymerization Reaction Dynamics of Ethylene Glycol Methacrylates and Dimethacrylates by Calorimetry," *Polymer*, **33**, 1683 (1992).

A.B. Scranton, J. Klier, and C.L. Aronson, "Complexation of Polymeric Acids with Polymeric Bases," in "Polyelectrolyte Gels," edited by R.S. Harland and R.K. Prud'homme, ACS Symposium Series 480, American Chemical Society, Washington, DC, p. 171 (1992).

C.L. Aronson and A.B. Scranton, "Complexation of Poly(4-vinyl phenol) with Poly(N,N-dimethylacrylamide)," Proceedings of the 8th Annual ASM/ESD Advanced Composites Conference, Chicago, IL (1992).

E.W. Nelson, T.P. Carter and A.B. Scranton, "Photosensitization of Cationic Photopolymerizations by Anthracene," *Polym. Mat. Sci. and Eng.*, **69**, 363 (1993).

E.W. Nelson, T.P. Carter and A.B. Scranton, "Fluorescence Monitoring of Cationic Photopolymerizations of Divinyl Ethers Photosensitized by Anthracene," *Polymer Preprints*, **34**, 779 (1993).

A.B. Kinney and A.B. Scranton, "Formation and Structure of Crosslinked Polyacrylates," *Polym. Mat. Sci. and Eng.*, **69**, 487 (1993).

E.W. Nelson, T.P. Carter and A.B. Scranton, "Fluorescence Monitoring of Cationic Photopolymerizations: Divinyl Ethers Photosensitized by Anthracene Derivatives," *Macromolecules*, **27**, 1013 (1994).

J.L. Jacobs, E.W. Nelson, and A.B. Scranton, "Use of Fluorescence to Monitor Temperature and Observe Water Effects in Cationic Photopolymerizations of Divinyl Ethers," *Polym. Mat. Sci. and Eng.*, **70**, 74 (1994).

A.B. Kinney and A.B. Scranton, "Formation and Structure of Crosslinked Polyacrylates: Methods for Modeling Network Formation" in *Advances in Superabsorbent Polymers*, edited by N.A. Peppas and F. L. Buchholz, ACS Symposium Series 573, American Chemical Society, Washington, p. 1 (1994).

A.B. Scranton, B. Rangarajan and J. Klier, "Biomedical Applications of Polyelectrolytes," *Advances in Polymer Science*, **122**, 1 (1995).

E.W. Nelson, T.P. Carter and A.B. Scranton, "The Role of the Triplet State in the Photosensitization of Cationic Polymerizations by Anthracene," *Journal of Polymer Science, Polymer Chemistry*, **33**, 247 (1995).

A.M. Mathur and A.B. Scranton, "Synthesis and Ion-Binding Properties of Polymeric Pseudocrown Ethers: A Molecular Dynamics Study," *Sep. Sci. and Technol.*, **30**, 1071 (1995).

E.W. Nelson, and A.B. Scranton, "In Situ Raman Spectroscopy for Cure Monitoring of Divinyl Ether Cationic Photopolymerizations," *Polym. Mat. Sci. and Eng.*, **72**, 413 (1995).

Publications, continued:

C.L. Crofcheck, E.W. Nelson, J.L. Jacobs, and A.B. Scranton, "Temperature-Sensitive Luminescence for Monitoring High-Speed Cationic Photopolymerizations," *Polym. Mat. Sci. and Eng.*, **72**, 50 (1995).

J.L. Jessop, A.B. Scranton, and G.J. Blanchard, "*In Situ* Cure Monitoring of a Vinyl Ester Polymer Using Fiber Optic Fluorescence Sensors," *Polym. Mat. Sci. and Eng.*, **72**, 58 (1995).

J.L. Jacobs and A.B. Scranton, "A Transmission Electron Microscopic Study of the Morphology of Cationically Photopolymerized Divinyl Ethers," *Polym. Mat. Sci. and Eng.*, **72**, 367 (1995).

E.W. Nelson, J.L. Jacobs, A.B. Scranton, K.S. Anseth, and C.N. Bowman, "Photo-Differential Calorimetry Studies of Cationic Polymerizations of Divinyl Ethers," *Polym. Mat. Sci. and Eng.*, **72**, 481 (1995).

C.L. Crofcheck, E.W. Nelson, J.L. Jacobs and A.B. Scranton, "Temperature-Sensitive Luminescence of Tris(β -diketone) Europium Chelates for Monitoring High Speed Cationic Photopolymerizations," *Journal of Polymer Science, Polymer Chemistry*, **33**, 1735 (1995).

L.S. Coons, B. Rangarajan, D. Godshall, A.B. Scranton, "Production of Polymeric Composites Based Upon Photopolymerization Methods" in "Innovative Processing & Characterization of Composite Materials," edited by R.T. Gibson, T.W. Chou, and P.K. Raju, NCA Symposium Series Vol. 20, ASME, New York, p. 227-240, 1995.

E.W. Nelson, J.L. Jacobs, and A.B. Scranton, K.S. Anseth, and C.N. Bowman, "Photo-Differential Scanning Calorimetry Studies of Cationic Polymerizations of Divinyl Ethers," *Polymer*, **36**, 4651 (1995).

A.M. Mathur and A.B. Scranton, "Characterization of Hydrogels Using Nuclear Magnetic Resonance Spectroscopy," *Biomaterials*, **17**, 547 (1996).

E.W. Nelson and A.B. Scranton "Kinetics of Cationic Photopolymerizations of Divinyl Ethers Characterized Using *In Situ* Raman Spectroscopy," *Journal of Polymer Science, Polymer Chemistry*, **34**, 403 (1996).

B. Rangarajan, L.S. Coons and A.B. Scranton, "Characterization of Hydrogels Using Luminescence Spectroscopy," *Biomaterials*, **17**, 649 (1996).

A.M. Mathur, S.K. Moorjani and A.B. Scranton, "Methods for Synthesis of Hydrogel Networks: A Review," *J. Macromol. Sci, Rev. Macromol. Chem. Phys.*, **C36**, 405 (1996).

E.W. Nelson and A.B. Scranton, "*In Situ* Raman Spectroscopy for Cure Monitoring of Cationic Photopolymerizations of Divinyl Ethers," *J. Raman Spectroscopy*, **27**, 137 (1996).

L.S. Coons, B. Rangarajan, and A.B. Scranton, "Photopolymerizations of Composites," *Polym. Mat. Sci. and Eng.*, **74**, 389 (1996).

S.K. Moorjani, B. Rangarajan, A.B. Scranton, "The Effect of Viscosity on the Rate of Photosensitization of Diaryliodonium Salts by Anthracene," *Polym. Mat. Sci. and Eng.*, **74**, 315 (1996).

A.B. Scranton, S.K. Moorjani, K.J. Sirovatka, and E.W. Nelson, "Photosensitization of Iodonium Salts for Cationic Photopolymerizations," *Polym. Mat. Sci. and Eng.*, **75**, 193 (1996).

Publications, continued:

A.M. Mathur and A.B. Scranton, "Synthesis and Ion-Binding Properties of Polymeric Pseudocrown Ethers II: Template Ion Induced Cyclization Of Oligomeric Ethylene Glycol Diacrylates," *Sep. Sci. and Technol.*, **32**, 285 (1997).

S.K. Moorjani, B. Rangarajan, and A.B. Scranton, "The Effect of Viscosity on the Rate of Photosensitization of Diaryliodonium Salts by Anthracene," *ACS Symposium Series*, **673**, 95 (1997).

A.M. Mathur, A.B. Scranton, and J. Klier, "Reversible Block/Graft Copolymeric Emulsifiers Based Upon Intramolecular Complexes," *Polym. Mater. Sci. Eng.*, **76**, 295 (1997).

L.S. Coons, B. Rangarajan, D. Godshall, and A.B. Scranton, "Photopolymerization of Vinyl Ester - Glass Fiber Composites," *ACS Symposium Series*, **673**, 203 (1997).

A.M. Mathur, V. Narayanan and A.B. Scranton "Coatings Formed by the Photopolymerization of Epoxidized Soybean Oil Containing Cyclohexanedimethanol Divinylether as a Reactive Diluent" Proceedings of the 5th. International Congress of Paint Industry Suppliers, **1**, 419 (1997).

V. Narayanan and A.B. Scranton, "UV Curing of Composites," *Radtech Report*, **11** (6) 25, (1997).

V. Narayanan and A.B. Scranton, "Photopolymerizations of Composites," *Trends in Polymer Science*, **5**, 415 (1997).

A.M. Mathur, B. Drescher, J. Klier and A.B. Scranton, "Polymeric Emulsifiers Based on Reversible Formation of Hydrophobic Units," *Nature*, **392**, 367 (1998).

K.K. Baikerikar, B. Rangarajan, D. Godshall, and A.B. Scranton "Photopolymerizable Encapsulants for Microelectronic Devices," Radtech '98 International Conference Proceedings, 712 (1998).

V. Narayanan, K.K. Baikerikar, and A.B. Scranton "A Study of Initiating Systems for Photopolymerization of Composites," Radtech '98 International Conference Proceedings, 31, (1998).

A.M. Mathur, K.F. Hammonds, J. Klier and A.B. Scranton, "Equilibrium Swelling of Poly(methacrylic acid-g-ethylene glycol) Hydrogels: Effect of Swelling Medium and Synthesis Conditions," *J. Control. Rel.*, **54**, 177 (1998).

P. Kohli, A. B. Scranton and G. J. Blanchard, "Copolymerization of Maleimides and Vinyl Ethers: A Kinetic and Structural Study," *Macromolecules*, **31**, 5681 (1998).

J.L.P. Jessop, G.J. Blanchard, and A.B. Scranton, "In-situ Cure Monitoring Using Fiber-Optic Fluorescence Sensors," *Radtech Report*, **12**, 27 (1998).

Arvind M. Mathur, V. Narayanan, and A.B. Scranton "UV Curable Epoxidized Oils with Vinylethers as Reactive Diluents," Radtech '98 International Conference Proceedings, 486 (1998).

B. Rangarajan, L. Capodieci, R. Subramanian, M. Templeton, and A. Scranton, "Sampling Strategies for sub-100 nm Overlay," SPIE Proceedings, **3332**, 348, 1998.

