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Advanced nanocomposite materials synthesis and characterization and self-assembly processing; Polymeric thin films and composites; Fire and heat resistant polymeric materials; Colloidal crystal coating and manufacturing; Templating photonic crystals from polymeric arrays; Nanoencapsulation of useful pigments.

References - see p. 22

Education

Lehigh University, Bethlehem, PA 18015
B.S.E.E. (1971, Electrical Engineering)
M.S. (1973, Chemistry); M.S. (1976, Mathematics)
Ph.D. (1976, Chemistry)

Employment

- 2008-2009 Visiting Professor and Fellow, Max Planck Institute of Colloids and Interfaces, Golm (Potsdam), Germany
- 2002-present Professor, Polymer and Coating Program, Eastern Michigan University
- 2004 Visiting Professor, The University of Applied Sciences Esslingen
Developed and presented course on Particle Synthesis and Characterization (April-May)
- 1998-2002 Managing Consultant (1998), Strider Research Corporation
Developed courses on Patents and Patenting (2003), Nanoparticle Synthesis (2000), Particle-Based Materials Synthesis (2000), Particle Characterization (1999), and Small Particle Formation (1999)
- 2001-2002 Program Director, Experimental Physical Chemistry Program, Chemistry Division, National Science Foundation
- 2000 Adjunct Professor in Chemical Engineering Department, University of Rochester
Taught graduate course on Colloid and Surface Chemistry and Engineering
- 1978-1998 Research Associate (1992), Senior Research Scientist (1983), Research Chemist (1978), Analytical Technology Division, (1993), Color Paper Materials Laboratory (1990), Dispersion Technology Laboratory (1984), Emulsion Physical Chemistry Laboratory (1978), Research Laboratories, Eastman Kodak Company
Technology leader for methods and technology development, for silver halide dopant development, and for colloid characterization
Consultant in colloid and dispersion formulation, development, and paper manufacturing
Manage contract articulation and execution in dispersion formulation and development

Employment (continued)

- Develop particle characterization methods and applications
 - Developed dielectric spectroscopy as quantitative probe for network formation in nanoparticulate thin films
 - Combined conductivity and nmr self-diffusion methods to distinguish microstructural transitions in microemulsions, including percolating cluster formation in reverse microemulsions and subsequent transitions to bicontinuous structure
 - Developed and applied heterocoagulation model for characterization of coating-defect particulates in film manufacture
 - Applied capillary hydrodynamic fractionation to characterization of aqueous dispersions of nanoparticulates and to aqueous gelatin dispersions of oil/coupler particulates
 - Developed prototype thermal diffusion transfer color print materials (heat image separation systems) and prototype aqueous diffusion transfer color print materials for deep tank processing
 - Demonstrated microemulsion polymerization in three component water/anionic surfactant/monomer microemulsions
 - Developed reaction-diffusion model for and optimized structure of future generation photographic paper elements
 - Developed *in situ* precipitation methods for dispersing organic filter dyes
 - Modeled surface charge generation at the water/solid interface in terms of surfactant adsorption and electroacoustic response
 - Developed microcrystalline dispersions with adsorption of plasticizer from solution as an alternate method for incorporating nanocrystalline image couplers in photographic films
 - Developed model for dye-forming efficiency in bilayer records; developed methods for characterizing coupler dispersion reactivity in practical film formats
- 1977-1978 Postdoctoral Research Associate with Professor E. S. Stevens, Chemistry Department, SUNY, Binghamton, NY
- Developed model for circular dichroism of chiral alcohols and saccharides
 - Developed Monte Carlo based algorithm for multidimensional energy minimization
- 1976-1977 Associate Physiologist, Biophysical Spectroscopy Laboratory, Physiology Department, University of California, Irvine, CA
- Developed Monte Carlo methods for modeling sequence specific processes (quantum yields for UV lesion formation, restriction endonuclease digestion) in DNA
- 1974-1976 Buch Fellow, Department of Chemistry, Lehigh University, Bethlehem, PA
- Pursued research projects on PhD thesis; developed cuprous zeolite exchange chemistry; characterized cuprous and cupric exchanged zeolites and copper clusters therein
- 1973-1974 Instructor of Chemistry, Department of Chemistry, Lafayette College, Easton, PA
- Taught advanced physical chemistry, physical chemistry laboratory, and general chemistry
- 1971-1973 Horner Fellow and graduate teaching assistant, Department of Chemistry, Lehigh University, Bethlehem, PA

