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University of South Florida
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EDUCATION

June, 1996	Ph. D. (ChE)	California Institute of Technology, Pasadena, CA
June, 1993	M. S. (ChE)	California Institute of Technology, Pasadena, CA
July, 1990	B. Tech. (ChE)	Indian Institute of Technology, Bombay, India

PROFESSIONAL EXPERIENCE

2010 – To date	Professor of Chemical & Biomedical Engineering
2004 - 2010	Associate Professor of Chemical & Biomedical Engineering University of South Florida
1997 - 2004	Assistant Professor of Chemical & Biomolecular Engineering Research Faculty, Frederick Seitz Materials Research Laboratory Research Faculty, Center for Nanoscale Science and Technology Research Faculty, Materials Chemistry, Department of Chemistry University of Illinois at Urbana-Champaign, IL (UIUC).
1995 - 1997	Post-Doctoral Researcher University of California (Davis) and Center for Polymeric Interfaces and Macromolecular Assemblies (IBM-UCDavis-Stanford).
1990 - 1995	Graduate Research Assistant California Institute of Technology, Pasadena, CA (Caltech).

HONORS

Outstanding Professor Award by AIChE Student Chapter at USF (2011)

Invited attendee, 2nd Frontiers of Engineering Education Symposium by National Academy of Engineering (2010)

Jerome Krivanek Distinguished Teacher Award, University of South Florida (2009)

Member, Charter Class of Academy of Inventors, University of South Florida (2009)

Outstanding Undergraduate Teaching Award, University of South Florida (2007-2008)

Million Dollar Researcher: Recognition of Outstanding Research Achievement by USF Sponsored Research (2005-06)

Daily Illini's Incomplete List of Teachers Ranked Excellent (2004, 2003, 2002, 2001, 1998)*

Faculty Early Career Development (CAREER) Award by NSF (1999-2003)

Teaching Excellence Award, School of Chemical Sciences, University of Illinois (1999)

Everitt Award for Teaching Excellence, College of Engineering, University of Illinois (1999)

GE Scholar and Graduate of Teaching College, University of Illinois (1997-98)

Raychem Fellowship, California Institute of Technology (1991-93)

William H. Corcoran Graduate Fellowship, California Institute of Technology (1990-91)

Silver Medal for ranking first, Indian Institute of Technology (1990)

National Merit Scholarship, Government of India (1984-90)

*Top 30% of instructors at the University of Illinois

PUBLICATIONS (peer reviewed; * indicates corresponding author)

1. Cecil Coutinho and Vinay Gupta*, "CMP Using Polymeric Additives and Composite Abrasive Particles" In Handbook of Plastics Engineering. Editor: M. Kutz, Elsevier Publishers (2011).

2. F. Fanord, K. Fairbairn, H. Kim, A. Garces, V. Bhethanabotla, and V. K. Gupta*, "Bisphosphonate-modified Gold Nanoparticles: A Useful Vehicle to Study Treatment of Osteonecrosis of the Femoral Head", ***Nanotechnology,* 22(3),** 035102/1-035102/11 (2011).

3. B. D. Mankidy, C. A. Coutinho, and V. K. Gupta*, "Probing the Interplay of Size, Shape, and Solution Environment on Macromolecular Diffusion using a Simple Refraction Experiment", ***Journal of Chemical Education***, **8 (5)**, 515–518 (2010).

4. C. A. Coutinho, B. D. Mankidy, and V. K. Gupta*, "A Simple Refraction Experiment for Probing Diffusion in Ternary Mixtures", ***Chemical Engineering Education,* 44(2)**, 134-139 (2010).

5. C. A. Coutinho and V. K. Gupta*, "Photocatalytic Degradation of Methyl Orange Using Polymer-Titania Microcomposites", ***J Colloid and Interface Science* 333(2)**, 457-464 (2009).

6. D. A. Walker and V. K. Gupta*, "Reversible End-to-End Assembly of Gold Nanorods using a Disulfide modified Polypeptide", ***Nanotechnology,* 19(43)**, 435603/1-435603/9 (2008).

7. C. A. Coutinho, Subrahmanya R. Mudhivarthi, Ashok Kumar, and V. K. Gupta*, "Novel Ceria-Polymer Microcomposites for Chemical Mechanical Polishing", ***Applied Surface Science, 255(5,Pt. 2)***, 3090-3096 (2008).

8. C. A. Coutinho, R. Harrinauth and V. K. Gupta*, "Settling Characteristics of Composites of PNIPAM Microgels and TiO_2 Nanoparticles", ***Colloid and Surfaces A: Physicochemical and Engineering Aspects***, **318**, 111-121 (2008).

9. J. Y. Shim and V. K. Gupta*, "Reversible Aggregation of Gold Nanoparticles Induced by pH Dependent Conformational Transitions of a Self-Assembled Polypeptide", ***Journal of Colloid and Interface Science***, **316**, 977-983 (2007).

10. C. A. Coutinho and V. K. Gupta*, "Formation and Properties of Composites Based on Microgels of a Responsive Polymer and TiO_2 Nanoparticles", ***Journal of Colloid and Interface Science,* 116**, 116-122 (2007).

11. Raghu Mudhivarti, Cecil Coutinho, Ashok Kumar and Vinay K. Gupta*, "Novel Core-Shell Type Abrasive Particles for Oxide CMP Applications", ***ECS Transactions***, **3(41)**, 9-19, (2006).

12. Yu-Wen Huang and V. K. Gupta*, "An SPR and AFM Study of the Effect of Surface Heterogeneity on the Adsorption of Proteins", ***J Chemical Physics***, **121(5)**, 2264-2271 (2004).

13. J. D. Faull, P. J. Wissmann and V. K. Gupta*, "Ionic Interactions and Multilayer Structures on Self-Assembled Surfaces of Calix[4]resorcinarene", ***Thin Solid Films***, **457(2)**, 292-300 (2004).

14. Vinay K. Gupta* and Yu-Wen Huang, "Adsorption of Flexible Polymers and Globular Proteins on Surfaces with Nanometer Scale Heterogeneity", In ***Encylcopedia of Nanoscience and Nanotechnology***, Editors: J. A. Schwarz, C. Contescu, K. Putyera, Marcel-Dekker, Inc., New York (NY), p23-34 (2004).

15. Vinay K. Gupta*, "Interfacial Phenomena at the Nanoscale", In ***Encylcopedia of Nanoscience and Nanotechnology***, Editors: J. A. Schwarz, C. Contescu, K. Putyera, Marcel-Dekker, Inc., New York (NY), p1505-1514 (2004).

16. John D. Faull and Vinay K. Gupta*, "Chemical Selectivity of Self-Assembled Surfaces of Calix[4]resorcinarene", ***Thin Solid Films***, **440(1-2)**,129-137 (2003).

17. Yu-Wen Huang, Kyoung-Yong Chun, and V. K. Gupta*, "Adsorption of a Polyelectrolyte on Surfaces with Nanometer Sized Chemical Heterogeneity", ***Langmuir***, **19(6)**, 2175-2180 (2003).

18. Kyoung-Yong Chun, Yu-Wen Huang, and V. K. Gupta*, "Polymer Adsorption on Nano-heterogeneous Surfaces: Impact of Size and Density of Heterogeneous Sites", ***J Chemical Physics***, **118(7)**, 3252-3256 (2003).

19. Alveda J. Williams and Vinay K. Gupta*, "Structure and Formation of Self-Assembled Monolayers of Helical Poly(γ-benzyl L-glutamate) by Surface Plasmon Resonance and Infrared Spectroscopy", ***Thin Solid Films***, **423(1/2)**, 228-234 (2003).

20. Vinay K. Gupta*, Yu-Wen Huang, and Kyoung-Yong Chun, "Role of nanometer scale heterogeneity of surfaces in the adsorption of macromolecules", ***Recent Research Developments in Macromolecules***, Volume 6, S. G. Pandalai (Ed.), Research Signpost, Trivandrum (2002).

21. John D. Faull and Vinay K. Gupta*, "Impact of Host Structure on Guest-Host Recognition at Self-Assembled Surfaces of Tetrathiol and Tetrasulfide Derivatives of Calix[4]resorcinarene", ***Langmuir***, **18(17)**, 6584-6592 (2002).