A.M. Mathur and A.B. Scranton, "Synthesis and Ion-Binding Properties of Polymeric Pseudocrown Ethers III: Ion Binding Studies," *Sep. Sci. and Technol.*, **34**, 855 (1999).

Publications, continued:

J.L.P. Jessop, S.N. Goldie, A.B. Scranton, G.J. Blanchard, B. Rangarajan, L. Capodiceci, R. Subramanian, M.K. Templeton, "Characterizing Acid Mobility in Chemically Amplified Resists via Spectroscopic Methods," *Advances in Resist Technology and Processing*, **3678**, 914, 1999.

A.B. Scranton, R.M. Russell, N. Basker, J.L.P. Jessop, and L.C. Scranton "Teaching Material and Energy Balances on the Internet" *ASEE National Conference Proceedings, CD-ROM edition*, June 1999.

A.B. Scranton, "Radiation Curing in the Next Millennium: New Directions in Photopolymerization," *Radtech Report*, **13**, 36 (1999).

K.S. Padon and A.B. Scranton, "Recent Advances in Three Component Photoinitiators" *Recent Res. Devel. Polymer Science*, **3**, 369, (1999).

K.K. Baikerikar and A.B. Scranton "Viscosity Characterization of Highly Filled Photopolymerizable Liquid Encapsulants for Microelectronic Devices" *Polymer Composites*, **21**, 297 (2000).

B. Drescher and A.B. Scranton, "Reversible Block/Graft Copolymeric Emulsifiers Based Upon Intramolecular Complexation," *Polym. Mat. Sci. and Eng.*, **82**, 21 (2000).

K.S. Padon and A.B. Scranton, "Mechanistic Studies of the Three Component Photoinitiator System Methylene Blue, N-Methyldiethanolamine and Diphenyliodonium Chloride," *Polym. Mat. Sci. and Eng.*, **82**, 27 (2000).

K.K. Baikerikar and A.B. Scranton, "Photopolymerizable Liquid Encapsulants," *Polym. Mat. Sci. and Eng.*, **82**, 39 (2000).

J.L.P. Jessop, S.N. Goldie, A.B. Scranton, and G.J. Blanchard, "Spectroscopic Characterization of Acid Mobility in 248 nm Chemically Amplified Resists," *Polym. Mat. Sci. and Eng.*, **82**, 48 (2000).

A.B. Scranton, B. Drescher, E.W. Nelson and J.L. Jacobs "Use of Infrared and Raman Spectroscopy for Characterization of Controlled Release Systems" *Handbook of Pharmaceutical Controlled Release Technology*, edited by D. Wise, Marcel Dekker, New York, p. 131-154, 2000.

J.L.P. Jessop, S.N. Goldie, A.B. Scranton, G.J. Blanchard, B. Rangarajan, Uzodinma Okoroanyanwu, R. Subramanian, M.K. Templeton, "Spectroscopic Characterization of Acid Mobility in Chemically Amplified Resists," *Advances in Resist Technology and Processing XVII*, **3999** (2000).

A.M. Mathur, B. Drescher, A.B. Scranton, and J. Klier, "A Polarity-Sensitive Fluorescence Study of the pH-Dependent Aggregation of Poly(methacrylic acid-g-ethylene glycol) Copolymers in Water," *Spectroscopy*, **15**(4), 36 (2000).

K.S. Padon and A.B. Scranton, "A Mechanistic Investigation of the Three-component Radical Photoinitiator System Methylene Blue, N-methyldiethanolamine, and Diphenyliodonium Chloride," *Journal of Polymer Science, Polymer Chemistry*, **38**, 2057 (2000).

K.S. Padon and A.B. Scranton, "The Effect of Oxygen on the Three-Component Radical Photoinitiator System Methylene Blue, N-Methyldiethanolamine, and Diphenyliodonium Chloride," *Journal of Polymer Science, Polymer Chemistry*, **38**, 3336 (2000).

Publications, continued:

Brian J. Elliott, Alec B. Scranton, James H. Cameron and Christopher N. Bowman, "Characterization and Polymerization of Metal Complexes of Poly(ethylene glycol) Diacrylates and the Synthesis of Polymeric Pseudocrown Ethers," *Chem. Mater.* **12**, 633, (2000).

K.K. Baikerikar and A.B. Scranton "Photopolymerizable Liquid Encapsulants for Microelectronic Devices," *Polymer*, **42**, 431-441 (2001).

B. Drescher and A.B. Scranton, "Synthesis and Characterization of Polymeric Emulsifiers Containing Reversible Hydrophobes: Poly(methacrylic acid-g-ethylene glycol)," *Polymer*, **42**, 49 (2001).

K.S. Padon, A.B. Scranton, "A Mechanistic Investigation of the Three-Component Radical Photoinitiator System Eosin Y Spirit Soluble, N-methyldiethanolamine, and Diphenyliodonium Chloride," *Journal of Polymer Science, Polymer Chemistry*, **39**, 715 (2001).

K.K. Baikerikar and A.B. Scranton "Photopolymerizable Liquid Encapsulants for Microelectronic Devices: Thermal and Mechanical Properties of Systems with reduced In-Mold Cure Times" *Journal of Applied Polymer Science*, **81**, (14), 3449-3461 (2001).

K.S. Padon, D. Kim, and A.B. Scranton, "Spectroscopic Investigation of Three Component Initiator Systems," *Polymer Preprints*, **42**, 705 (2001).

K.K. Baikerikar, V. Sipani, C. Coretsopoulos and A.B. Scranton, "Photopolymerization of Silica-Filled Composites: Encapsulants for Microelectronic Devices," *Polymer Preprints*, **42**, 789 (2001).

A.B. Scranton, and K.K. Baikerikar, "Photopolymerizable Liquid Encapsulants for Microelectronics," Radtech Europe Conference Proceedings, 259, 2001.

V. Sipani, C.N. Coretsopoulos, and A.B. Scranton, "Photopolymerization of Composite Materials," *Trends in Photochemistry and Photobiology*, **7**, 169 (2001).

G. A. Miller, L. Gou, V. Narayanan, and A.B. Scranton, "Modeling of Photobleaching for Photoinitiation of Thick Polymerization Systems," *Journal of Polymer Science, Polymer Chemistry*, **40**, 793 (2002).

R. Nagarajan, C.E. Hoyle, A.B. Scranton and M. El-Maazawi, "Determination of Overall Photoinitiator Efficiencies," Radtech North America Technical Conference Proceedings, 120 (2002).

A.B. Scranton, G.A. Miller, L. Gou, and M. El-Maazawi, "Modeling of Photobleaching for Photoinitiation of Thick Polymerization Systems," Radtech North America Technical Conference Proceedings, 129 (2002).

D. Kim, M. El-Maazawi, and A.B. Scranton, "Formation of Ground State Complex in Electron-Transfer Photoinitiator Systems," Radtech North America Technical Conference Proceedings, 152 (2002).

J.L.P. Jessop, S.N. Goldie, A.B. Scranton and G.J. Blanchard, "Spectroscopic Characterization of Acid Generation and Concentration and Free Volume Evolution in Chemically Amplified Resists," *J. Vac. Sci. Technol. B*, **20** (1), 219-225 (2002).

A.B. Scranton, V. Sipani, K. Jain and M. El-Maazawi, "Photopolymerization of Thick Polymer Systems," Proceedings of the 30th International Waterborne, High-Solids, and Powder Coatings Symposium, New Orleans, LA, page 283 (2003).

Publications, continued:

V. Sipani and A.B. Scranton, "Cationic Photopolymerization of Epoxide Monomers: Characterization of Active Center Propagation Lifetime," *Mat. Sci. and Eng.*, **88**, 217 (2003).

K.S. Padon, D. Kim, M. El-Maazawi and A.B. Scranton, "Spectroscopic Investigation of Three Component Initiator Systems," *ACS Symposium Series*, **847**, 15 (2003).

K.K. Baikerikar, V. Sipani, C.N. Coretsopoulos, and A.B. Scranton, "Photopolymerization of Silica-Filled Composites: Encapsulants for Microelectronic Devices," *ACS Symposium Series*, **847**, 389 (2003).

V. Sipani and A.B. Scranton, "Dark-cure studies of cationic photopolymerizations of epoxides: Characterization of the active center lifetime and kinetic rate constants," *Journal of Polymer Science, Polymer Chemistry*, **41**, 2064-2072, (2003).

V. Sipani, L.S. Coons, B. Rangarajan, and A.B. Scranton, "Photopolymerization of Composites: Recent Developments in Glass-Fiber and Silica-Filled Systems," *Radtech Report*, **17**, 22 (2003).

V. Sipani and A.B. Scranton, "Kinetic Studies of Cationic Photopolymerizations of Phenyl Glycidyl Ether," *Journal of Photochemistry and Photobiology*, **159**, 189 (2003).

A.B. Scranton, "Web-Based Distance Education: Experiences Teaching Material and Energy Balances," American Society for Engineering Education North Midwest Region Conference Proceedings, 2003.

K. Jain, D.R. Rethwisch, and A.B. Scranton, "Microemulsion Photopolymerization", *Recent Research Developments in Polymer Science*, **7**, 35 (2003).

L. Gou, C.N. Coretsopoulos, and A.B. Scranton "Measurement of the Dissolved Oxygen Concentration in Acrylate Monomers Using a Novel Photochemical Method," *Journal of Polymer Science*, **42**, 1285 (2004).

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D. Kim and A.B. Scranton, "Effect of Electron Donor Structure on the Kinetics of Visible Three-component Photoinitiator Systems," *Radtech International North America Conference Proceedings*, 2004.

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A.B. Scranton, N. Stephenson, and D. Kriks, "Modeling of Photoinitiation of Thick Polymers Illuminated with Polychromatic Light," *Radtech International North America Conference Proceedings*, 2004.

L. Gou and A.B. Scranton, "A Photochemical Method to Eliminate Oxygen Inhibition in Photocured Systems," *Radtech International North America Conference Proceedings*, 2004.

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V. Sipani, A. Kirsch, and A.B. Scranton, "Dark Cure Studies of Cationic Photopolymerizations of Epoxides: Characterization of Kinetic Rate Constants at High Conversions," *Journal of Polymer Science*, **42**, 4409 (2004).

