

Nomination for the CAPA Distinguished Junior Faculty Award (Fall 2008)

I, as a member of the Chinese-American Chemistry & Chemical Biology Professors Association (CAPA), hereby nominate the following colleague for the CAPA Distinguished Junior Faculty Award.

Nominee's Name (CAPA member): Qian Wang

Nominee's Position and Rank: Assistant Professor

Nominee's Institution: University of South Carolina

Brief Description of the Nominee's Achievement (not to exceed 200 words):

Qian Wang has established an outstanding research program in the hierarchical assemblies of bionanoparticles and using such organized assemblies to study and to manipulate cellular responses and behaviors.

He has secured over \$4 Million extramural funding to support his research over the 4 years. He has been awarded \$800K from the W. M. Keck Foundation to establish an "Open Laboratory for Bionanoparticle Research", and received the NSF CAREER Award and the Alfred P. Sloan Award in 2008.

Wang has published 35 peer-reviewed papers or book chapters in the past four years (31 in print, 4 in press), with 4 others submitted. His works have been reported in *Nature*, *Science*, as the cover article for *Angew. Chem. Int. Chem.*, being highlighted by *Nature Nanotechnology* and reported by *Nanowerk*. Several of his papers are among the most cited hot papers in *Organic Letters*, *Tetrahedron Letters*, *Synlett* and *Synthesis – SYNFORM* in 2007.

Wang was invited to organize the workshop entitled "Synthesis, Assembly and Characterization of Bionanomaterials" for the BNL NSLS/CFN in 2007, and symposiums for ACS Division of Colloid and Surface Chemistry in 2005 and 2008. In addition, he has been invited as Associate Editor for "*Letter in Organic Chemistry*" and is serving on the editorial board of "*Experimental Biology and Medicine*". He has given numerous invited talks at International Meetings and more than 30 seminars at Universities and Institutes internationally.

Nominator's Name and Rank: Guijun Wang, Associate Professor

Nominator's Institution: University of New Orleans

Date: 4/14/2008

This nomination should be accompanied by the nominee's updated CV with a list of publications.

Please email this nomination form and the accompanying materials as a PDF file to:

Xi Chen (chen@chem.ucdavis.edu)

Deadline: April 25, 2008

Wang, Qian, Ph.D.

Assistant Professor

631 Sumter Street

Department of Chemistry and Biochemistry

University of South Carolina

Columbia, SC 29208

Phone: (803) 777-8436

Fax: (803) 777-9521

Email: wang@mail.chem.sc.edu

(i) Positions

08/2003- Assistant Professor
Department of Chemistry and Biochemistry
University of South Carolina

(ii) Educations

05/2001-07/2003 Senior Research Associate
The Scripps Research Institute
Advisor: M.G. Finn

11/1999-04/2001 Postdoctoral Fellow
The Scripps Research Institute
Advisor: M.G. Finn

10/1997-10/1999 Postdoctoral Fellow
University of Lausanne, Switzerland
Advisor: Manfred Schlosser

09/1992-09/1997 Ph.D. Organic Chemistry
Tsinghua University, Beijing, P.R. China
Advisor: Yufen Zhao

09/1987-07/1992 B.S. Chemistry
Tsinghua University, Beijing, P.R. China
Advisor: Yongde Li

(iii) Honors

- NSF CAREER Award, 2008
- Alfred P. Sloan Research Scholar, 2008
- ARO BCRP Synergy Award, 2007
- Two Thumbs Up Award, University of South Carolina, 2005
- DOD MURI award (Co-PI), 2004
- ARO BCRP Concept Award, 2004
- USC Research and Productive Scholarship Award, 2004
- Honors at Tsinghua University: Guanghua Graduate Award (1993); Honor Graduation Award (1992); YANG NAINING Award (1992); CHANGXING Award (1991); GUANGHUA Award (1990); "12.9" Award (1989); First Award of Outstanding Student (1988-1991)
- First Award of National Chemistry Olympiad, P.R.China, 1987

(iv) Research Interests

Bioconjugation chemistry; self-assembly of nanomaterials; bionanoparticle chemistry; synthesis of fluorescent compounds and neoglycoconjugates for biological applications.