22. Mun-Sik Kang and Vinay K. Gupta*, "Photochromic Cross-links in Thermo-responsive Hydrogels of Poly(N-isopropylacrylamide): Enthalpic and Entropic Consequences on Swelling Behavior", ***J. Physical Chemistry B***, **106**, 4127-4132 (2002).

23. Yu-Wen Huang and Vinay K. Gupta*, "Influence of Polymer Flux and Chain Length on the Adsorption of Poly(ethylene oxide) on Physically Heterogeneous Surfaces", ***Langmuir***, **18**, 2280-2287 (2002).

24. Dennis W. Smithenry, Mun-Sik Kang, and Vinay K. Gupta*, "Telechelic Poly(*N*-isopropylacrylamide): Polymerization and Chain Aggregation in Solution", ***Macromolecules,*** **34**, 8503-8511 (2001).

25. Alveda J. Williams and Vinay K. Gupta*, "Role of Photochromic Initiator in the Synthesis and Physical Properties of Hinged, Photoresponsive Polypeptides", ***J. Polymer Science: Part B Physics,*** **39**, 2759 - 2773 (2001).

26. Alveda J. Williams and Vinay K. Gupta*, "Self-Assembly of a Rod-like Polypeptide on Solid Surfaces: Role of Solvent, Molecular Weight, and Time of Assembly", ***J. Physical Chemistry B,*** **105**, 5223-5230 (2001).

27. Yu-Wen Huang and Vinay K. Gupta*, "Effects of Physical Heterogeneity on the Adsorption of Poly(ethylene oxide) at a Solid-Liquid Interface", ***Macromolecules***, **34**, 3757-3764 (2001).

28. John D. Faull and Vinay K. Gupta*, "Selective Guest-Host Association on Self-Assembled Monolayers of Calix[4]resorcinarene", ***Langmuir***, **17**, 1470-1476 (2001).

29. V. K. Gupta and N. L. Abbott, "Using Droplets of Liquid Crystals to Probe the Microscopic and Mesoscopic Structure of Organic Surfaces", ***Langmuir***, **15**, 7213-7223 (1999).

30. B. S. Gallardo, V. K. Gupta, F. D. Eagerton, L. I. Jong and N. L. Abbott, "Electrochemical Principles for Active Control of Liquids on Sub-Millimeter Scales", ***Science***, **283**, 57-60 (1999).

31. N. L. Abbott, V. K. Gupta, W. J. Miller, and R. R. Shah, "Orientations of Liquid Crystals on Self-Assembled Monolayers Formed From Alkanethiols on Gold", ***ACS Symposium Series,*** **695**, 81-103 (1998).

32. V. K. Gupta, J. J. Skaife, T. B. Dubrovsky, and N. L. Abbott, "Optical Amplification of Ligand Receptor Binding Using Liquid Crystals", ***Science***, **279**, 2077-2080 (1998).

33. V. K. Gupta and N. L. Abbott, "Design of Surfaces for Patterned Orientation of Liquid Crystals on Planar and Curved Substrates", ***Science***, **276**, 1533-1536 (1997).

34. W. J. Miller, V. K. Gupta, N. L. Abbott, M. Tsao, and J. F. Rabolt, "Comparison of the Anchoring of Nematic Liquid Crystals on Self-Assembled Monolayers Formed From Semifluorinated Thiols and Alkanethiols on Gold", ***Liquid Crystals,*** **23**, 175-184 (1997).

35. V. K. Gupta and N. L. Abbott, "Azimuthal Anchoring Transition of Nematic Liquid Crystals Anchored on Self-Assembled Monolayers Formed From Odd and Even Alkanethiols", ***Physical Review E,*** **54** (5), R4540-R4543 (1996).

36. V. K. Gupta, W. J. Miller, C. L. Pike, and N. L. Abbott, "Using Isotropic, Nematic and Smectic Fluids for the Study of Self-Assembled Monolayers Formed From Alkanethiols on Gold", ***Chemistry of Materials,*** **8** (7), 1366-1369 (1996).

37. V. K. Gupta and N. L. Abbott, "Uniform Anchoring of Nematic Liquid Crystals on Self-Assembled Monolayers Formed From Alkanethiols on Obliquely Deposited Gold", ***Langmuir,* 12** (10), 2587-2593 (1996).

38. V. K. Gupta, R. Krishnamoorti, J. A. Kornfield, and S. D. Smith, "Role of Strain in Controlling Lamellar Orientation During Flow Alignment of Diblock Copolymers", ***Macromolecules,* 29** (4), 1359-1362 (1996).

39. V. K. Gupta, R. Krishnamoorti, Z. R. Chen, J. A. Kornfield, S. D. Smith, M. Satkowski, and J. Gothaus, "Dynamics of Shear Alignment in a Lamellar Diblock Copolymer: Interplay of Frequency, Strain Amplitude and Temperature", ***Macromolecules,* 29** (3), 875-884 (1996).

40. V. K. Gupta, R. Krishnamoorti, J. A. Kornfield, and S. D. Smith, "Evolution of Microstructure During Shear Alignment in a Polystyrene-Polyisoprene Diblock Copolymer", ***Macromolecules,* 28 (**13**)**, 4464-4474 (1995).

41. V. K. Gupta, J. A. Kornfield, A. Ferencz, and G. Wegner, "Controlling Molecular Ordering in 'Hairy-Rod' Polymer Langmuir-Blodgett Films: A Polarization-Modulation Microscopy Study", ***Science,* 265 (**5174**)**, 940-942 (1994).

42. V. K. Gupta and J. A. Kornfield, "Polarization-Modulation Laser-Scanning Microscopy (PM-LSM): A Powerful Tool to Image Molecular Order", ***Review of Scientific Instruments***, **65** (9), 2823-2828 (1994).

43. V. K. Gupta and S. K. Bhatia, "Solution of Cyclic Profiles in a Catalytic Reactor with Periodic Flow Reversal", ***Computers & Chemical Engineering***, **15** (4), 229-237 (1991).

CONFERENCE PROCEEDINGS (non-refereed; * indicates corresponding author)

1. C. A. Coutinho, Subrahmanya R. Mudhivarthi, Ashok Kumar, and V. K. Gupta*, "*Chemical Mechanical Polishing of Oxide Layers using Novel Ceria-Polymer Microcomposites*", Proceedings of the Annual Meeting of the AIChE, November 2008.

2. C. A. Coutinho and V. K. Gupta*, "*Developing Composites of Polymer Microgels and Titania Nanoparticles for Photocatalytic Degradation*", Proceedings of the Annual Meeting of the AIChE, November 2008.

3. Vinay K. Gupta*, Babu Joseph, Norma Alcantar, Ryan Toomey and Aydin Sunol, "*A Spiral Curriculum for Chemical Engineering*", Proceedings of the Annual Meeting of the AIChE, November 2008.

4. C. A. Coutinho, Subrahmanya R. Mudhivarthi, Ashok Kumar, and V. K. Gupta*, *"Novel Slurries of Hybrid Inorganic-Organic Abrasive Microparticles for Oxide CMP",* Proceedings of the 13th International Chemical-Mechanical Planarization for ULSI Multilevel Interconnection Conference (CMP-MIC), March 2008.

5. Cecil Coutinho, Subrahmanya R. Mudhivarthi, Ashok Kumar, and V. K. Gupta*, "*Hybrid Inorganic-Organic Microparticles for Chemical Mechanical Polishing*", Proceedings of the Annual Meeting of the AIChE, November 2007.

6. Cecil Coutinho and Vinay K. Gupta*, "*Synthesis And Properties Of Functional Composites Formed From A Responsive Polymer And Titania Nanoparticles*", Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2007).

7. Cecil Coutinho and Vinay K. Gupta*, "*Smart Responsive Composite Materials for Downstream Remediation*", Proceedings of the 3rd Annual USF Interdisciplinary Graduate Research Symposium, 3, 108-109 (2007).

8. Cecil Coutinho, David Walker, Maya Trotz and Vinay K. Gupta*, "*Composite Materials of Thermo-responsive Polymer Networks and Inorganic Nanoparticles*", Proceedings of the Annual Meeting of the AIChE, November 2006.