Publications, continued:

D. Kim and A.B. Scranton, "The Role of Diphenyl Iodonium Salt (DPI) in Three-Component Photoinitiator Systems Containing Methylene Blue (MB) and an Electron Donor," *Journal of Polymer Science, Polymer Chemistry*, **42**, 5863 (2004).

V. Sipani, A. Kirsch, and A.B. Scranton, "Characterization of Kinetic Rate Constants of Cationic Photopolymerizations of Epoxides," *Polymer Preprints*, **45**, 3 (2004).

N. Stephenson, D. Kriks, and A.B. Scranton, "Modeling of Photoinitiation of Thick Polymer Systems," *Polymer Preprints*, **45**, 27 (2004).

L. Gou, C.N. Coretsopoulos, and A.B. Scranton, "Reduction of Oxygen Inhibition in Free Radical Photopolymerization," *Polymer Preprints*, **45**, 39 (2004).

K. Jain, P. Rasmussen, A.B. Scranton, and D.R. Rethwisch, "Enhanced Epoxidation of Soybean Oil through Microemulsion Technique," *Polymer Preprints*, **45**, 579 (2004).

A.B. Scranton and C.N. Bowman, "Update on the NSF/Industry/University/ Cooperative Research Center for Fundamentals and Applications of Photopolymerization," *Radtech Report*, **18**, 22 (2004).

L. Gou, B. Opheim, and A.B. Scranton, "The Effect of Oxygen in Free Radical Photopolymerization," *Recent Res. Devel. Polymer Science*, **8**, 125 (2004).

J.D. Oxman, D.W. Jacobs, M.C. Trom, V. Sipani, B. Ficek, and A. B. Scranton, "Evaluation of Initiator Systems for Controlled and Sequentially Curable Free Radical/Cationic Hybrid Photopolymerizations," *Journal of Polymer Science, Polymer Chemistry* **43**, 1747 (2005).

N. Stephenson, D. Kriks, M. Al-Maazawi, and A.B. Scranton, "Spatial and Temporal Evolution of the Photoinitiation Rate for Thick Polymer Systems Illuminated on Both Sides," *Polymer International*, **54**, 1429 (2005).

K. Jain, J. Klier, and A.B. Scranton, "Photopolymerization of Butyl Acrylate-in-Water Microemulsions: Polymer Molecular Weight and End-Groups," *Polymer*, **46**, 11273 (2005).

L. Gou, B. Opheim, C.N. Coretsopoulos, and A.B. Scranton, "Consumption of the Molecular Oxygen in Polymerization Systems Using Photosensitized Oxidation of Dimethylantracene," *Chemical Engineering Communications*, **193**, 620, (2006).

B.A. Ficek, L. Magwood, C. Coretsopoulos, and A.B. Scranton, "Stage-Curable Hybrid Radical/Cationic Photopolymerizations," *Photochemistry and UV Curing: New Trends*, 293 (2006).

L. Gou, B. Opheim and A.B. Scranton, "Methods to Overcome Oxygen Inhibition in Free Radical Photopolymerizations," *Photochemistry and UV Curing: New Trends*, 301 (2006).

N.S. Kenning, D. Kriks, M. El-Maazawi, and A.B. Scranton, "Spatial and Temporal Evolution of the Photoinitiation Rate for Thick Polymer Systems Illuminated with Polychromatic Light," *Polymer International*, **55**, 994 (2006).

R. Huang, B.A. Ficek, S.O. Glover, and A.B. Scranton, "Effect of Water in Cationic Photopolymerizations: Reversible Inhibition," *Radtech Report*, **21**, 30 (2007).

Publications, continued:

Peter D. Ganahl, Alec B. Scranton and Chris N. Coretsopoulos, "A Simple, Inexpensive and Effective Method for Polymerization Shrinkage Stress Measurements in Photopolymerized Coatings," *Radtech report*, **21**, September/October Issue, 10 (2007).

V. Sipani and A.B. Scranton, "Cationic Photopolymerization," *Concise Encyclopedia of Polymer Science and Technology*, 3rd edition, John Wiley & Sons, Inc. 1, (2007).

B.A. Ficek, A.M. Theisen, and A.B. Scranton, "Cationic Photopolymerizations of Thick Polymer Systems: Active Center Lifetime and Mobility," *European Polymer Journal*, **44**, 98 (2008).

Beth A. Ficek, Amber Thiesen, and Alec B. Scranton, "Lifetimes and Mobility of Cationic Active Centers," Radtech International North America Conference Proceedings, 2008.

Leroy Magwood, Beth A. Ficek, Alec B. Scranton, and Chris Coretsopoulos, "Stage-Curable Free Radical/Cationic Photopolymerizations," Radtech International North America Conference Proceedings, 2008.

Nicole Stephenson Kenning, Beth A. Ficek, Cindy C. Hoppe, and Alec B. Scranton, "Spatial and Temporal Evolution of the Photoinitiation Rate for Thick Polymer Systems Illuminated by Polychromatic Light: Selection of Efficient Photoinitiators for LED or Mercury Lamps," *Polymer International*, **57**, 1134 (2008).

Dongkwan Kim, Alec B. Scranton and Jeffrey W. Stansbury, "Analysis of Association Constant for Ground State Dye-Electron Acceptor Complex of Photoinitiator Systems and the Association Constant Effect on the Kinetics of Visible-light-induced Polymerizations", *Journal of Polymer Science, Polymer Chemistry*, **47**, 1429 (2009).

Dongkwan Kim, Alec B. Scranton and Jeffrey W. Stansbury, "Effect of the Electron Donor Structure on the Shelf-Life Time of Visible-Light Activated Three-Component Initiator Systems," *Journal of Applied Polymer Science*, **114**, 1535 (2009).

Alec B. Scranton, Peter D. Ganahl, Chad M. Smith and Chris N. Coretsopoulos "Structured Illumination for Reduction of Polymerization Shrinkage Stress in Photo-cured Acrylate Coatings," *Polymeric Materials: Science and Engineering*, **101**, 1020 (2009).

Alec B. Scranton, Cindy C. Hoppe, Beth A. Ficek and Ho Seop Eom, "Cationic Photopolymerization of Systems Pigmented with Carbon Black Nanoparticles," *Polymer Preprints*, **51**, 687 (2010).

Cindy C. Hoppe, Beth A. Ficek, Ho Seop Eom, and Alec B. Scranton, "Cationic Photopolymerization of Epoxides Containing Carbon Black Nanoparticles," *Polymer*, **51**, 6151 (2010).

Leroy Magwood, Beth A. Ficek, Chris N. Coretsopoulos, and Alec B. Scranton, "Polymerization Kinetics and Physical Property Development in Hybrid Radical/Cationic Photopolymerizations," in Basics and applications of Photopolymerization Reactions, edited by J.P. Fouassier and X. Allonas, **1**, 255 (2010).

Peter D. Ganahl, Chad M. Smith, Alec B. Scranton and Chris N. Coretsopoulos, "Structured Illumination for Reduction of Polymerization Shrinkage Stress in Photo-cured Acrylate Coatings," in Basics and applications of Photopolymerization Reactions, edited by J.P. Fouassier and X. Allonas, **2**, 213 (2010).

Publications, continued:

Hajime Kitano, Karthik Ramachandran, and Alec B Scranton, “Free Radical Shadow Cure Initiated Using Two-component and Three-component Initiator Systems,” *International Journal of Photoenergy*, 213846, (2012).

Hajime Kitano, Karthik Ramachandran, Ned B. Bowden, and Alec B. Scranton, “Unexpected Visible-light-induced Free Radical Photopolymerization at Low Light Intensity and High Viscosity Using a Titanocene Photoinitiator”, *Journal of Applied Polymer Science*, **128**, 611 (2013).

Ho Seop Eom, Julie L.P. Jessop, and Alec B. Scranton, “Photoinitiated cationic copolymerizations: Effects of the oligomer structure and composition,” *Polymer*, **54**, 4134, (2013).

Edited Volumes:

“Modern Hydrogel Delivery Systems,” edited by A.B. Scranton, and N.A. Peppas, *Advanced Drug Delivery Reviews*, Vol. 11, Issues 1 and 2, Elsevier, Amsterdam (1993).

“Advances in Photopolymerizations, Fundamentals and Applications,” edited by A.B. Scranton, C.N. Bowman, and R.W. Peiffer, *ACS Symposium Series Vol. 673*, American Chemical Society, Washington DC (1997).

Patents:

G.J. Blanchard, J.L. Jessop, and A.B. Scranton, “Method for *in situ*, Noninvasive Polymer Cure Determination,” U.S. Patent 5,633,313, issued May 27, 1997.

G.J. Blanchard, J.L. Jessop, and A.B. Scranton, “Apparatus for *in situ*, Noninvasive Polymer Cure Determination,” U.S. Patent 5,707,587, issued January 13, 1998.

A.B. Scranton, A.M. Mathur, and J. Klier, “Polymers Comprising Reversible Hydrophobic Functionalities,” U.S. Patent 5,739,210, issued April 14, 1998.

A.B. Scranton, A.M. Mathur, and J. Klier, “Emulsifiers and Thickeners Comprising Reversible Hydrophobic Functionalities,” U.S. Patent 5,844,039, issued December 1, 1998.

A.B. Scranton, B. Rangarajan, and L.S. Coons, “Thick Composite Parts made From Photopolymerizable Compositions and Methods for Making Such Parts,” U.S. Patent 5,855,837, issued January 5, 1999.

R.W. Worden and A.B. Scranton, “Method for Forming Reversible Colloidal Gas or Liquid Aphrons and Compositions Produced,” U.S. Patent 6,022,727, issued February 8, 2000.

A.B. Scranton, B. Rangarajan and K.K. Baikerikar, “Photopolymerizable Encapsulants for Microelectronic Devices,” U.S. Patent 6,099,783, issued August 8, 2000.

A.B. Scranton, L Gou, “Photochemical Method to Eliminate Oxygen Inhibition of Free Radical Polymerizations,” U.S. Patent 7,141,615, issued November 28, 2006.

A.B. Scranton and K. Jain, “Method for Producing Polymers with Controlled Molecular Weight and End Group Functionality Using Photopolymerization in Microemulsions,” U.S. Patent. 7,226,957 B1 issued June 5, 2007.