Professional Activities

- Editor-in-Chief, Journal of Dispersion Science and Technology (2000 - 2004)
Associate Editor (Fall 1999 – June 2000)
- Chair, Chemistry of Supramolecules and Assemblies Gordon Research Conference (2007)
Vice-Chair (2005); Discussion Leader (1999, 2003)
- Chair, Chemistry at Interfaces Gordon Research Conference (1996)
Vice-Chair (1994); Discussion Leader (1989, 1992, 1994, 2000, 2002)
- Chairman - Division of Colloid and Surface Chemistry, American Chemical Society (1998)
Chairman-Elect (1997); Vice-Chairman (1996); Executive Committee - Member at Large (1994-1996); Trustee, Endowment Fund (1998-2001); Webmaster, Division of Colloid and Interface Chemistry (1998-2002; 2007-); Program Chair (2008-)
- Co-Chair - Continuing Symposia on Surfactants and Association Colloids (1992-1997)
- Member at Large, Colloid and Surface Science Symposium Committee (2003-2006)
- Canvassing Committee - ACS Award in Colloid or Surface Chemistry (1994-1997)
- POLYCHAR Scientific Committee (2008-)
- IEEE Nanoelectronics Conference, INEC 2008 (Shanghai), Technical Program Committee
- Chair, NASA Science Concept Review Panel: Low Volume Fraction Colloidal Assembly (2000)
- Participant – ARO Workshop (1999) - *Templated Nanoscale Synthesis and Reactivity*
- Participant - NSF Workshop (1998)
Materials Design and Processing at the Nano- and Mesoscales through Self-Assembly
- Participant – Materials Advanced Study Summer Institute (1998) - *Complex Fluids Materials*
- General Chair and Organizer of the international Particles Conferences:
Particles 2008 – Particle Synthesis, Characterization, and Particle-Based Advanced Materials (Orlando, FL, May); *Particles 2007 – Particle-Based Device Technologies* (Toronto, Ontario, August); *Particles 2006 – Medical/Biochemical Diagnostic, Pharmaceutical and Drug Delivery Applications of Particle Technology* (Orlando, FL, May); *Particles 2005 – Surface Modification in Particle Technology* (San Francisco, CA, August); *Particles 2004 – Particle Synthesis, Characterization, and Particle-Based Advanced Materials* (Orlando, FL, March); *Particles 2003 – Imaging, Marking and Printing Applications of Particle Technology* (Toronto, Ontario, August); *Particles 2002 – Medical/Biochemical Diagnostic, Pharmaceutical and Drug Delivery Applications of Particle Technology* (Orlando, FL, April); *Particles 2001* (Orlando, FL, February)
- Organizer of the symposium “” held at the 79th Colloid and Surface Science Symposium (Clarkson University, Potsdam, NY, June 2005)
- Co-Organizer of the international symposium – *Particle Size Assessment and Characterization* (224th National ACS meeting, Boston, August 2002)
- Co-Organizer of the international symposium - *Ultrasonic and Dielectric Characterization Techniques for Suspended Particulates* (NIST Campus, Gaithersburg, MD, August 1997)
- Organizer of the international symposium - *Interfacial Structure* (210th National ACS meeting, Chicago, August 1995)

Co-Organizer of the international symposium - *Electrochemistry in Microheterogeneous Fluids*
(202nd National ACS meeting, New York, August 1991)

Editorial Board – *Current Opinion Colloid Interface Science* (2001 -)

Editorial Board – *Colloids and Surfaces A. Physicochemical and Engineering Aspects* (2002 -)

Editorial Review Board - *Journal of Imaging Science* (1990)