9. Cecil Coutinho and Vinay K. Gupta*, "*Composite Smart Materials for Use in Wastewater Remediation*", Proceedings of the 2nd Annual USF Interdisciplinary Graduate Research Symposium, 2, 66-67 (2006).

10. Vinay K. Gupta* and Yu-Wen Huang, *"Polymer adsorption on nano-heterogeneous surfaces",* Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2003), 44(1), 1093-1094.

11. Vinay K. Gupta* and Mun-Sik Kang, *"Enthalpic and entropic consequences of photochromic cross-links in thermo-responsive hydrogels of poly(N-isopropylacrylamide)"*, Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2002), 43(1), 338-339.

12. Vinay K. Gupta* and Alveda J. Williams, *"Controlled self-assembly of helical, rod-like polypeptides on solid surfaces"*, Polymeric Materials Science and Engineering (2001), 84 25-26.

13. Nicholas L. Abbott, Rahul R. Shah, Vinay K. Gupta, and Justin J. Skaife, *"Using liquid crystals as probes of nanostructured organic surfaces"*, Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1999), 40(1), 425-426.

14. Nicholas L. Abbott, Vinay K. Gupta, William J. Miller, and Rahul R. Shah, *"Orientations of liquid crystals on self-assembled monolayers formed from alkanethiols on gold"*, Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1997), 38(1), 941-942.

15. V. K. Gupta, R. Krishnamoorti, J. A. Kornfield, and S. D. Smith, *"Effect of shear frequency and strain on the evolution of flow alignment of PS-PI lamellar diblock copolymers",* Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1995), 36(1), 176-7.

16. J. A. Kornfield, R. Krishnamoorti, V. K. Gupta, Z. – R. Chen, S. D. Smith, and A. Ashraf, *"Order and dynamics of ABC triblocks",* Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (1995), 36(1), 172-3.

PATENTS

1. V. K. Gupta, C. Coutinho, M. Trotz, 'Functional Composites formed from Colloidal Polymer Particles with Photocatalytic Metal Oxide (MOx) Nanoparticles', Patent Pending.
2. V. K. Gupta, A. Kumar, C. Coutinho, S. Mudhivarthi, 'Polymeric Microgels for Chemical Mechanical Planarization (CMP) Processing', US Patent Application (20090013609) January 15, **2009**.
3. N. L. Abbott, J. J. Skaife, V. K. Gupta, T. B. Dubrovsky, and Rahul R. Shah, 'Optical Amplification of Molecular Interactions Using Liquid Crystals',
   World Intellectual Property (# WO-9963329A1), December 9, **1999;** *European Patent* (# EP-1084394A1), March 21, **2001**; *US Patent* (#6,284,197B1), September 4, **2001**.
4. J. A. Kornfield, V. K. Gupta and A. Kratel, 'Polarization-Modulation Laser-Scanning Microscopy', *U. S. Patent* (#5,457,536), October 10, **1995**.

PRESENTATIONS

1. V. K. Gupta "Innovations in Engineering E-Learning: A Simple Approach to Enabling Advanced & Interactive Calculations within Instructional Presentations", 2nd Frontiers of Engineering Education Symposium by National Academy of Engineering, December 2010 (**invited)**.
2. V. K. Gupta "Engineering Novel Materials and Constructs by Combining Polymers with Inorganic Nanoparticles", Nanoflorida 2010 Symposium, Orlando (FL), September 2010 (**invited)**.
3. V. K. Gupta, Bijith Mankidy, and Cecil Coutinho, "A Simple Optical Experiment On Polymer Diffusion for Undergraduates That Incorporates Web-Cam Capture, Data Digitization, and Multi-Variable Regression", American Institute of Chemical Engineers, Annual Meeting, Nashville (TN), November 2009.
4. V. K. Gupta, "A Spiral Curriculum for Chemical Engineering", American Institute of Chemical Engineers, Annual Meeting, Philadelphia (PA), November 2008.
5. V. K. Gupta, "Transforming Chemical Engineering Education for Transfer Students", American Society of Engineering Education (ASEE), Annual Meeting, Pittsburgh (PA), June 2008.
6. V. K. Gupta, "Chemical Engineering Curriculum - Spiraling out of Control OR Spiraling into Control", American Institute of Chemical Engineers, Annual Meeting, Salt Lake City (UT), November 2007.

7. V. K. Gupta, David Walker, and Jeong-Yeop Shim, “Switching the Aggregation of Nanoparticles by pH Dependent Conformational Transitions of a Self-Assembled Polypeptide”, American Institute of Chemical Engineers, Annual Meeting, Salt Lake City (UT), November 2007.

8. V. K. Gupta, “New Uses of Stimuli-Responsive Polymers in Nanoscience and Nanotechnology”, Drug Discovery Colloquium, Department of Chemistry, University of South Florida, September 18, 2007. **[invited]**

9. V. K. Gupta, “Materials Characterization Using Polarized Light”, Center for Communications and Signal Processing Seminar, Department of Electrical Engineering, University of South Florida, August 23, 2007. **[invited]**

10. V. K. Gupta and Jeong-Yeop Shim, “Reversible Aggregation of Nanoparticles Induced by pH Dependent Transitions of a Self-Assembled Polypeptide”, American Institute of Chemical Engineers, Annual Meeting, San Francisco (CA), November 2006.

11. V. K. Gupta, Jeong-Yeop Shim, Justine Molas and Adrian Defante, “Ionization, Molecular Recognition, and Wetting Phenomena on Self-Assembled Interfaces formed from Chiral and Achiral Macrocylic Compounds”, American Institute of Chemical Engineers, Annual Meeting, San Francisco (CA), November 2006.

12. V. K. Gupta, Babu Joseph, Aydin Sunol, Norma Alcantar and Ryan Toomey, “Transforming the Educational Experience of Transfer Students in Chemical Engineering using a Multi-Dimensional Spiral Curriculum”, American Institute of Chemical Engineers, Annual Meeting, San Francisco (CA), November 2006.
13. V. K. Gupta, " Self-Assembled Surfaces: A Tool to Understand and Control Interfacial Recognition and Adsorption”, Department of Chemical Engineering, City College of New York, November 2005. **[invited]**

14. V. K. Gupta and Jeong-Yeop Shim, “Caged Polymers within Metallic Nanoshells as Novel Hybrid Nanomaterials”, American Institute of Chemical Engineers**,** Annual Meeting, Cincinnati (OH), October 2005.

15. V. K. Gupta and Justine Molas, “Ionization of Self-Assembled Surfaces of Bowl-Shaped Cavitands”, American Institute of Chemical Engineers**,** Annual Meeting, Cincinnati (OH), October 2005.

16. V. K. Gupta and Yu-Wen Huang, "AFM and SPR Study of Adsorption of Flexible and Globular Polymers on Nano-Heterogeneous Surfaces", Annual Symposium of Florida Chapter of the AVS Science and Technology Society, Orlando (FL), March 2005.

17. V. K. Gupta, "Self-Assembled Surfaces of Cavitands for Selective Binding of Neutral and Ionic Species", American Institute of Chemical Engineers**,** Annual Meeting, Austin (TX), November 2004.

18. V. K. Gupta and Yu-Wen Huang, "Surface Heterogeneity and its Impact on Adsorption of Flexible and Globular Polymers", American Institute of Chemical Engineers**,** Annual Meeting, Austin (TX), November 2004.

19. V. K. Gupta, "Interfacial Phenomena: Chemical Selectivity at Self-Assembled Surfaces", American Chemical Society, Symposium on Nanoscience and Nanotechnology, Annual Meeting, Anaheim (CA), March 2004.**[invited paper]**

20. V. K. Gupta and Yu-Wen Huang, "Adsorption of Flexible and Globular Polymers on Heterogeneous Surfaces", Symposium on Nanoscience and Nanotechnology, American Chemical Society, Annual Meeting, Anaheim (CA), March 2004.**[invited paper]**

21. V. K. Gupta, "Controlling Interfacial Phenomena using Molecularly Engineered Surfaces", Department of Chemical & Biomolecular Engineering, Tulane University, December 2003. **[invited]**

22. John D. Faull and V. K. Gupta, "Role of molecular size and chemical structure in guest-host recognition on self-assembled surfaces", American Institute of Chemical Engineers**,** Annual Meeting, Indianapolis (IN), November 2002.