Patents, continued:

C.G. Templeman, E.M. Leonard, B.A. Ficek, and A.B. Scranton, "Method of Applying Polymer Coating to a Substrate," U.S. Patent 8,197,911, issued June 12, 2012.

C.G. Templeman, A.B. Scranton, B.A. Ficek and C. Hoppe, "Method for Determining the Production Parameters for a Substrate Coating Process, Patent Number 8,993,042 B2, issued March 31, 2015.

C.G. Templeman, A.B. Scranton, B.A. Ficek, "Method for Producing Layered Materials Using Long-Lived Photo-Induced Active Centers," Japanese Patent Number 5805940, September 11, 2015.

C.G. Templeman, A.B. Scranton, B.A. Rundlett, C. Hoppe, "Method for Producing Layered Materials Using Long-Lived Photo-Induced Active Centers," U.S. Patent 9,274,429 B2, March 1, 2016.

Invited Lectures:

"Macromolecular Network Formation by Polyaddition reactions," The University of Iowa, Iowa City, Iowa, September 5, 1989.

"The Roles of NMR Spectroscopy and Molecular Modeling in the Analysis of Polymeric Systems," The Dow Chemical Company, Midland, Michigan, May 24, 1990.

"Self-Associating Networks of Poly(Methacrylic Acid-g-Ethylene Glycol)," Hope College, Holland, Michigan, January 18, 1991.

"Synthesis and Characterization of Novel Hydrogels," Kimberly-Clark Corporation, Neenah, Wisconsin, May 24, 1991.

"Formation and Structure of Crosslinked Polyacrylates," ACS Fall Meeting, Symposium on Advances in Superabsorbent Polymers, Chicago, August 25, 1993.

"Fluorescence Monitoring of Cationic Photopolymerizations of Divinyl Ethers Photosensitized by Anthracene," ACS National Meeting, Chicago, IL, August 25, 1993.

"High-Speed, Solvent-Free Cationic Photopolymerizations," 19th Mr. Clean Conference, Cocoa Beach, Florida, October 18, 1994.

"High-Speed, Solvent-Free Cationic Photopolymerizations," Delco Electronics Inc., Kokomo, Indiana, January 20, 1995.

"Structure and Properties of Hydrogels," The Institute of Materials Science, Orlando, Florida, March 8, 1995.

"High-Speed Cationic Photopolymerizations of Vinyl Ethers," Center for Fundamental Materials Research, East Lansing, MI April 28, 1995.

"Kinetics and Mechanisms of Cationic Photopolymerizations of Vinyl Ethers," AT&T Bell Laboratories, Murry Hill, New Jersey, May 11, 1995.

"Kinetics and Mechanisms of Cationic Photopolymerizations of Vinyl Ethers," Gordon Research Conference, Chemistry and Physics of Coatings and Films, New Hampton, New Hampshire, July 25, 1995.

Invited Lectures, continued:

“Recent Advances in Green Chemistry” U.S. Environmental Protection Agency, Federal Facilities Pollution Prevention Conference, Chicago, Illinois, September 6, 1995.

“Novel Block/Graft Copolymer Surfactants,” The Dow Chemical Company, Midland, Michigan, October 5, 1995.

“Photopolymerizations of Composites,” Gordon Research Conference on Composite Materials, Ventura, California, January 10, 1996.

“High-Performance UV Cured Furniture Top-Coats” Haworth Incorporated, Holland Michigan, January 30, 1996.

“Cationic Photopolymerizations,” Oakland University, Rochester, Michigan, February 21, 1996.

“Film Formation in Water-Borne Coatings,” The Institute of Materials Science, Orlando, Florida, March 12, 1996.

“Photosensitization Of Iodonium Salts For Cationic Photopolymerizations,” ACS National Meeting, Orlando, Florida, August 1996

“Reversible Multiblock Copolymeric Emulsifiers Based upon Polymer Complexation,” Dow Chemical Company, September 26, 1996.

“Kinetics of Cationic Photopolymerizations of Divinyl Ethers: *In Situ* Characterization of the Photosensitization and Propagation Reactions Using Fluorescence and Raman Spectroscopy,” 3M Corporation, St. Paul, MN, December 18, 1996.

“Kinetics and Mechanisms of Cationic Photopolymerizations,” University of Colorado, Boulder, CO, January 23, 1997.

“Cationic Photopolymerizations of Polymer Films and Coatings,” The Dow Chemical Company, February 11, 1997.

“Kinetics of Cationic Photopolymerizations of Divinyl Ethers” ISP Corporation, Wayne, NJ, April 24, 1997.

“New Directions in Photopolymerizations,” DSM Desotech Inc., Elgin, IL, May 16, 1997.

“Cationic Polymerizations of Epoxidized Soybean Oil,” Michigan Soybean Promotion Committee, East Lansing, MI, February 18, 1998.

“Photopolymerization Kinetics,” NSF Conference on Photopolymerization, University of Southern Mississippi, Hattiesburg, MS, March 3, 1998.

“Radiation Curing of Coatings,” Detroit Coatings Society, Detroit, MI, March 23, 1998.

“Radiation Curing in Next Millenium: New Directions in Photopolymerization,” Keynote Lecture, Radtech '98 International Conference, April 20, 1998.

“Design and Synthesis of Reversible Multiblock Copolymeric Emulsifiers Based upon Polymer Complexation,” University of Colorado, April 23, 1998.

Invited Lectures, continued:

“Design and Synthesis of Reversible Multiblock Copolymeric Emulsifiers Based upon Polymer Complexation,” University of Iowa, December 3, 1998.

“Design and Synthesis of Reversible Multiblock Copolymeric Emulsifiers Based upon Polymer Complexation,” Michigan State University, Department of Chemical Engineering, January 14, 1999.

“Fluorescence and Raman Spectroscopy for in situ Characterization of Cationic Photopolymerization,” Michigan State University, Analytical Chemistry Seminar Series. January 21, 1999.

“*In Situ* Characterization of the Kinetics of Cationic Photopolymerizations Using Fluorescence and Raman Spectroscopy,” Dow Corning Corporation, July 21, 1999.

“Spectroscopic Methods for Characterizing Photoinduced Reactions in Polymer Systems,” ACS National Meeting, Analytical Division, August 25, 1999.

“Design and Synthesis of Reversible Multiblock Copolymeric Emulsifiers Based upon Polymer Complexation,” Wayne State University, September 22, 1999.

“The Role of Academic/Industrial Interactions in the Development of Photopolymerization Science,” Radtech International Fall Meeting, Arlington, VA, October 6, 1999.

“Fundamentals and Applications of Photopolymerization,” Sartomer Company, Exton, PA, April 17, 2000.

“Fundamentals and Applications of Photopolymerization,” Ashland Inc., Columbus, OH, June 27, 2000.

“Development of a Web-Based Course on Photopolymerization Science,” Radtech International Winter Meeting, Orlando, Florida, January 30, 2001.

“Design and Synthesis of Reversible Emulsifiers Based upon Polymer Complexation,” Iowa State University, February 8, 2001.

“Spectroscopic Characterization of Photopolymerizations,” University of Iowa, Physical Chemistry Seminar, March 1, 2001.

“Fundamentals and Applications of Photopolymerization,” Millipore Corp., Bedford, MA, June 14, 2001.

“Photopolymerization of Silica-Filled Composites: Encapsulants for Microelectronic Devices,” ACS National Meeting, Polymer Division, August 29, 2001.

“Fundamentals and Applications of Photopolymerization,” Loctite Corp., Rocky Hill, CT, December 18, 2001.

“Photopolymerizations of Thick Polymers and Composites,” Photopolymerization Fundamentals Meeting, Breckenridge, CO, June 10, 2002.

“Fundamentals and Applications of Photopolymerization,” National Starch Corporation, Bridgewater, NJ, July 1, 2002.

“Fundamentals of Cationic Photopolymerizations,” Dow Chemical Company, Bound Brook, NJ, August 6, 2002.

Invited Lectures, continued:

“Maximizing the Teaching, Research, and Service Contributions with Small Faculties,” Department Chair’s Forum, Annual AIChE Meeting, Indianapolis, IN, November 5, 2002.

“Photopolymerization of Thick Polymer Systems,” 30th International Waterborne, High-Solids, and Powder Coatings Symposium, New Orleans, LA, February 27, 2003.

“Photopolymerization of Thick Polymer Films,” Gordon Research Conference, Chemistry and Physics of Coatings and Films, New London, New Hampshire, July 15, 2003.

“The Twenty Greatest Engineering Achievements of the 20th Century,” Iowa Engineering Society, Cedar Rapids, Iowa, February 24, 2004

“Advances in Light-induced Polymerization: Photopolymerization of Thick Systems and Elimination of Oxygen inhibition,” Michigan State University, East Lansing, MI, February 26, 2004.

“Advances in Light-induced Polymerization: Photopolymerization of Thick Systems and Elimination of Oxygen inhibition,” University of Iowa Physical Chemistry Seminar, Iowa City, IA, April 5, 2004.

“Photopolymerization, See the Light,” University of Iowa College of Engineering, College-wide Seminar, September 23, 2004.

“Photopolymerization, See the Light,” Clemson University, Clemson, South Carolina, February 10, 2005.

“Photopolymerization, See the Light,” Iowa State University Spring 2005 Distinguished Professor Lecture, Ames, Iowa, March 10, 2005.

“Advances in Photopolymerization,” Iowa State University, Ames, Iowa, March 10, 2005

“Oxygen in Free Radical Polymerizations,” Photopolymerization Fundamentals Meeting, Breckenridge, CO, June 28, 2005.

“Advances in Photopolymerization Systems,” PPG Industries, Allison Park, PA, September 13, 2005.

“Photopolymerization, See the Light,” Boeing, Wichita, Kansas, October 7, 2005.

“Structured Illumination for Reduction of Shrinkage Stress,” 3M Corporation, St. Paul, MN, October 27, 2005.

“Advances in Cationic Photopolymerization,” Toyota Technical Center, Ann Arbor, MI, November 14, 2005.

“Challenges and Opportunities in Engineering,” Iowa Engineering Society, Muscatine, Iowa, February 23, 2006.