Awards and Honors

Gordon Best Paper Award, National Paint & Coatings Association, \$1,000 (2009)

Diploma Lecture Award, CBMM Łódź, Polish Academy of Sciences (2009)

Ronald W. Collins Distinguished Faculty Award in Research, \$3500 (2007)

Pfizer Research Award, \$14,000 (2007)

DuPont Science and Engineering Award, \$20,000 (2003)

Fellow, Society for Imaging Science and Technology (1999)

Service Recognition Award, Division of Colloid and Surface Chemistry
of the American Chemical Society (1999)

Team Achievement Award for Improved Ferrotyping (1996)

Kodak Distinguished Inventors' Gallery (1995)

MRE Innovation Award for Nanocrystalline Technology (1995)

CTO Patent Award for Innovation and Initiative in Patenting (1994)

American Men and Women of Science

Who's Who in America

Who's Who in Nanotechnology

Who's Who in Science and Engineering

Who's Who in the East

Buch Fellow (1974-1976)

Sigma Xi (1974)

Horner Fellow (1971-1973)

National Merit Scholar (1967-1971)

Grant and Contract Awards

Air Force Office of Scientific Research (Grant Award No. FA9550-08-1-0431); \$1,523,900; August 15, 2008; Hybrid Materials for Thermal Management in Thin Films and Bulk Composites.

NIGMS/NIH (Award No. RGM080982A); \$5,000, April 1, 2007; Functional Materials through Bottom-Up Self-Assembly, 2007 Chemistry of Supramolecules and Assemblies Gordon Research Conference.

Air Force Research Laboratory (UTC Prime Contract FA8650-05-D-5807, Task Order BH Subcontract Agreement 06-S568-BH-C1); \$841,507; Advanced Coating Systems for Aluminum Surfaces.

Army Research Laboratories (Contract W911QX-06-C-0102); \$365,000, August 25, 2006; Nanomaterials for Biological Defense

Office of Naval Research (Grant Award No. N00014-04-1-0763, renewal modification); \$970,000; November 30, 2005; Advanced Fouling Release Coatings and Analysis

National Science Foundation (Grant No. CHE-0443444); \$203,495; February 1, 2005; RUI – Acquisition of an NMR Spectrometer

U.S. Army Tank-Automotive and Armaments Command (Cooperative Agreement No. DAAD19-03-2-0013); \$335,531; January 1, 2005; Advanced Coatings Research Collaborative Program

Office of Naval Research (Grant Award No. N00014-04-1-0763); \$934,000; August 6, 2004; Advanced Antifouling Coatings and Materials

National Science Foundation (Grant No. DMR-0414803); \$132,784; August 1, 2004; RUI – Acquisition of Thermogravimetric Analyzer System for Advanced Materials Analysis.

National Science Foundation (Grant No. CHE-0407360); \$99,072; May 1, 2004; RUE: RUI-Undergraduate Curriculum Development.

Petroleum Research Fund (ACS-PRF Grant No. 40316-B9), \$50,000, January 1, 2004; Comminution Dilatancy in Nanoparticle (Organic Nanopigment) Formation.

U.S. Army Tank-Automotive and Armaments Command (Contract DAAE07-03-Q), \$167,650, November 2003; Anticorrosion/Antimicrobial Active Coating Platform.

Dupont Science and Engineering Award, \$20,000, October 2003.

Dupont Performance Coatings (Contract), \$60,000, September 2003; Color Matching Automotive Metallic Pigments.