23. Mun-Sik Kang and V. K. Gupta, "Enthalpic and entropic consequences of photochromic cross-links in thermo-responsive hydrogels of poly(N-isopropylacrylamide)", American Institute of Chemical Engineers**,** Annual Meeting, Indianapolis (IN), November 2002.

24. Yu-Wen Huang, Kyoung-Yong Chun, and V. K. Gupta, "Impact of nanometer scale heterogeneity of surfaces on the adsorption of neutral and ionic polymers on a surface", American Chemical Society, Annual Meeting, Orlando (FL), April 2002.

25. John D. Faull and V. K. Gupta, "Interplay between size and chemical structure in guest-host recognition on self-assembled surfaces formed from calix[4]resorcinarene", American Chemical Society, Annual Meeting, Orlando (FL), April 2002.

26. Mun-Sik Kang and V. K. Gupta, "Enthalpic and entropic consequences of photochromic cross-links in thermo-responsive hydrogels of poly(N-isopropylacrylamide)", American Chemical Society, Annual Meeting, Orlando (FL), April 2002.

27. Alveda J. Williams, Mun-Sik Kang, and V. K. Gupta, "Two-dimensional interfacial assembly of helical, rod-like polypeptides on solid substrates", American Chemical Society, Annual Meeting, Orlando (FL), April 2002.

28. V. K. Gupta, "Probing Interfacial Phenomena using Molecularly Engineered Surfaces", Department of Chemical Engineering, Northwestern University, April 2002. **[invited]**

29. Alveda J. Williams and V. K. Gupta, "Synthesis and Physical Characterization of a Hinged, Photoresponsive Polypeptide", American Institute of Chemical Engineers**,** Annual Meeting, Reno (NV), November 2001.

30. John D. Faull and V. K. Gupta, "Selective Guest-Host Association from Aqueous Solutions on Self-Assembled Surfaces formed from Calix[4]resorcinarene", American Institute of Chemical Engineers**,** Annual Meeting, Reno (NV), November 2001.

31. Dennis Smithenry, Mun-Sik Kang, and V. K. Gupta, "Telechelic Poly(N-Isopropylacrylamide): Polymerization and Chain Aggregation in Solution", American Institute of Chemical Engineers**,** Annual Meeting, Reno (NV), November 2001.

32. Yu-Wen Huang, Kyoung-Yong Chun, and V. K. Gupta, "Kinetics of Polymer Adsorption on Heterogeneous Surfaces", American Institute of Chemical Engineers**,** Annual Meeting, Reno (NV), November 2001.

33. V. K. Gupta, "Interplay of Molecular Structure and Forces in Interfacial and Solution Phenomena of Polymers", Nylon Intermediates Group, DuPont (Sabine River Laboratory), August 2001 **[invited]**.

34. V. K. Gupta, "Molecular Engineering of Surfaces by Self-Assembly of New Structural Motifs", Department of Chemical Engineering, Princeton University, April 2001. **[invited]**

35. V. K. Gupta, "Selective Guest-Host Association on Self-Assembled Monolayers of Calix[4]resorcinarence", American Chemical Society, Annual Meeting, San Diego (CA), April 2001. **[invited]**

36. Alveda J. Williams and V. K. Gupta, "Controlling Self-Assembly of Helical, Rod-Like Polypeptides on Solid Surfaces", American Chemical Society**,** Annual Meeting, San Diego (CA), April 2001.

37. Alveda J. Williams and V. K. Gupta, "Self-Assembled Films of Rod-Like Polypeptides: Influence of Molecular Weight and Solvent Polarity", The International Chemical Congress of Pacific Basin Societies, Pacifichem 2000, Honolulu (HI), December 2000.

38. Alveda J. Williams and V. K. Gupta, "Self-Assembled Films of Rod-Like Polypeptides: Influence of Molecular Weight and Solvent Polarity", American Institute of Chemical Engineers**,** Annual Meeting, Los Angeles (CA), November 2000.

39. John D. Faull and V. K. Gupta, "Chemically Selective Surfaces for Targeted Recognition of Trace Organic Chemical: A Study into the Role of Molecular Organization", American Chemical Society, Annual Meeting, Washington (DC), August 2000.

40. Yu-Wen Huang and V. K. Gupta, "Adsorption of Polymers on Chemically Heterogeneous Surfaces", American Chemical Society, Annual Meeting, Washington (DC), August 2000.

41. V. K. Gupta, " A Balancing Act Between Elastic and Flexoelectric Effects in Liquid Crystals", Midwest Thermodynamics and Statistical Mechanics Conference, University of Notre Dame, May 1998. **[invited]**

42. V. K. Gupta, T. B. Dubrovsky, and N. L. Abbott "Modification of the Interactions Between Liquid Crystals and Biotin-Immobilized Surfaces upon Specific Binding of Avidin",American Institute of Chemical Engineers, Annual Meeting, Los Angeles (CA), November 1997.

43. V. K. Gupta and N. L. Abbott "Use of Self-Assembled Monolayers for Patterned Alignment of Liquid Crystals on Planar and Curved Surfaces",American Chemical Society, Annual Meeting, Las Vegas (NV), September 1997.

44. V. K. Gupta, T. B. Dubrovsky, and N. L. Abbott "Amplification of the Specific Binding of Avidin to Immobilized Biotin Using Liquid Crystals", American Chemical Society, Annual Meeting, Las Vegas (NV), September 1997.

45. V. K. Gupta "Using Liquid Crystals to Study Interfacial Structure", Department of Chemical Engineering, Indian Institute of Technology (Delhi), February 1997. **[invited]**

46. V. K. Gupta, W. J. Miller, and N. L. Abbott, "Anchoring of Liquid Crystals on Self-Assembled Monolayers Formed From Alkanethiols", American Institute of Chemical Engineers, Annual Meeting, Chicago (IL), November 1996.

47. V. K. Gupta, W. J. Miller, C. L. Pike, and N. L. Abbott, "Anchoring of Nematic Liquid Crystals on Self-Assembled Monolayers Formed From Alkanethiols", American Physical Society, Annual Meeting, St. Louis (MO), March 1996.

48. V. K. Gupta and J. A. Kornfield, "Controlling Molecular Order in Ultra-Thin LB Films of a 'Hairy-Rod' Phthalocyanine", American Institute of Chemical Engineers**,** Annual Meeting, Miami Beach (FL), November 1995.

49. V. K. Gupta, R. Krishnamoorti, Z. R. Chen, J. A. Kornfield, S. D. Smith, M. Satkowski, and J. Gothaus, "Development of Microstructure During Shear Alignment of a Lamellar Block Copolymer", American Institute of Chemical Engineers**,** Annual Meeting, Miami Beach (FL), November 1995.

50. V. K. Gupta, J. A. Kornfield, A. Ferencz, and G. Wegner, "Controlling Molecular Order in Ultra-Thin LB Films of a 'Hairy-Rod' Phthalocyanine Polymer", Multilayered Thin Films Symposium, MRS Meeting, San Francisco (CA), April 1995.

51. V. K. Gupta, R. Krishnamoorti, J. A. Kornfield, and S. D. Smith, "Effect of Shear Frequency and Strain on the Evolution of Flow Alignment of PS-PI Lamellar Diblock Copolymers", American Chemical Society, Annual Meeting, Anaheim (CA), April 1995.

52. V. K. Gupta, R. Krishnamoorti, J. A. Kornfield, and S. D. Smith, "Evolution of Microstructure During Shear Alignment in Lamellar Polystyrene-Polyisoprene Diblock Copolymer", American Physical Society, Annual Meeting, San Jose (CA), March 1995.

53. V. K. Gupta, J. A. Kornfield, A. Ferencz, and G. Wegner, "Controlling Molecular Order in Ultra-Thin LB Films of a 'Hairy-Rod' Phthalocyanine Polymer", American Physical Society, Annual Meeting, San Jose (CA), March 1995.

54. V. K. Gupta "Controlling Molecular and Microstructural Alignment in Anisotropic Polymeric Systems", Department of Chemical Engineering, Indian Institute of Technology (Bombay) , February 1995.**[invited]**

55. V. K. Gupta, R. Krishnamoorti, J. A. Kornfield, and S. D. Smith "Effect of Frequency and Strain During Flow Alignment of Lamellar Block Copolymers", Polymers West Gordon Research Conference, Ventura (CA), January 1995.