“Careers in Engineering,” Welcoming address at the State Science and Engineering Fair of Iowa, March 24, 2006.

“Advances in Photopolymerization: Solving Problems in Materials and Coatings with Light-Induced Reactions,” Fifth Annual Optical Science and Technology Center Symposium, Iowa City, IA, Feb. 16, 2007.

Invited Lectures, continued:

“Photopolymerization of Thick Systems and Elimination of Oxygen Inhibition,” ACS Spring National Meeting, Chicago, March 26, 2007.

“Reduction of Polymerization Shrinkage Stress in Photo-cured Coatings using Structured Illumination,” Materials Research Society, Spring National Meeting, San Francisco, April 10, 2007.

“The Potential of Light-Induced Polymerizations in Automotive Clearcoats,” Toyota Technical Center, Ann Arbor, MI, May 11, 2007.

“Photopolymerization of Thick Systems,” Photopolymerization Fundamentals Meeting, Breckenridge, CO, June 25, 2007.

“Photopolymerization of Thick Systems and Elimination of Oxygen Inhibition,” AIChE Annual Meeting, November, 2007.

“Recent Advances in Photopolymerization: Cationic Photopolymerizations, Elimination of Shrinkage Stresses, and Reduction of Oxygen Inhibition,” DSM Desotech, Elgin, IL, March 26, 2008

“Recent Advances in Photopolymerization: Elimination of Shrinkage Stresses and Oxygen Inhibition,” 3M Corp., St. Paul, MN, April 15, 2008

“Cationic Photopolymerizations of Pigmented Systems, and Elimination of Oxygen Inhibition in Free Radical Photopolymerizations,” Xerox Corporation, Mississauga Ontario, September 12, 2008.

“The Potential of Light-Induced Polymerizations in Automotive Clearcoats,” Toyota Technical Center, Ann Arbor, MI, October 22, 2008.

“The Energy Future,” The Green Summit Sponsored by the University of Iowa Student Government. Iowa City, IA, April 18, 2009

“Reduction in Polymerization Shrinkage Stress in Photo-cured Coatings Using Structured Illumination,” Photopolymerization Fundamentals Meeting, Breckenridge, CO, June 24, 2009.

“Structured Illumination for Reduction of Polymerization Shrinkage Stress in Photo-cured Acrylate Coatings,” ACS National Meeting, Washington, DC, August 17, 2009.

“Structured Illumination for Reduction of Polymerization Shrinkage Stress in Photo-cured Acrylate Coatings,” Charlie Hoyle Memorial Symposium, Hattiesburg, MS, April 12, 2010.

“Photopolymerization Research,” Academic Roundtable on Academic Issues for UV/EB, Radtech North America Conference, Baltimore, MD, May 24, 2010.

“Cationic Photopolymerization of Systems Pigmented with Carbon Black Nanoparticles,” ACS National Meeting, Boston, MA, August 23, 2010.

Keynote address for the *Phi Eta Sigma National Honors Society Initiation Ceremony*, Iowa City, April 11, 2011.

“Engineering Provides Floods of Opportunities,” Cedar Rapids West Rotary, March 21, 2012.

Invited Lectures, continued:

“Engineering Provides Floods of Opportunities,” Iowa City Kiwanis, July 17, 2012.

“Engineering Provides Floods of Opportunities,” Iowa City Rotary, July 19, 2012.

“Engineering Provides Floods of Opportunities,” Marshalltown Rotary, July 24, 2012.

“Engineering Provides Floods of Opportunities,” Iowa City Downtown Rotary, July 30, 2012.

“Engineering Provides Floods of Opportunities,” Burlington Rotary, August 6, 2012.

“University of Iowa College of Engineering Partnerships with John Deere,” August 17, 2012.

“University of Iowa College of Engineering Partnerships with Rockwell Collins,” September 12, 2012.

“University of Iowa College of Engineering Partnerships with Caterpillar,” September 15, 2012.

“Engineering Provides Floods of Opportunities,” Davenport Rotary, September 17, 2012.

“Globalization and Engineering Education,” World Canvass Radio and Television Show, Iowa City, Iowa, December 7, 2012.

“Academic Leadership in the 21st Century,” Leadershape Guest Leader, Washington, Iowa, January 16, 2013.

“Engineering Provides Floods of Opportunities,” Cedar Rapids Rotary, January 28, 2013.

“Engineering Provides Floods of Opportunities,” Muscatine Rotary, February 4, 2013.

“University of Iowa College of Engineering Partnerships with Stanley Consultants,” February 4, 2013.

“University of Iowa College of Engineering Partnerships with FIRST Tech Challenge,” Iowa State FTC Championship, Iowa City, February 23, 2013.

“Engineering at the University of Iowa,” Annual Conference of the Iowa Engineering Societies, Des Moines, May 2, 2013.

“Fire and Ice,” Muscatine STEM Festival, May 4, 2013.

“Educating Engineers....and Something More,” West Burlington Rotary, May 13, 2013.

“University of Iowa College of Engineering Partnerships with John Deere,” Dubuque, Iowa, September 5, 2013.

“A Web-Based Course on Material and Energy Balances,” Inaugural Lecture for the *Engineering Lecture and Something More Series*, Iowa City, Iowa, September 6, 2013.

“Educating Engineers, and Something More,” College of Liberal Arts and Sciences Advisory Board, Iowa City, October 21, 2014.

“University of Iowa College of Engineering Partnerships with FIRST Tech Challenge,” Regional Qualifying Competition, Linn Mar High School, Marion, Iowa, November 9, 2013.

Invited Lectures, continued:

“University of Iowa College of Engineering Partnerships with FIRST Tech Challenge,” Regional Qualifying Competition, Central College, Pella, Iowa, December 14, 2013.

“University of Iowa College of Engineering Partnerships with FIRST Tech Challenge,” Iowa State FTC Championship, Iowa City, February 22, 2014.

“Educating Engineers....and Something More,” Sioux City Rotary, March 10, 2014.

“UI College of Engineering Grand Challenges Scholars,” Iowa Board of Regents Meeting, March 12, 2014.

“University of Iowa College of Engineering Welcome to the FTC North Superregional,” Iowa City, April 4, 2014.

“Educating Engineers....and Something More,” Women and Minority Student Sessions, FTC North Superregional, Iowa City, April 5, 2014.

“Fire and Ice,” Muscatine STEM Festival, May 10, 2014.

“*Become an Engineer and Something More*,” FTC League Championship, Corning, Iowa, January 10, 2015.

“*UI College of Engineering Partnerships with Rockwell Collins*,” Rockwell Collins Corporate Headquarters, Cedar Rapids, January 23, 2015.

“*Leading as an Introvert*,” IT Leadership Development Team “*What’s on Your Mind*” Lecture Series, Iowa City, February 3, 2015.

“*Educating Students to Meet the Engineering Grand Challenges*,” Cedar Rapids Downtown Rotary, Cedar Rapids, Iowa, February 16, 2015.

“*Engineering at the University of Iowa*,” FTC State Championship, Iowa City, March 7, 2015.

“*Become an Engineer and Something More*,” FTC North Super Regional, Des Moines, March 27, 2015. Discussions of the College of Engineering at the Hawkeye Caucus, Des Moines, March 31, 2015.

“*UI College of Engineering and Deere & Company: Partnership for Excellence*,” John Deere Corporate Headquarters, Moline, IL, April 20, 2015.

“*FTC Inspires Students for Engineering.... and Something More*” Meetings with Iowa FTC Teams at the World Championships, St. Louis, MO, April 24, 2015.

“*Engineers Make Life Better*,” Opening remarks for Black Girls Do Science, Iowa City, May 2, 2015.

“*Educating Engineers, and Something More*,” Presentation for Computer Innovation Institute: Infusing Innovation and Entrepreneurship into the K-12 Classroom, Iowa City, July 22, 2015.

“*UI College of Engineering Partnerships with Iowa City Area Companies*,” Iowa City Area Development Group, Iowa City, August 18, 2015.

Invited Lectures, continued:

“University of Iowa College of Engineering and John Deere: Partnership for Excellence,” Dubuque, Iowa, August 20, 2015.

“The University of Iowa College of Engineering: Excellence and Impact in Korea,” Talk for Governor Branstad’s Trade Delegation, Seoul, South Korea, September 11, 2015.

“Partnerships Across the State and Across the World,” Dedication of the “Hawkeye Bridge” in Buchanan County Iowa, November 10, 2015.

“Dean’s Panel, Big Ten Women’s Workshop,” Milwaukee, WI, March 24, 2016.

“Governor’s 2016 Future Ready Iowa Summit, The Right Stuff Panel,” Des Moines, IA, April 19, 2016.

“University of Iowa College of Engineering: Where Students Become Engineers.....and Something More,” University of Iowa Foundation Board of Directors Meeting, Iowa City, IA, April 29, 2016.

“Cationic Photopolymerization of Systems Pigmented with Carbon Black Nanoparticles,” ACS National Meeting, Philadelphia, PA, August 22, 2016.

“Photopolymerizations: Solving Problems with Light,” Radtech International Symposium: Photopolymerization: Past, Present and Future, Estes Park, CO, October 6, 2016.

“Structured Illumination for Reduction of Polymerization Shrinkage Stress,” AIChE Annual Meeting, San Francisco, CA, November 15, 2016.

Presentations:

N.A. Peppas, A.B. Scranton, and L.C. Scranton, “Suspension Polymerization of 2-Hydroxyethyl Methacrylate,” Annual AIChE Meeting, New York, November 16, 1987.

A.B. Scranton and N.A. Peppas, “Copolymerization and Crosslinking Reaction of Hydrophilic Monomers,” Annual AIChE Meeting, Washington D.C., December 3, 1988.

N.A. Peppas, A.B. Scranton, and D.E. Edwards, “A Branching Theory for the Analysis of Certain Sol-Gel Processes,” Annual AIChE Meeting, Washington D.C., December 5, 1988.

A.B. Scranton, J Klier, and N.A. Peppas, “Soluble Fraction Effects on Dynamic Swelling of Hydrogels,” Annual AIChE Meeting, San Francisco, November 7, 1989.