Grant and Contract Awards (continued)
Publications (Research Articles, Reviews, Patents, Books)

164. "Carbon nanotube latexes;" M. Antonietti, Y. Shen, T. Nakanishi, N. Tambe, R. Crombez, and J. Texter, *Adv. Mater.* (2009) submitted.
163. "Antimicrobial anionic surfactants active against gram-positive bacteria;" S. Rhoades, R. Amad, P. Ziemer, D. Clemans, L. Shetron-Rama, and J. Texter, *J. Antmicrob. Chemotherapy* , submitted.
164. "Superprimers from stimuli-responsive nanolatexes;" N. Tambe, D. England, and J. Texter, European Coatings 2009 Conference Proceedings, Vincentz, Nurenburg (2009) pp. xxx-xxx (in press).
162. "Advanced applications of ionic liquids in polymer science," F. Yan, J. Lu, and J. Texter, *Prog. Poly. Sci.* , **34**, 431-448 (2009); doi:10.1016/j.progpolymsci.2008.12.001.
161. "Templating hydrogels;" J. Texter, *Coll. Polymer Sci.* **287**, 313-321 (2009); DOI: 10.1007/s00396-008-1990-z.
160. "New high charge density polymers for printable electronics, sensors, batteries, and fuel cells," H. Gu, D. England, F. Yan, and J. Texter, 24-27 March 2008, 2nd International Nanoelectronics Conference (INEC 2008), 863-868.
159. "Ionic liquids in microemulsions," Z. Qiu and J. Texter, *Curr. Opinion Colloid Interface Science*, **13**, 252-262 (2008).
158. "Bactericidal silver ion delivery into hydrophobic coatings with surfactants," J. Texter, P. Ziemer, S. Rhoades, and D. Clemans, *J. Industrial Microbiol .Biotech.* **34**, 571-575 (2007).
157. "Blowing bubbles in PMMA with the SEM," J. Kraut, R. Hiesgen, L. Ge, and J. Texter, *Polymer Preprints*, **48**, 520-521(2007).
156. "LV-TEM imaging of nanosilica formation in thermoreversible block copolymer gel," J. Texter, R. Schwarz, and P. Stepan, *Polymer Preprints*, **48**, 511-512 (2007).
155. "Reversibly-porating materials via microemulsion polymerization," F. Yan, D. England, H. Gu, and J. Texter, *PMSE Preprints*, **97**, 345-347 (2007).
154. "Solvent-reversible poration in ionic liquid copolymers," F. Yan and J. Texter, *Angew. Chem. Int. Ed.*, **46**, 2440-2443 (2007); DOI: .10.1002/anie.200604127.
153. "Reversibly porating coatings" F. Yan and J. Texter, in *Proceedings of Smart Coatings 2007*, T. Provder and J. Baghdachi, Editors, Eastern Michigan University, Ypsilanti, Michigan, 2007, pp. 72-87.

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152. "Polymerization of and in mesophases," F. Yan and J. Texter, *Adv. Colloid Interface Sci.*, **128-130**, 27-35 (2006); DOI: 10.1016/j.cis.2006.11.014.
151. "Dynamical mechanical analysis and curing analysis of fouling release coatings and components," T. Provder, S. Malliprakash, S. H. Amin, A. Majid, J. Texter, *Macromol. Symp.* **242**, 279-289 (2006); DOI: 10.1002/masy.200651039.
- Publications (continued)
150. "Surfactant ionic liquid-based microemulsions for polymerization," F. Yan and J. Texter, *Chem. Comm.*, 2696-2698 (2006); DOI: 10.1039/b605287h.
149. "Electroacoustic characterization of electrokinetics in concentrated pigment dispersions: 3-cyano-4-(4'-butanesulfonamidophenyl)-5-furylidene-furan-2-one," J. Texter, *Colloids Surfs. A. Physicochem. Aspects*, **282-283**, 475-482 (2006).
148. "Capturing nanoscopic length scales and structures by polymerization in microemulsions," F. Yan and J. Texter, *Soft Matter*, **2**, 109-118 (2006).
147. "Fouling release and antifouling coatings derived from thermoreversible gels," J. Texter and R. Schwarz, *Polymer Preprints*, **46**, 1238-1239 (2005).
146. "Amide-ligand hydrogen bonding in reverse micelles," M.A. Walters, P.M. Tadross, A.L. Rheingold, L.N. Zakharov, D. Mudzudzu, and J. Texter, *Inorg. Chem.*, **44**, 1172-1174 (2005).
145. "Polymerizable bis(2-ethylhexyl)sulfosuccinate - Application in microemulsion polymerization;" J. Texter and L. Ge, *Langmuir*, **20**, 11288-11292 (2004).
144. "Colloid and interface science applications;" J. Texter, *Curr. Opinion Colloid Interface Science*, **9**, 253-254 (2004).
143. "Combustion resistant nanocomposites from water/AOT/MMA reverse microemulsions;" L. Ge and J. Texter, *Polym. Bull.* **52**, 297-305 (2004).
142. "Polyurethanes via microemulsion polymerization;" J. Texter and P. Ziemer, *Macromolecules*, **37**, 5841-5853 (2004); Correction, **37**, 7424 (2004).
141. *Particle Sizing and Characterization*, ACS Symp. Ser., vol. 881, T. Provder and J. Texter, Editors, American Chemical Society, Washington, DC, 2004, 298 pp.
140. "Capillary hydrodynamic fractionation of organic nanopigment dispersions;" J. Texter, in *Particle Sizing and Characterization*, ACS Symp. Ser., vol. 881, T. Provder and J. Texter, Editors, American Chemical Society, Washington, DC, 2004, pp. 151-173.
139. "Nanoparticle dispersion: Challenges and solutions;" J. Texter, in *Nanoparticles 2003 – Volume VI – Proceedings of the Sixth Annual BCC Conference*, M.N. Rittner and T. Abraham, Editors, Business Communications Company, Norwalk, CT, 2004, pp. 55-78.