56. V. K. Gupta, J. A. Kornfield, A. Ferencz, and G. Wegner, "Characterization of Molecular Order 'Hairy-Rod' Phthalocyanine Polymer LB Films using Laser-Scanning Polarization-Modulation Microscopy ", American Institute of Chemical Engineers**,** Annual Meeting, San Francisco (CA), November 1994.

PRESENTATIONS BY STUDENTS

1. Bijith Mankidy, John Wolan, Babu Joseph and Vinay K. Gupta, "A Model Cobalt/Silica Fischer Tropsch Nanocomposite Catalyst Preparation by Surface Functionalization", American Institute of Chemical Engineers, Annual Meeting, Salt Lake City (UT), November 2010.

2. Fedena Fanord, Harry Kim, Venkat Bhethanabotla, Vinay K. Gupta, "Assessment of a Localized Bisphosphonate Therapy for Perthes Disease Using Multifunctional Gold Nanoparticles", American Institute of Chemical Engineers, Annual Meeting, Salt Lake City (UT), November 2010.

3. Kristina Tran, Kirpal Bisht, and Vinay K. Gupta, "Gold Nanorods and Nanoprisms: Synthesis, Characterization, and Self-Assembly", Central Regional Meeting of the American Chemical Society (CeRMACS), Dayton (OH), June 2010.

4. Alisha Petereson and Vinay K. Gupta, "Synthesis and Characterization of Novel Nanomaterials: Gold Nanoshells with An Organic-Inorganic Hybrid Core", American Institute of Chemical Engineers, Annual Meeting, Nashville (TN), November 2009.

5. Fedena Fanord, Korie Fairbairn, Harry Kim, Venkat Bhethanabotla, Vinay K. Gupta, "Bisphosphonate Modified Gold Nanoparticles to Study Bone Resorption", American Institute of Chemical Engineers, Annual Meeting, Nashville (TN), November 2009.

6. Bijith Mankidy, Babu Joseph, and Vinay K. Gupta, "Surface Decoration of Cobalt Nanoparticles On Silica Colloids", American Institute of Chemical Engineers, Annual Meeting, Nashville (TN), November 2009.

7. Cecil Coutinho and Vinay K. Gupta, "Investigating the Photocatalytic Performance of Rapid Settling PNIPAM-Titania Microcomposites", American Institute of Chemical Engineers, Annual Meeting, Nashville (TN), November 2009.

8. Fedena Fanord, Korie Fairbairn, Harry Kim, Venkat Bhethanabotla, Vinay K. Gupta, "Using Functionalized Nanoparticles to Study Intracellular Response Central to the Progression of Osteonecrosis", National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE), St. Louis (MO), April, 2009. **[Recipient of the Dow Chemical Company Graduate-NOBCChE Conference Fellowship Award.]**

9. Chhavi Manocha, Ashok Kumar and Vinay K. Gupta, "Study of Conditioner Abrasives in Chemical Mechanical Planarization", Symposium on Science and Technology of Chemical Mechanical Planarization (CMP) at the Annual Spring Meeting of MRS, San Francisco (CA), April 2009.

10. Cecil A. Coutinho and Vinay K. Gupta, "Polymer-Titania Composites for Photocatalytic Degradation of Organics in Aqueous Environments", Symposium on Materials Science of Water Purification at the Annual Spring Meeting of MRS, San Francisco (CA), April 2009.

11. Cecil A. Coutinho, Subrahmanya R. Mudhivarthi, Ashok Kumar and Vinay K. Gupta, "Novel Ceria-Polymer Composites for Reduced Defects during Oxide CMP", Symposium on Science and Technology of Chemical Mechanical Planarization (CMP) at the Annual Spring Meeting of MRS, San Francisco (CA), April 2009.

12. Korie Fairbairn, Fedena Fanord, Harry Kim, Venkat Bhethanabotla, and Vinay K. Gupta, "Studying The Effects Of Gold Nanoparticles On Mature Osteoclast Cells", Annual Joint Symposium of Florida Chapter of the AVS Science and Technology Society and Florida Society of Microscopy, Orlando (FL), March 2009.

13. Cecil Coutinho and Vinay K. Gupta, "Photocatalytic Degradation using Polymer-Titania Microcomposites", Annual Joint Symposium of Florida Chapter of the AVS Science and Technology Society and Florida Society of Microscopy, Orlando (FL), March 2009.**[Honorable Mention in Materials Science Section]**

14. Fedena Fanord and Vinay K. Gupta, "Nanocomposites Based on Gold Nanorods and Thermally-Responsive Polymer Nanogels", Annual Meeting of AIChE, Philadelphia (PA), November, 2008.

15. Fedena Fanord, Korie Fairbairn, Harry Kim, Venkat Bhethanabotla, and Vinay K. Gupta, "Using Functionalized Gold Nanoparticles to Study Uptake and Intracellular Trafficking of Biochemicals Central to Osteonecrosis", Annual Meeting of AIChE, Philadelphia (PA), November, 2008.

16. Cecil Coutinho and Vinay K. Gupta, "Developing Composites of Polymer Microgels and Titania Nanoparticles for Photocatalytic Degradation", Annual Meeting of AIChE, Philadelphia (PA), November, 2008.

17. Cecil A. Coutinho, Subrahmanya R. Mudhivarthi, Ashok Kumar and Vinay K. Gupta, "Chemical Mechanical Polishing of Oxide Layers Using Novel Ceria-Polymer Microcomposites", Annual Meeting of AIChE, Philadelphia (PA), November, 2008.

18. Cecil Coutinho, Reshma Harrinauth and Vinay K. Gupta, "Settling Characteristics of Composites of PNIPAM Microgels and Inorganic Nanoparticles", Annual Meeting of AIChE, Philadelphia (PA), November, 2008.

19. Bijith D. Mankidy and Vinay K. Gupta, "Novel Composite Particles for Catalysis: Cobalt Nanoparticles on Silica Colloids", The Southeastern Regional Meeting of American Chemical Society, Nashville (TN), November, 2008.

20. Bijith D. Mankidy, Cecil A. Coutinho and Vinay K. Gupta, "A Simple Laser Refraction Experiment for Undergraduates to Measure Diffusion in Aqueous Solutions of Macromolecules and Ternary Mixtures", The Southeastern Regional Meeting of American Chemical Society, Nashville (TN), November, 2008.

21. Bijith Mankidy and Vinay K. Gupta, "Novel Composite Particles: Cobalt Nanoparticles on Silica Colloids", NanoFlorida 2008 Symposium, University of Central Florida, Orlando (FL), September 26-28, 2008.

22. Fedena Fanord and Vinay K. Gupta, "Preparation and Characterization of Gold Nanorods End-Capped with Thermally-Responsive Nanogels", Pan-American Advanced Studies Institute (PASI) on "Microscopy Techniques for Nanomaterials", Cancun (Mexico**)** August 21-29, 2008 **[PASI fellowship awardee]**

23. Fedena Fanord, Cecil Coutinho, David Walker, and Vinay K. Gupta, "Novel Nanomaterials Based on Gold Nanorods and Thermally-Responsive Polymer", Annual Meeting of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE), Philadephia (PA), March 2008. **[2008 NOBCChE Advancing Science Travel Awardee]**

24. Fedena Fanord, Cecil Coutinho, David Walker, and Vinay K. Gupta, "Novel Nanomaterials Based on Gold Nanorods and Thermally-Responsive Polymer", Annual Joint Symposium of Florida Chapter of the AVS Science and Technology Society and Florida Society of Microscopy, Orlando (FL), March 2008. **[1st Prize in Poster Session on Materials Processing]**

25. David Walker and Vinay K. Gupta, "Fabrication Of End-Functionalized Gold Nanorods", Annual Joint Symposium of Florida Chapter of the AVS Science and Technology Society and Florida Society of Microscopy, Orlando (FL), March 2008. **[2nd Prize in Poster Session on Materials Processing]**

26. Reshma Harrinauth, Cecil Coutinho and Vinay K. Gupta, "Sedimentation Behavior Of Inorganic-Organic Composite Particles", Annual Joint Symposium of Florida Chapter of the AVS Science and Technology Society and Florida Society of Microscopy, Orlando (FL), March 2008. **[Honorable Mention]**

27. Cecil Coutinho, "Hybrid and Composite Inorganic-Organic Microparticles for Chemical Mechanical Polishing", Young Leaders Session at Annual Joint Symposium of Florida Chapter of the AVS Science and Technology Society and Florida Society of Microscopy, Orlando (FL), March 2008.