A.B. Scranton and N.A. Peppas, “Copolymerization/Crosslinking Reaction of 2-Hydroxyethyl Methacrylate with Ethylene Glycol Dimethacrylate,” Annual AIChE Meeting, San Francisco, November 8, 1989.

J. Klier, A.B. Scranton and N.A. Peppas, “Self-Association of Poly(methacrylic acid-g-ethylene glycol) as Studied by Nuclear Overhauser Effect and NMR Relaxation Time Measurements,” Annual AIChE Meeting, San Francisco, November 8, 1989.

J. Klier, A.B. Scranton and N.A. Peppas, “Complex-Forming Hydrogels Sensitive to Environmental Conditions,” Central Regional Meeting, ACS, University Center, Michigan, June 7, 1990.

Presentations, continued:

C.L. Aronson and A.B. Scranton, "Solution State NMR Relaxational Studies of Polymeric Systems," ACS Fall Scientific Meeting, Midland, Michigan, October 12, 1990.

A.B. Scranton, J. Klier, and N.A. Peppas, "Complexation of Polymeric Acids with Complementary Oligomeric Bases," Annual AIChE Meeting, Chicago, November 14, 1990.

K.F. Hammonds and A.B. Scranton, "Equilibrium Swelling of Poly(methacrylic acid-g-ethylene glycol) Networks," ACS Fall Scientific Meeting, Midland, Michigan, October 26, 1991.

A.M. Mathur, K.F. Hammonds, C.L. Aronson, A.B. Scranton and J. Klier, "Responsive Materials Based Upon Polymer Complexation," Annual AIChE Meeting, Los Angeles, November 20, 1991.

K.E. Abt and A.B. Scranton, "Responsive Poly(methacrylic acid-g-ethylene glycol) Networks," Great Lakes College Chemistry Conference, East Lansing, MI, April 4, 1992.

C.L. Aronson and A.B. Scranton, "Complexation of Poly(4-vinyl phenol) with Poly(N,N-dimethylacrylamide)" 8th Annual ASM/ESD Advanced Composites Conference, Chicago, IL November 5, 1992.

E.W. Nelson and A.B. Scranton, "Fluorescence Methods for Monitoring UV Initiated Cationic Polymerizations," ACS Fall Scientific Meeting, University Center, Michigan, November 7, 1992.

A.M. Mathur and A.B. Scranton, "Ion Binding Properties of Poly(ethylene glycol) Diacrylates and Dimethacrylates," ACS Fall Scientific Meeting, University Center, Michigan, November 7, 1992.

L.S. Coons and A.B. Scranton, "Simultaneous Radical and Cationic Polymerizations," ACS Fall Scientific Meeting, University Center, Michigan, November 7, 1992.

E.W. Nelson, T.P. Carter and A.B. Scranton, "Photosensitization of Cationic Photopolymerizations by Anthracene," ACS National Meeting, Chicago, IL, August 24, 1993.

E.W. Nelson, T.P. Carter and A.B. Scranton, "Fluorescence Monitoring of Cationic Photopolymerizations of Divinyl Ethers Photosensitized by Anthracene," ACS National Meeting, Chicago, IL, August 25, 1993.

A.B. Kinney and A.B. Scranton, "Formation and Structure of Crosslinked Polyacrylates," ACS National Meeting, Chicago, IL, August 25, 1993.

A.M. Mathur and A.B. Scranton, "Synthesis and Ion Binding Properties of Polymeric Pseudocrown Ethers," Eight Symposium on Separation Science and Technology for Energy Applications, Gatlinburg, TN, October 25, 1993.

C.L. Aronson and A.B. Scranton, "Hydrogen Bonded Interpolymer Complexes of Poly(N,N-Dimethylacrylamide with Poly(4-vinyl phenol)" ACS Fall Scientific Meeting, University Center, MI, October 23, 1993.

E.W. Nelson, T.P. Carter and A.B. Scranton, "Spectroscopic Monitoring of High Speed Cationic Photopolymerizations of Bisvinyl Ether Films," AIChE Annual Meeting, St. Louis, Missouri, November 11, 1993.

A.B. Scranton and J. Klier, "Responsive Poly(Methacrylic Acid-g-Ethylene Glycol) Hydrogels," AIChE Annual Meeting, St. Louis, Missouri, November 8, 1993.

Presentations, continued:

J.L. Jacobs, E.W. Nelson, and A.B. Scranton, "Use of Fluorescence to Monitor Temperature and Observe Water Effects in Cationic Photopolymerizations of Divinyl Ethers," ACS National Meeting, San Diego, CA, March 13, 1994.

C.L. Crofcheck, E.W. Nelson and A.B. Scranton, "Temperature Sensitive Fluorescence for Monitoring High Speed Cationic Photopolymerizations," AIChE North Central Regional Meeting, Ann Arbor, MI, March 19, 1994.

C.L. Crofcheck, E.W. Nelson and A.B. Scranton, "Temperature Sensitive Fluorescence for Monitoring High Speed Cationic Photopolymerizations," Great Lakes College Chemistry Conference, East Lansing, MI, April 9, 1994.

J.L. Jessop, A.B. Scranton, and G.J. Blanchard, "In Situ Cure Monitoring for Composite Processing Using Fiber Optic Fluorescence Sensors," Eight Annual CFMR/Industry Symposium, East Lansing, MI, April 11, 1994.

E.W. Nelson, and A.B. Scranton, "*In Situ* Raman Spectroscopy for Cure Monitoring of Divinyl Ether Cationic Photopolymerizations," ACS National Meeting, Anaheim, CA, April 5, 1995.

C.L. Crofcheck, E.W. Nelson, J.L. Jacobs, and A.B. Scranton, "Temperature-Sensitive Luminescence for Monitoring High-Speed Cationic Photopolymerizations," ACS National Meeting, Anaheim, CA, April 2, 1995.

J.L. Jessop, A.B. Scranton, and G.J. Blanchard, "*In Situ* Cure Monitoring of a Vinyl Ester Polymer Using Fiber Optic Fluorescence Sensors," ACS National Meeting, Anaheim, CA, April 2, 1995.

J.L. Jacobs and A.B. Scranton, "A Transmission Electron Microscopic Study of the Morphology of Cationically Photopolymerized Divinyl Ethers," ACS National Meeting, Anaheim, CA, April 4, 1995.

E.W. Nelson, J.L. Jacobs, A.B. Scranton, K.S. Anseth, and C.N. Bowman, "Photo-Differential Calorimetry Studies of Cationic Polymerizations of Divinyl Ethers," ACS National Meeting, Anaheim, CA, April 5, 1995.

J.L. Jessop, A.B. Scranton, and G.J. Blanchard, "In Situ Cure Monitoring for Composite Processing Using Fiber Optic Fluorescence Sensors," Ninth Annual CFMR/Industry Symposium, East Lansing, MI, April 10, 1995.

L.S. Coons, B. Rangarajan, and A.B. Scranton, "Novel High-Speed, Low-Cost Composite Processing Methods Based Upon Photopolymerizations," Symposium on Polymer Composites Processing, East Lansing, Michigan, June 8, 1995.

B. Rangarajan and A.B. Scranton, "Applications of Solvent-Free Photopolymerizations," 21st Mr. Clean Conference, Indianapolis, IN, October 19, 1995.

A.M. Mathur and A.B. Scranton, "Synthesis and Ion-Binding Properties of Polymeric Pseudocrown Ethers II," Ninth Symposium on Separation Science and Technology for Energy Applications, Gatlinburg, TN, October 23, 1995.

Presentations, continued:

J.L. Jessop, A.B. Scranton and G.J. Blanchard, "In-situ Cure Monitoring for Composites Processing Using Fiber Optic Fluorescence Sensors," 11th Annual Advanced Composites Conference, Dearborn, Michigan, November 7, 1995.

L.S. Coons, B. Rangarajan, and A.B. Scranton, "Production of Thick Polymers and Composites Based Upon Photopolymerizations," 11th Annual Advanced Composites Conference, Dearborn, Michigan, November 7, 1995.

E.W. Nelson and A.B. Scranton, "Kinetics of Cationic Photopolymerizations of Vinyl Ethers," AIChE Annual Meeting, Miami, Florida, November 14, 1995.

L.S. Coons, B. Rangarajan, D. Godshall, A.B. Scranton, "Production of Polymeric Composites Based Upon Photopolymerization Methods" ASME, National Meeting, San Francisco, CA, November 13, 1995.

E.W. Nelson and A.B. Scranton, "High-Speed, Solvent-Free Cationic Photopolymerizations of Vinyl Ethers," AIChE Annual Meeting, Miami, Florida, November 16, 1995.

B.K. Becker, A.M. Mathur, and A.B. Scranton, "Novel Reversible Multiblock Copolymeric Emulsifiers," ACS National Meeting, New Orleans, LA, March 28, 1996.

S.K. Moorjani, B. Rangarajan, A.B. Scranton, "The Effect Of Viscosity On The Rate of Photosensitization Of Diaryliodonium Salts By Anthracene," ACS National Meeting, New Orleans, LA, March 28, 1996.

L.S. Coons, B. Rangarajan, and A.B. Scranton, "Photopolymerizations of Composites," ACS National Meeting, New Orleans, LA, March 29, 1996.

B.K. Becker, A.M. Mathur, and A.B. Scranton, "Novel Reversible Multiblock Copolymeric Emulsifiers," AIChE Regional Meeting, Columbus, Ohio, April 27, 1996.

L.S. Coons, B. Rangarajan, D. Godshall, and A.B. Scranton, "Production of Polymeric Composites Based Upon Ultraviolet Photopolymerization Methods," 28th ACS Central Regional Meeting, Dayton Ohio, June 10, 1996.

A.M. Mathur, A.B. Scranton, and J. Klier, "Polymeric Emulsifiers Based Upon Reversible Intramolecular Complexation," AIChE Spring National Meeting, Houston, March 10, 1997.

R. Chen and A.B. Scranton, "Polymers from Renewable Feedstocks: Cationic Photopolymerizations of Epoxidized Soybean Oil, AIChE Regional Meeting, East Lansing, MI, April 12, 1997.

A.M. Mathur, B. Drescher, A.B. Scranton, and J. Klier, "Reversible Block-Graft Copolymeric Emulsifiers Based Upon Polymer Complexation," ACS National Meeting, San Francisco, April 15, 1997.