Publications (continued)

138. "Polymer colloids in photonic materials;" J. Texter, *Comptes Rend. Chimie*, **6**, 1425-1433 (2003).
137. "Particle surface modification in diagnostics and drug delivery;" J. Texter, *Polym. Mat.: Sci. Eng.*, **89**, 98-100 (2003).
136. "Colloid and interface science applications;" J. Texter and T.A. Hatton, *Curr. Opinion Colloid Interface Science*, **7**, 253-254 (2002).
135. "Dielectric spectroscopy of particle-based waterborne coatings;" J. Texter, *J. Non-Crystalline Solids*, **305**, 339-344 (2002).
134. "Capillary hydrodynamic fractionation of organic nanopigment dispersions;" J. Texter, *Polym. Mat.: Sci. Eng.*, **87**, 339-340 (2002).
133. "Physical state and structure of dispersion particles – Effects on reactivity;" J. Texter, in *Proc. International Congress of Imaging Science 2002*, Society of Photographic Science and Technology of Japan and The Imaging Society of Japan, Tokyo, 2002, pp. 110-111.
132. "Micelles;" J. Texter, in *Encyclopedia of Chemical Physics and Physical Chemistry Volume III.: Applications*, J.H. Moore and N.D. Spencer, Editors, Institute of Physics Publishing, Philadelphia, (2001) 2285-2316.
131. "Precipitation and condensation of organic particles;" J. Texter, *J. Disp. Sci. Technol.*, **22**, 499-527 (2001).
130. "Surface and colloid chemistry in photographic technology;" J. Texter, in *Handbook of Applied Colloid and Surface Chemistry*, K. Holmberg, Editor, Wiley, London, 2001, pp. 85-104.
129. "Chemical processing by self-assembly;" J. Texter and M. Tirrell, *AIChE J.*, **47**, 1706-1710 (2001).
128. *Reactions and Synthesis in Surfactant Systems*, J. Texter, Editor, Marcel Dekker, New York, 2001, 905 pp.
127. "Organic particle precipitation;" J. Texter, in *Reactions and Synthesis in Surfactant Systems*, J. Texter, Editor, Marcel Dekker, New York, 2001, pp. 577-607.
126. "Microstructure effects on transport in microemulsions;" J. Texter, in *Liquid Interfaces in Chemical, Biological, and Pharmaceutical Applications*, A. G. Volkov, Editor, Marcel Dekker, New York, 2001, pp. 241-255.
125. "Chromogenic black and white imaging for heat image separation;" J. Texter and R.G. Willis, *U.S. Patent 6,114,080*, September 5, 2000.