28. David Walker and Vinay K. Gupta, "Nanocomposites of Inorganic Oxide Coated Gold Nanorods", Annual Conference of the American Institute of Chemical Engineers, Salt Lake City (UT), November 2007.

29. Cecil Coutinho, Reshma Harrinauth, Maya Trotz and Vinay K. Gupta, "Functional Composites Formed from Cross-linked Microparticles of a Responsive Polymer and Titania Nanoparticles", Annual Conference of the American Institute of Chemical Engineers, Salt Lake City (UT), November 2007.

30. Cecil Coutinho, Subrahmanya Mudhivarti, Vinay K. Gupta and Ashok Kumar, "Hybrid Inorganic-Organic Microparticles for Oxide and Copper Chemical Mechanical Polishing", Annual Conference of the American Institute of Chemical Engineers, Salt Lake City (UT), November 2007.

31. Reshma Harrinauth, Cecil Coutinho and Vinay K. Gupta, "Sedimentation Behavior of Organic-Inorganic Composites of Titania Nanoparticles and Polymeric Microgels", American Chemical Society Southeastern Regional Conference, Greensville (SC), October 2007.

32. Fedena Fanord, Cecil Coutinho, David Walker and Vinay K. Gupta, "Preparation and Characterization of Gold Nanorods End-Capped with Thermally-Responsive Nanogels", American Chemical Society Southeastern Regional Conference, Greensville (SC), October 2007.

33. Cecil Coutinho and Vinay K. Gupta, "Synthesis and properties of functional composites formed from a responsive polymer and titania nanoparticles", Annual Conference of American Chemical Society, Boston (MA), August 2007.

34. Subrahmanya R Mudhivarthi, Cecil Coutinho, Ashok Kumar, and Vinay Gupta, "Development of Low Defect CMP Slurries using Hybrid Abrasive Particles of different Surface Morphologies", Materials Research Society, San Francisco (CA), April 2007.

35. David Walker and Vinay K. Gupta, "Fabrication of Inorganic Oxide Coated Gold Nanorods", 5th Annual USF Undergraduate Honors Research Symposium, Tampa (FL), April 2007.[**1st Prize in Engineering Section**]

36. Reshma Harrinauth and Vinay K. Gupta, "Sedimentation of Organic-Inorganic Nano-Composites", 5th Annual USF Undergraduate Honors Research Symposium, Tampa (FL), April 2007

37. Cecil Coutinho and Vinay K. Gupta, "Organic-Inorganic Nano-Composites For Photocatalytic Remediation", Annual Joint Symposium of Florida Chapter of the AVS Science and Technology Society and Florida Society of Microscopy, Orlando (FL), March 2007.

38. Raghu Mudhivarti, Cecil Coutinho, Ashok Kumar and Vinay K. Gupta, "Novel Core-Shell Type Abrasive Particles for Oxide CMP Applications", 210th Meeting of the Electrochemical Society, Cancun (Mexico), November 2006

39. Cecil Coutinho, Maya Trotz, and Vinay K. Gupta, "Composite Materials of Thermo-Responsive Polymer Networks and Inorganic Nanoparticles", Annual Conference of American Institute of Chemical Engineers, San Francisco (CA), November 2006

40. David Walker, Cecil A. Coutinho, and Vinay K. Gupta, "Simple colorimetric quantification of TiO2 content in polymer-nanoparticle composites" , 58th Southeast Regional Meeting of the American Chemical Society and Joint Meeting with American Institute of Chemical Engineers, Augusta (GA), November 2006.

41. Cecil A. Coutinho, David Walker and Vinay K. Gupta, "Synthesis and characterization of interpenetrating networks functionalized with nanoparticles of titanium dioxide", 58th Southeast Regional Meeting of the American Chemical Society and Joint Meeting with Americal Insitute of Chemical Engineers, Augusta (GA), November 2006.

42. Justine Molas and Vinay K. Gupta, "Ionization and Molecular Recognition Phenomena In Self-Assembled Surfaces of Bowl-Shaped Macrocyclic Molecules", Bridging Nanoscale Forces and Interfacial Phenomena to the Macroscopic World, International Workshop, Cancun (Mexico), May 2006.

43. Dayling L. Chaparro and Vinay K. Gupta, "Novel Polymer-Metal Nano-Composites for Applications in Detection and Sensing", Bridging Nanoscale Forces and Interfacial Phenomena to the Macroscopic World, International Workshop, Cancun (Mexico), May 2006.

44. David Walker and Vinay K. Gupta, "Optical Characterization and Modeling of Gold Nanoparticles", 4th Annual USF Undergraduate Honors Research Symposium, Tampa (FL), April 2006

45. Justine Molas and Vinay K. Gupta, "Ionization and Molecular Recognition Phenomena In Self-Assembled Surfaces of Bowl-Shaped Macrocyclic Molecules", 4th Annual USF Undergraduate Honors Research Symposium, Tampa (FL), April 2006

46. Violeta Leath and Vinay K. Gupta, "Characterization of Polymer Solutions by Static Light Scattering", 4th Annual USF Undergraduate Honors Research Symposium, Tampa (FL), April 2006

47. Justine Molas and Vinay K. Gupta, "Ionization and Molecular Recognition Phenomena In Self-Assembled Surfaces of Bowl-Shaped Macrocyclic Molecules", Annual Research Experiences for Undergraduates (REU) Symposium, College of Engineering, USF, Tampa (FL), April 2006.

48. Cecil Coutinho and Vinay K. Gupta, "Composite Smart Materials for Use In Wastewater Remediation", 2nd Interdisciplinary Graduate Research Symposium, NSF IGERT and NSF Bridge to the Doctorate Programs at USF, Tampa (FL), April 2006.

49. Dayling L. Chaparro and Vinay K. Gupta, "Novel Polymer-Metal Nano-Composites for Applications in Detection And Sensing", 2nd Interdisciplinary Graduate Research Symposium, NSF IGERT and NSF Bridge to the Doctorate Programs at USF, Tampa (FL), April 2006.

50. Dayling L. Chaparro and Vinay K. Gupta, "Novel Polymer-Metal Nano-Composites for Applications In Detection And Sensing", Annual Joint Symposium of Florida Chapter of the AVS Science and Technology Society and Florida Society of Microscopy, Orlando (FL), March 2006.

51. Cecil Coutinho and Vinay K. Gupta, "Composite Smart Materials for Use In Wastewater Remediation", Annual Joint Symposium of Florida Chapter of the AVS Science and Technology Society and Florida Society of Microscopy, Orlando (FL), March 2006.**[Honorable Mention]**

52. Justine Molas and Vinay K. Gupta, "Ionization and Molecular Recognition Phenomena In Self-Assembled Surfaces of Bowl-Shaped Macrocyclic Molecules", Annual Joint Symposium of Florida Chapter of the AVS Science and Technology Society and Florida Society of Microscopy, Orlando (FL), March 2006.

53. Dayling L. Chaparro and Vinay K. Gupta, "Novel Polymer-Metal Nano-Composites for Applications in Detection And Sensing", Inaugural Interdisciplinary Graduate Research Symposium, NSF IGERT and NSF Bridge to the Doctorate Programs at USF, Tampa (FL), April 2005.

54. Justine Molas and Vinay K. Gupta, "Synthesis and Characterization of Self-Assembled Monolayers", Annual Research Experiences for Undergraduates (REU) Symposium, College of Engineering, USF, Tampa (FL), March 2005.

55. Justine Molas and Vinay K. Gupta, "Synthesis and Characterization of Self-Assembled Monolayers", 3rd Annual USF Undergraduate Honors Research Symposium, Tampa (FL), March 2005.**[2nd Prize in Engineering Division]**

56. Mingjie Xu and Vinay K. Gupta, "Engineering Hybrid Systems of Nanoparticles and Polymers", American Vacuum Society, Annual Symposium on Applied Surface Analysis, Urbana (IL), June 2003.