A.M. Mathur, V. Narayanan and A.B. Scranton "Coatings formed by the Photopolymerization of Epoxidized Soybean Oil Containing Cyclohexanedimethanol Divinylether as a Reactive Diluent" 5th. International Exhibition of Paint Industry Suppliers, Sao Paulo, Brazil, Sept. 15-17 1997.

P. Kohli, A. B. Scranton and G. J. Blanchard, "Understanding Photopolymerization of Bismaleimides and Divinylethers: A New Class of Charge-Transfer Polymerization", The Federation of Analytical Chemistry and Spectroscopy Societies XXIV Annual Meeting, Providence, RI, October, 30, 1997.

Presentations, continued:

V. Narayanan and A.B. Scranton, "Modeling of Photobleaching of Initiators in Solution," AIChE Annual Meeting, Los Angeles, November 17, 1997.

B.J. Elliott, A.B. Scranton and C.N. Bowman, "Synthesis of Pseudocrown Ether Membranes for Adsorption and Separation of Metal Ions," AIChE Annual Meeting, Los Angeles, November 17, 1997.

B. Rangarajan, L. Capodieci, R. Subramanian, M. Templeton, and A. Scranton, "Sampling Strategies for sub-100 nm Overlay," SPIE Annual Conference, February 24, 1998.

K.K. Baikerikar, B. Rangarajan, D. Godshall, and A.B. Scranton "Photopolymerizable Encapsulants for Microelectronic Devices," Radtech '98 International North American Conference, April 21, 1998.

V. Narayanan, K.K. Baikerikar, and A.B. Scranton "A Study of Initiating Systems for Photopolymerization of Composites," Radtech '98 International North American Conference, April 20, 1998.

Arvind M. Mathur, V. Narayanan, and A.B. Scranton "UV Curable Epoxidized Oils with Vinylethers as Reactive Diluents," Radtech '98 International North American Conference, April 22, 1998.

P. Srivastava, B. Drescher, J.W. Heckman, R.M. Worden and A.B. Scranton, "Characterization of Colloidal Liquid and Gas Aphrons Formed Using Novel, Reversible, Copolymeric Block/Graft Emulsifiers," AIChE Annual Meeting, November 17, 1998.

B.J. Elliot, A.B. Scranton, and C.N. Bowman, "Polymeric Pseudocrown Ether Membranes for Adsorption and Separation of Metal Ions," AIChE Annual Meeting, November 19, 1998.

J.L.P. Jessop, S.N. Goldie, A.B. Scranton, G.J. Blanchard, B. Rangarajan, L. Capodieci, and R. Subramanian, "Characterizing Acid Mobility in Chemically Amplified Resists via Spectroscopic Methods," SPIE International Microlithography Conference, Anaheim, CA, March 1999.

C. Browning, D. Clark, C Harney, K. Stuart, M. Bounds, J. McCoy, L. Terrell, S. Whitehead, A. Scranton, and E. Jackson, "NOBCCHE at Michigan State University: Achieving Academic Excellence Through Diversity and Interaction," ACS National Meeting, Anaheim California, March 22, 1999.

A.B. Scranton, R.M. Russell, N. Basker, J.L.P. Jessop, and L.C. Scranton "Teaching Material and Energy Balances on the Internet" ASEE National Conference, Charlotte, North Carolina, June 23, 1999.

K.S. Padon and A.B. Scranton, "Fundamental Studies of Photoinitiation and Cure of a New Initiator System for Coatings Cured with Visible Light," Gordon Research Conference on Coatings and Films, New London, NH, July 12, 1999.

J.L.P. Jessop, S.N. Goldie, A.B. Scranton, and G.J. Blanchard, "Characterizing Acid Mobility in Chemically Amplified Resists via Spectroscopic Methods," AIChE Annual Meeting, Dallas, TX, November 1999.

J.L.P. Jessop, S.N. Goldie, A.B. Scranton, G.J. Blanchard, B. Rangarajan, U. Okoroanyanwu, R. Subramanian, M.K. Templeton, "Spectroscopic Characterization of Acid Mobility in Chemically Amplified Resists," SPIE International Microlithography Conference, Anaheim, CA, February 2000.

B. Drescher and A.B. Scranton, "Reversible Block/Graft Copolymeric Emulsifiers Based Upon Intramolecular Complexation," ACS Spring National Meeting, San Francisco, March 26, 2000.

Presentations, continued:

K.S. Padon and A.B. Scranton, "Mechanistic Studies of the Three Component Photoinitiator System Methylene Blue, N-Methyldiethanolamine and Diphenyliodonium Chloride," ACS Spring National Meeting, San Francisco, March 26, 2000.

K.K. Baikerikar and A.B. Scranton, "Photopolymerizable Liquid Encapsulants," ACS Spring National Meeting, San Francisco, March 27, 2000.

J.L.P. Jessop, S.N. Goldie, A.B. Scranton, and G.J. Blanchard, "Spectroscopic Characterization of Acid Mobility in 248 nm Chemically Amplified Resists," ACS Spring National Meeting, San Francisco, March 27, 2000.

A.B. Scranton and L.C. Scranton, "Teaching Material and Energy Balances on the Internet: Continuous Improvement of a Web-based Course," ASEE Annual Conference and Exposition, St. Louis, June 20, 2000.

A.B. Scranton and L.C. Scranton, "A Cooperative Learning Group Project Implemented on the Internet: The People Balance Project," ASEE Annual Conference and Exposition, St. Louis, June 20, 2000.

A.B. Scranton and K.S. Padon, "Spectroscopic Methods for Characterizing Photopolymerization Systems," AIChE Annual Meeting, Los Angeles November 13, 2000.

K.S. Padon, D. Kim, and A.B. Scranton, "Spectroscopic Investigation of Three Component Initiator Systems," ACS National Meeting, Chicago, August 28, 2001.

R. Nagarajan, C.E. Hoyle, A.B. Scranton and M. El-Maazawi, "Determination of Overall Photoinitiator Efficiencies," Radtech North America Technical Conference, Indianapolis, IN, April 29, 2002.

A.B. Scranton, G.A. Miller, L. Gou, and M. El-Maazawi, "Modeling of Photobleaching for Photoinitiation of Thick Polymerization Systems," Radtech North America Technical Conference, Indianapolis, IN, April 29, 2002.

D. Kim, M. El-Maazawi, and A.B. Scranton, "Formation of Ground State Complex in Electron-Transfer Photoinitiator Systems," Radtech North America Technical Conference, Indianapolis, IN, April 29, 2002.

V. Sipani and A.B. Scranton, "Fundamental Characterization of Cationic Photopolymerization," AIChE Annual Meeting, Indianapolis, IN, November 4, 2002.

L. Gou, M. El-Maazawi, and A.B. Scranton, "Modeling of Photobleaching for Photoinitiation of Thick Polymerization Systems," AIChE Annual Meeting, Indianapolis, IN, November 4, 2002.

K. Jain and A.B. Scranton, "Photopolymerization of Butyl acrylate-In-Water Microemulsion," AIChE Annual Meeting, Indianapolis, IN, November 4, 2002.

D. Kim and A.B. Scranton, "Fundamental Characterization of Three Component Initiator Systems," AIChE Annual Meeting, Indianapolis, IN, November 4, 2002.

V. Sipani and A.B. Scranton, "Cationic Photopolymerization of Epoxide Monomers: Characterization of Active Center Propagation Lifetime," New Orleans, LA, March 25, 2003.

A.B. Scranton, "Web-Based Distance Education: Experiences Teaching Material and Energy Balances," American Society for Engineering Education North Midwest Region Meeting, Ames, Iowa, October 11, 2003.

Presentations, continued:

V. Sipani and A.B. Scranton, "Kinetic Studies of Cationic Photopolymerizations of Epoxide Monomers," AIChE Annual Meeting, San Francisco, CA, November 17, 2003.

L. Gou and A.B. Scranton, "Photochemical Method to Eliminate Oxygen Inhibition," AIChE Annual Meeting, San Francisco, CA, November 17, 2003.

D. Kim and A.B. Scranton, "Effect of Electron Donor Structure on the Kinetics of Visible Three-Component Photo-Initiator Systems," AIChE Annual Meeting, San Francisco, CA, November 17, 2003.

K. Jain, N.L. Stephenson, and A.B. Scranton "Photobleaching of Thick Polymer Systems," AIChE Annual Meeting, San Francisco, CA, November 17, 2003.

K. Jain, A.B. Scranton, B.A. Ficek, P. Rasmussen, and D. Rethwisch "Microemulsions of Soybean Oil," AIChE Annual Meeting, San Francisco, CA, November 17, 2003.

A.B. Scranton, N. Stephenson, and D. Kriks, "Modeling of Photoinitiation of Thick Polymers Illuminated with Polychromatic Light," Radtech International North America Biannual Conference, Charlotte, NC, May 3, 2004.

L. Gou and A.B. Scranton, "A Photochemical Method to Eliminate Oxygen Inhibition in Photocured Systems," Radtech International North America Biannual Conference, Charlotte, NC, May 3, 2004.

D. Kim and A.B. Scranton, "Effect of Electron Donor Structure on the Kinetics of Visible Three-component Photoinitiator Systems," Radtech International North America Biannual Conference, Charlotte, NC, May 4, 2004.

V. Sipani and A.B. Scranton, "Characterization of the Kinetic Rate Constants for the Cationic Photopolymerizations of Epoxide Monomers," Radtech International North America Biannual Conference, Charlotte, NC, May 4, 2004.

N. Stephenson, D. Kriks, and A.B. Scranton, "Modeling of Photoinitiation of Thick Polymer Systems," ACS Fall National Meeting, Philadelphia, August 24, 2004.

L. Gou, C.N. Coretsopoulos, and A.B. Scranton, "Reduction of Oxygen Inhibition in Free Radical Photopolymerization," ACS Fall National Meeting, Philadelphia, August 24, 2004.

K. Jain, P. Rasmussen, A.B. Scranton, and D.R. Rethwisch, "Enhanced Epoxidation of Soybean Oil through Microemulsion Technique," ACS Fall National Meeting, Philadelphia, August 25, 2004.

V. Sipani, A. Kirsch, and A.B. Scranton, "Characterization of Kinetic Rate Constants of Cationic Photopolymerizations of Epoxides," ACS Fall National Meeting, Philadelphia, August 25, 2004.

A. B. Scranton, "Research in the Center for Fundamentals and Applications of Photopolymerization," Radtech International North America Biannual Conference, Chicago, April 26, 2006.

N. Kenning, D. Kriks, M. El-Maazawi, and A. B. Scranton, "Photoinitiation Rate Profiles for Thick Polymerization Systems," Radtech International North America Biannual Conference, Chicago, April 26, 2006.

Presentations, continued:

Joe D. Oxman, Alec B. Scranton, Dwight W. Jacobs, Matthew C. Trom, Vishal Sipani, and Beth Ficek, "Evaluation of Initiator Systems for Controlled and Sequentially Curable Free-Radical/Cationic Hybrid Photopolymerizations," ACS Spring National, March 26, 2007.

Beth A. Ficek and Alec B. Scranton, "Cationic Photopolymerizations: Long-Lived Cationic Active Centers," MRS Spring National Meeting, San Francisco, April 10, 2007.

Beth A. Ficek and Alec B. Scranton, "Cationic Photopolymerizations: Long-Lived Cationic Active Centers," Photopolymerization Fundamentals Meeting, Breckenridge, Colorado, June 25, 2007.

Beth A. Ficek, Amber Thiesen, and Alec B. Scranton, "Lifetimes and Mobility of Cationic Active Centers," Radtech International North America Biannual Conference, Chicago, May 5, 2008.

Leroy Magwood, Beth A. Ficek, Alec B. Scranton, and Chris Coretsopoulos, "Stage-Curable Free Radical/Cationic Photopolymerizations," Radtech International North America Biannual Conference, Chicago, May 5, 2008.

Cindy C. Hoppe, Nicole Stephenson Kenning, Beth A. Ficek, Alec B. Scranton "Spatial and Temporal Evolution of the Photoinitiation Rate for Thick Polymer Systems Illuminated by Polychromatic Light: Selection of Efficient Photoinitiators for L.E.D. or Mercury Lamps," AIChE Annual Meeting, Philadelphia, PA, Nov. 19, 2008.

Alec B. Scranton, Lijing Gou and Chris N. Coretsopoulos,, "Reduction of Oxygen Inhibition in Free Radical Photopolymerization," ACS Midwest Regional Meeting, Iowa City, IA, October 21, 2009.

Cindy Hoppe, Nicole S. Kenning, Beth Ficek and Alec Scranton, "Spatial and Temporal Evolution of the Photoinitiation Rate for Thick Polymer Systems Illuminated by Polychromatic Light," ACS Midwest Regional Meeting, Iowa City, IA, October 21, 2009.

Chris N. Coretsopoulos, Peter D. Ganahl and Alec B. Scranton, "Applications of Structured Illumination for Reduction of Shrinkage Stress and Gloss Control," ACS Midwest Regional Meeting, Iowa City, IA, October 21, 2009.

Cindy Hoppe, Beth Ficek and Alec Scranton, "Cationic Photopolymerizations of Systems Pigmented with Carbon Black," ACS Midwest Regional Meeting, Iowa City, IA, October 21, 2009.

Ho Seop Eom and Alec Scranton, "The Effects of Oligomeric Butadiene Structures On Kinetics of Cationic Photocopolymerizations with Difunctional Cycloaliphatic Epoxide and Phase Morphology," ACS Midwest Regional Meeting, Iowa City, IA, October 21, 2009.

University Service:***Committee Membership, Michigan State University:***

Reappointment, Promotion, and Tenure Teaching Committee, 1997.

Chemical Engineering Departmental Undergraduate Curriculum Committee, Fall 1992 to Fall 1999.

College of Engineering Curriculum Committee, Fall 1993 to Fall 1999.

Johansen Crosby Endowed Professorship Committee, 1992-93

Max T. Rogers NMR Center Advisory Committee, Fall 1993 to Fall 1999.

University Service, continued:

Chemical Engineering Chairperson Search Committee, Spring 1994.

Turner Alfrey Distinguished Visiting Professor Steering Committee, Fall 1993 to Fall 1999.

Reappointment, Promotion, and Tenure Service Committee, 1991

Committee Membership, The University of Iowa:

University of Iowa Biosciences Initiative Advisory Committee, Spring 2003 to Fall 2005.

University of Iowa Classroom Advisory Committee, Fall 2003 to Fall 2006.

Presidential Scholars selection committee, Fall 2003 to Fall 2010.

Civil and Environmental Engineering Departmental Review Committee, Summer 2004.

Graduate College Review Committee, March 2004 – April 2005.

The Board of Regents Distance Education Strategic Planning Committee, Fall 2004 to 2010.

University of Iowa Experiential Learning Council, Spring 2006 to Fall 2010.

University of Iowa Campus Classroom Committee, Established by the Provost, Fall 2006 to Fall 2010.

Engineering Representative for the University of Iowa Promotion Workshop sponsored by AAUP, the Faculty Senate, and the Office of the Provost, April 4, 2006.

NCA Self Study Subcommittee for Education within the Major, Fall 2006 – Spring 2007.

Iowa Center for Research by Undergraduates Steering Committee, Fall 2006 to Fall 2010.

Alliant Energy Erroll Davis Award Review Committee, Fall 2006 to Fall 2010.

University of Iowa Undergraduate Research Awards Committee, Spring 2006 to Fall 2010.

The Honors College Advisory Group, Spring 2006 to Fall 2010.

CLAS General Education Advisory Committee. Summer 2007 to Fall 2010.

University of Iowa Task Force on Outreach/Engagement, Summer 2009 to Fall 2010.

The University-Wide Instructional Equipment Proposal Review Committee, Spring 2009 to Fall 2010.

University College Advisory Committee, Summer 2010.

Faculty Advisor of Undergraduate Organizations:

National Organization of Black Chemists and Chemical Engineers (NOBCCChE) 1992 – 1998.

International Society of Pharmaceutical Engineers (ISPE) 1993 – 1999

Society of Plastic Engineers (SPE) 1996 - 1998

Community, State, National, and International Service:

Judge for 2013 Iowa Future City Competition, Cedar Rapids, January 26, 2013.

Judge for 2011 Iowa Future City Competition, Cedar Rapids, January 22, 2011.

Member of the Prairie High School Career and Technology Education (C.T.E) Advisory Council, Cedar Rapids, Iowa. April 2010 to date.

Panel leader for the Discover Engineering Night Hosted by Pella Corporation, Pella Iowa. ~250 attendees. February 12, 2009.

Member of the Cedar Rapids Prairie High School Project Lead the Way advisory board, Spring 2006

Judge for the Cedar Rapids Prairie High School Project Lead the Way student project presentations, May 15, 2006

Monash University Victoria, Australia, external reader of Ph.D. thesis, Timothy Scott (Department of Materials Engineering), 2005-06.

Member of the University of Colorado Department of Chemical and Biological Engineering Departmental Advisory Board 2004-07.

VIP Judge for Future Cities Middle School Competition, Cedar Rapids, Iowa, January 29, 2005

Presenter at the Invent Iowa competition, Spring 2005

VIP Judge for National Engineers Week Future Cities Competition, Cedar Rapids, January 2004

Judge for National Engineers Week Future Cities Competition, Cedar Rapids, February 2003

Director of AIChE Materials Engineering and Science Division, 2002 - 2004

Technical Program Committee Co-chair for the American Chemical Society, Division of Polymeric Materials: Science and Engineering, 1998-2002

Taught industrial shortcourse at Radtech 2000 meeting, Baltimore, MD, 66 industrial attendees.

Taught industrial shortcourse at Radtech 2002 meeting, Indianapolis, IND, ~50 industrial attendees, continuing education credit was available.

Taught industrial shortcourse at Radtech 2004 meeting, Charlotte, NC, ~50 industrial attendees, continuing education credit was available.

Taught industrial shortcourse at Radtech 2006 meeting, Chicago, IL, ~20 industrial attendees, continuing education credit was available.

Outreach activities: scientific and technical presentations at local schools:

- Kirkwood Elementary, Spring 2010
- Grand Wood Elementary, Spring 2010
- LEMME Elementary, Spring 2009
- Kirkwood Elementary, Spring 2009
- Coralville Central, Spring 2009
- Kirkwood Elementary, Spring 2008
- Coralville Central, Spring 2008
- Kirkwood Elementary, Spring 2007
- Roosevelt Elementary, Spring 2007
- Coralville Central, Spring 2007
- Grant Wood Elementary, Spring 2007
- North Cedar High School, Fall 2007
- Roosevelt Elementary, Spring 2007
- Kirkwood Elementary, Spring 2007
- Coralville Central, Spring 2007
- Grant Wood Elementary, Spring 2007
- Cedar Rapids Prairie High School, Spring 2007
- Anamosa High School, Spring 2006
- North Cedar High School, Fall 2006
- Coralville Central, Spring 2006
- Kirkwood Elementary, Spring 2006
- West Liberty Elementary, Spring 2006
- Lincoln Elementary, Spring 2006
- Solon High School, Spring 2005
- Coralville Central, Spring 2005

Kirkwood Elementary, Spring 2005
Roosevelt Elementary, Spring 2005
Solon Middle School, Spring 2005
Coralville Central, Spring 2004
Kirkwood Elementary, Spring 2004
Dubuque Hempstead High School, Fall 2003
Dubuque Senior High School, Fall 2003
Iowa City Regina High School, Fall 2003
Lincoln Elementary School, Spring 2003
Coralville Central Elementary, Spring 2003
Lone Tree Schools (fourth grade through High School), Spring 2003
Coralville Central Elementary, Spring 2002
Northwest Middle School, Spring 2002

Scientific and Professional Society Membership:

Member of the American Institute of Chemical Engineers (AIChE)

Elected, Director of AIChE Materials Engineering and Science Division, 2002 to 2004

Member of the American Chemical Society (ACS)

Member of the Executive Committee for the ACS Division of Polymeric Materials: Science and Engineering (PMSE), 1994 – 1998

Chair of the Technical Programming Committee for PMSE 1998 to 2001.

Member of the American Society for Engineering Education

Member of Omega Chi Epsilon