57. Yu-Wen Huang and V. K. Gupta, "Adsorption of Flexible Polymers and Globular Proteins on Nano-heterogeneous Surfaces", American Vacuum Society, Annual Symposium on Applied Surface Analysis, Urbana (IL), June 2003.[**Best Poster Award**]

58. Mingjie Xu and Vinay K. Gupta, "Engineering Hybrid Systems of Nanoparticles and Polymers", 77th ACS Colloid and Surface Science Symposium, Atlanta (GA), June, 2003.

59. Yu-Wen Huang and V. K. Gupta, "Adsorption of Flexible Polymers and Globular Proteins on Nano-heterogeneous Surfaces", University of Wisconsin, Nano All Around Us, Madison (WI), May 2003. (The

University of Wisconsin's Inaugural Technical Conference and Public Expo on Nanotechnology) [**Best Poster Award**]

60. Yu-Wen Huang, Kyoung-Yong Chun, and V. K. Gupta, "Polymer Adsorption on Nano-heterogeneous Surfaces, American Chemical Society, Annual Meeting, New Orleans (LA), March, 2003.

61. Yu-Wen Huang, Kyoung-Yong Chun, and V. K. Gupta, "Impact of nanometer scale heterogeneity of surfaces on the adsorption of neutral and ionic polymers on a surface", American Institute of Chemical Engineers**,** Annual Meeting, Indianapolis (IN), November 2002.

62. Kyoung-Yong Chun, Yu-Wen Huang, and V. K. Gupta, "Effects of chemical heterogeneity of surfaces on the adsorption of polyelectrolytes", American Institute of Chemical Engineers**,** Annual Meeting, Indianapolis (IN), November 2002.

63. Alveda J. Williams and V. K. Gupta, "Controlling Self-Assembly of Anisotropic, Rod-Like Polypeptides on Solid", Department of Chemistry, Norfolk State University, Norfolk (VA), September 2002.

64. John D. Faull and V. K. Gupta, "Interplay between size and chemical structure in guest-host recognition on self-assembled surfaces formed from calix[4]resorcinarene", 76th ACS Colloid & Surface Science Symposium, American Chemical Society Division of Colloid and Surface Chemistry, Ann Arbor (MI), June 2002.

65. Alveda J. Williams and V. K. Gupta, "Controlling Self-Assembly of Helical, Rod-Like Polypeptides on Solid Surfaces", 29th Annual NOBCChE Conference, New Orleans (LA), March 2002.

66. John D. Faull and V. K. Gupta, "Selective Guest Host Association and Separation on Self-Assembled Monolayers of Calix[4]Resorcinarene", 33rd Central/Great Lakes Regional Meeting of the American Chemical Society, Grand Rapids(MI), June 2001.

67. Alveda J. Williams and V. K. Gupta, "Synthesis and Physical Characterization of a Hinged, Photoresponsive Polypeptide", 28th Annual NOBCChE Conference, Baltimore (MD), April 2001.

68. Alveda J. Williams and V. K. Gupta, "Controlling Self-Assembly of Helical, Rod-Like Polypeptides on Solid Surfaces", American Physical Society, Annual Meeting, Seattle (WA), March 2001.

69. Yu-Wen Huang and V. K. Gupta, "Effects of Heterogeneity on the Adsorption of Poly(ethylene oxide) at a Solid-Liquid Interface", American Physical Society, Annual Meeting, Seattle (WA), March 2001.

70. Alveda J. Finnell and V. K. Gupta, "Control of Interfacial Properties of Surfaces Self-Assembled from Rod-Like Photo-Responsive Polypeptides", 27th Annual NOBCChE Conference, Miami (FL), April 2000.

TEACHING DUTIES

University of South Florida

- ECH 3023C Material & Energy Balances

Students learn the fundamentals of mass and energy balances in chemical processes.

- ECH 4264 Transport Phenomena

Students learn the fundamentals of momentum and heat transfer on microscopic and macroscopic scales.

- ECH 4123 Chemical Engineering Thermodynamics

Students learn the fundamentals of thermodynamics as it applies to thermo-physical properties of pure substances and mixtures, phase equilibria, and reaction equilibria

- BME/ECH 6931 Graduate Seminar in Chemical & Biomedical Engineering

Students attend research seminars by invited faculty from universities and industry as well as senior graduate students to obtain an overview of a wide range of research. Enrolled students practice writing skills and literature review

- ECH 6285 Advanced Transport Phenomena

Graduate students build on undergraduate level knowledge of transport processes and learn advanced concepts in momentum, heat, and mass transfer.

University of Illinois

- ChE261 (sophomore) Introduction to Chemical Engineering

Science and engineering students learn the basic principles of material and energy balances.

- ChE 373 (junior) Mass Transfer Operations

Upperclassmen in chemical, environmental, and food sciences learn the basics of mass transfer and solid-fluid or fluid-fluid chemical separations.

- ChE 377 (senior) Synthesis and Design of Chemical Systems

A capstone lecture and project based course where seniors learn to synthesize, design, and simulate chemical processes and integrate economics, safety, and environment issues.

- ChE 469 (graduate) Optical Methods in Chemical Engineering Research

Graduate and advanced undergraduate students learn the principles of analytical optical techniques such as light scattering, surface plasmon resonance, spectroscopy, ellipsometry, birefringence/dichroism measurements.

- ChE 292 (junior, senior) Supervision of undergraduate research projects

A course for students interested in experimental or computer modeling research projects in polymer science, nanomaterials, liquid crystals, and surface science.

ADMINISTRATIVE DUTIES

2006-2009	Member, Graduate Council, University of South Florida
	Policy Sub-committee (2006-07); Fellowship Sub-committee (2007-08; Chair 2008-2009)
2005 - present	Graduate Admissions Coordinator, Chemical Engineering, USF
2005 - present	Mentor, Sloan Minority PhD Program, College of Engineering, USF
2005-06	Member, Faculty Search Committee, Physics, Univ. of South Florida
2004-11	Departmental Web Page Coordinator, Chemical Engineering, USF
2004-05	Chair, Faculty Search Committee, Chemical Engineering, USF
2001-02	Undergraduate Curriculum Committee, Chemical Engineering, Univ. of Illinois
8/2001	Member, Curriculum Committee for new BS degree in Chemical & Biomolecular Engineering, Chemical Engineering, Univ. of Illinois
1999-03	Member, Chemical Engineering Student Advisory Council, Univ. of Illinois
1997-00	Graduate Admissions Committee, Chemical Engineering, Univ. of Illinois

PROFESSIONAL ACTIVITIES

Member

Advisory Board, Nanomaterials and Nanomanufacturing Research Center (NNRC), USF

American Institute of Chemical Engineers (AIChE)

American Society of Engineering Education (ASEE)

Chair (2008-2010) and Vice-Chair (2005-2007)

Area 1c- Interfacial Phenomena, Engineering Science & Fundamentals Group, AIChE National Programming Committee

Chair/Vice-Chair/Discussion leader

Chair, "Plenary Session: Interfacial Phenomena", at the Annual Meeting, American Institute of Chemical Engineers, Salt Lake City (UT), November 2010.

Chair, "Poster Session: Interfacial Phenomena", at the Annual Meeting, American Institute of Chemical Engineers, Salt Lake City (UT), November 2010.

Chair, “Plenary Session: Interfacial Phenomena”, at the Annual Meeting, American Institute of Chemical Engineers, Nashville (TN), November 2009.

Chair, “Poster Session: Interfacial Phenomena”, at the Annual Meeting, American Institute of Chemical Engineers, Nashville (TN), November 2009.

Chair, “Plenary Session: Interfacial Phenomena”, at the Annual Meeting, American Institute of Chemical Engineers, Philadelphia (PA), November 2008.

Chair, “Poster Session: Interfacial Phenomena”, at the Annual Meeting, American Institute of Chemical Engineers, Philadelphia (PA), November 2008.

Chair, “Nanoscale Structure In Polymers I-II: Self-Organization of Polymers at Surfaces and Interfaces”, at the Annual Meeting, American Institute of Chemical Engineers, Philadelphia (PA), November 2008.

Vice-Chair, “Department Level Curriculum Reform: Topical 6: AIChE Centennial: Chemical Engineering Education: Past and Future”, at the Annual Meeting, American Institute of Chemical Engineers, Philadelphia (PA), November 2008.

Chair, “Transport at Interfaces”, at the Annual Meeting, American Institute of Chemical Engineers, Salt Lake City (UT), November 2007.

Vice-Chair, “Plenary Session: Interfacial Phenomena”, at the Annual Meeting, American Institute of Chemical Engineers, Salt Lake City (UT), November 2007.

Vice-Chair, “Poster Session: Interfacial Phenomena”, at the Annual Meeting, American Institute of Chemical Engineers, Salt Lake City (UT), November 2007.

Chair, “Nanoscale Structure in Polymers I: Self-Organization of Polymers at Surfaces and Interfaces”, at the Annual Meeting, American Institute of Chemical Engineers, Salt Lake City (UT), November 2007.

Vice-Chair, “Plenary Session: Interfacial Phenomena”, at the Annual Meeting, American Institute of Chemical Engineers, San Francisco (CA), November 2006.

Chair, “Fundamentals of Interfacial Phenomena I-III”, at the Annual Meeting, American Institute of Chemical Engineers, San Francisco (CA), November 2006.

Vice-Chair, “Poster Session: Interfacial Phenomena”, at the Annual Meeting, American Institute of Chemical Engineers, San Francisco (CA), November 2006.

Chair, “General Poster Session on Separations”, at the Annual Meeting, American Institute of Chemical Engineers, San Francisco (CA), November 2006.

Chair, “Fundamentals of Interfacial Phenomena I-III”, at the Annual Meeting, American Institute of Chemical Engineers, Cincinnati (OH), October 2005.

Vice-Chair, “Poster Session: Interfacial Phenomena”, at the Annual Meeting, American Institute of Chemical Engineers, Cincinnati (OH), October 2005.

Chair, "Solid-Liquid Interfaces" at the Annual Meeting, American Institute of Chemical Engineers, Austin (TX), November 2004.

Chair, "Polymerization Kinetics, Catalysis, And Reaction Engineering" at the Annual Meeting, American Institute of Chemical Engineers, Reno (NV), November 2001.

Co-organizer for 4-day Symposium on "Macromolecular Self-Assembly at Surfaces and Interfaces" at the Annual Meeting, American Chemical Society, San Diego (CA), April 2001.

Chair, "Polymerization Kinetics, Catalysis, And Reaction Engineering" at the Annual Meeting, American Institute of Chemical Engineers, Los Angeles (CA), November 2000.

Discussion leader, "Templating" at the Gordon Research Conference on "Chemistry at Interfaces", Meriden (NH), July 2000.

Chair, "Nanoparticle Arrays: Nonlithographic Approaches to Micro- and Nanoscale Organization" at the Annual Meeting, Materials Research Society, Boston (MA), November 1999

Chair, "Polymer Thin Films and Interfaces II" at the Annual Meeting, American Institute of Chemical Engineers, Dallas (TX), October 1999

Chair, "Self-Organized Polymers at Interfaces" at the Annual Meeting, American Institute of Chemical Engineers, Dallas (TX), October 1999

Chair, "Adsorption of Macromolecules at Solid-Liquid Interfaces" at the Annual Meeting, American Institute of Chemical Engineers, Dallas (TX), October 1999

Chair, "Thermodynamics of Colloids, Polyelectrolytes and Ionic Fluids" at the Annual Meeting, American Institute of Chemical Engineers, Miami (FL), November 1998

Discussion leader, "Thin Organic Films and Sensors" at the Gordon Research Conference on "Chemistry at Interfaces", Meriden (NH), July 1998.

Reviewer

Journal of Chemical & Engineering Data, Journal of Polymer Science Part B: Polymer Physics, Journal of Chemical Physics, Journal of Physics and Chemistry of Solids, Journal of Physical Chemistry, Journal of Electroanalytical Chemistry, Langmuir, Journal of Colloid and Interface Science, Polymer, Macromolecules, European Polymer Journal, Colloids and Surfaces B, Thin Solid Films, Polymer, Advanced Materials, Chemistry of Materials, Journal of the American Chemical Society, Chemical Engineering Science, Applied Surface Science, ACS-Petroleum Research Fund, National Science Foundation.

NSF Review Panels (# attended)

CTS Unsolicited Proposals (1)

Engineering Career Grants (2)

CCLI: Courses, Curriculum, and Laboratory Instruction (4)

NIRT: Nanoscale Interdisciplinary Research Teams (2)

TSE/EPA: Technology for Sustaining the Environment (1)

EEC: Innovations in Engineering Education, Curriculum and Infrastructure (1)

RESEARCH GRANTS

NSF MRI: Acquisition of Scanning Electron Microscope for Research and Education (8/1/2009-7/31/2011) (**co-PI**)

Florida Energy Systems Consortium (FESC) Research Grant on Conversion of Biomass to liquid fuels (09/2008-12/2011) (**co-PI**)

Research Grant from Masscal Scientific Instruments and Matching Grant from Florida High Tech Corridor (FHTC) Agency 6/2008-12/2008 (**PI**)

Interdisciplinary Exploratory Research Grant (Phase II Grants under Functional Multiscale Materials by Design Initiative, State of Florida) 1/2008-12/2009 (**PI**)

NSF Implementation Grant: Department Level Undergraduate Reform 2005-2009 (**PI)**

NSF Nanoscale Exploratory Research (NER) Award: 2005-2007 (**co-PI**)

ACS Petroleum Research Fund, AC-Type Award: 9/1/04-8/31/07 **(PI)**

NSF Early CAREER Award (CTS-9875467): 6/1/99-5/31/03 (**PI)**

DOE-MRL Collaborative Research Initiative: 1/1/99-12/31/04 **(co-PI)**

DuPont Education Aid Program: 1999-2000 (**PI)**

NSF Engineering Equipment Grant (CTS-9732691): 8/1/98-7/31/99 **(PI)**

ACS Petroleum Research Fund, G-Type Award: 8/1/98-7/31/00 **(PI)**

University of Illinois Research Board Award: 1/1/98-8/31/98 **(PI)**

RESEARCH GROUP

UNIVERSITY OF SOUTH FLORIDA

Mr. Christopher Conners (PhD: 8/2010- to date)

Ms. Kristina Tran (MS 8/2010)

Ms. Chhavi Manocha (MS 12/2008)

Mr. Cecil Coutinho (PhD 8/2009)

Ms. Reshma Harrinauth (BS 1/07-7/07; MS 12/2008)

Dr. J-Y Shim (postdoc, 2/2005-12/2006)

Mr. Adrian Defante (MCHE 2005-2006)

Ms. Justine Molas (BS 8/2004 – 5/2006)

Ms. Alisha Peterson (MS 8/2010, PhD: 8/10-to date)

Mr. Bijith Mankidy (PhD: 8/2007 – to date)

Ms. Fedena Fanord (PhD: 8/2006 – to date)

Mr. David Walker (BS 1/06-5/07; MS 8/2008)

Ms. Dayling Chaparro (MS 12/2007)

Ms. Claire Osborn (BS 1/2008-7/2008)

Ms. Violeta Leath (BS 1/2006-5/2006)

UNIVERSITY OF ILLINOIS

Dr. Yu-Wen Huang (MS 2001, PhD 2003)

Dr. John D. Faull (MS 2001, PhD 2003)

Dr. Alveda J. Williams (PhD 2002)

Mr. Dennis Smithenry (1999-2000)

Mr. John Kautz (1998-1999)

Ms. Chemia Cooper (BS 2003)

Mr. Jonathan Galownia (BS 2000)

Mr. William Shimer (BS 2000)

Mr. Brian Anderson (BS 1998)

Mr. Mingjie Xu (MS 2003)

Dr. Kyoung-Yong Chun (post-doc, 2000-2002)

Dr. Mun-Sik Kang (postdoc, 2000-2001)

Ms. Nandini Priyadarshini (MS 1999)

Mr. Paul Wissman (BS 2003)

Ms. Kristen Kirkland (BS 2002)

Ms. Emily Nation (BS 2000)

Mr. Jason Werner (BS 1999)