(v) Teaching Experience

2005	Graduate course: Bionanotechnology and self-assembly
2004, 2006	Undergraduate course: Organic Chemistry
2003 - 2008	Graduate course: Organic Synthesis

(vi) Invited Talks

- 2008 Gordon Research Conference in Bioanalytical Sensors, RI (06/29/08-07/04/08)
“Application of Bionanoparticles in Sensing”
- 2008 Argonne National Lab, workshop of the annual Argonne National Laboratory APS users meeting (05/06/08)
“Plant Virus as Scaffold for Nanomaterials Development”
- 2008 Department of Chemistry, University of West Virginia, WV (04/30/08)
“Biological Particles Directed Chemistry and Nanomaterials Development”
- 2008 Institute for Microstructural Sciences, National Research Council of Canada, Ottawa, CA (04/07/08)
“Plant Viruses Directed Chemistry and Biomaterials Development”
- 2008 The First Annual Unither Nanomedical and Telemedical Technology Conference in Bioanalytical Sensors, Quebec, Canada (04/01/08-04/04/08)
“Self-Assembly of NanoBiomaterials for Tissue Engineering”
- 2007 Department of Chemistry, University of Georgia, GA (11/29/07)
“Bioconjugation and Self-Assembly in Bionanomaterials Development”
- 2007 College of Natural Sciences, Hawaii Pacific University, HA (11/09/07)
“Bionanoparticles – Bridging the Biology and Materials Development”
- 2007 Department of Chemistry, Wake Forest University, NC (10/31/07)
“Fluorogenic Reactions and Their Application in Protein Recognition”
- 2007 The 59th Southeast Regional Meetings of ACS, Greenville, SC (10/24/07-10/27/07)
“Biono Composite Materials for Cell Culturing and Tissue Engineering”
- 2007 Department of Chemistry, University of South Carolina at Charlotte, NC (10/18/07)

- “Bionanoparticles Directed Chemistry and Biomaterials Development”
- 2007 Department of Chemistry and Biochemistry, University of South Carolina, SC (08/31/07)
“Bionanoparticles Directed Chemistry and Biomaterials Development”
- 2007 Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, P.R. China (08/06/07)
“Development of Bionanoparticle Assemblies for Cell Culturing and Tissue Engineering”
- 2007 Chengdu Institute of Biology, Chinese Academy of Sciences, Chengdu, P. R. China (08/01/07)
“Development of Bionanoparticle Assemblies for Cell Culturing and Tissue Engineering”
- 2007 College of Chemistry, Nankai University, Tianjin, P. R. China (07/30/07)
“Development of Bionanoparticle Assemblies for Cell Culturing and Tissue Engineering”
- 2007 Third Sino-Chem Symposium, Wuhan, P.R. China (06/01/07)
“Bioconjugation and Self-Assembly in Bionanomaterials Development”
- 2007 Department of Chemistry, Xiamen University, Xiamen, P.R. China (06/04/07)
“Bionanoparticles – Chemistry, Assembly and Materials Development”
- 2007 Brookhaven National Lab, NY, workshop of the annual Brookhaven National Laboratory NSLS/CFN users meeting (05/23/07)
“Plant Virus as Scaffold for Nanomaterials Development”
- 2007 Center for Bio/Molecular Science and Engineering, Naval Research Laboratory, Washington DC (04/06/07)
“Viruses for Chemistry and Materials Development”
- 2007 Department of Chemistry, Duke University, NC (02/27/07)
“Biological Particles Directed Chemistry and Nanomaterials Development”
- 2007 Oregon Nanoscience and Microtechnologies Institute and Department of Microbiology, Oregon State University, OR (01/29/07)
“Viruses as Nano-sized Building Blocks for Chemistry and Nanomaterials Development”
- 2007 Department of Chemistry, University of Houston, TX (01/16/07)
“Bionanoparticles - Chemistry, Assembly, and Materials Development”
- 2006 The 58th Southeast Regional Meetings of ACS, Augusta, GA (11/03/07)
“Synthesis and Assembly of Biological Particle Composite Materials”

- 2006 Department of Chemistry, Oklahoma State University, Stillwater, OK (08/24/06)
“Plant viruses and biological particle – from chemistry to materials development”
- 2006 Second Sino-Chem Symposium, Shanghai, P.R. China (07/08/06)
“Viruses assembly – An Effort for New Materials Development”
- 2006 Brookhaven National Lab, NY (06/27/06)
“Hierarchical Self-assembly of Plant Viruses for Materials Development”
- 2006 ACS Colloidal Science Symposium, Boulder, CO
“Hierarchical Self-assembly of Plant Viruses for Materials Development”
- 2006 Foundations of nanoscience: self-assembled architectures and devices (3rd, FNANO06), Snowbird, Utah.
“Hierarchical Self-assembly of Tobacco Mosaic Virus for Materials Development”
- 2006 School of Medicine, University of South Carolina, Columbia, SC (02/20/06)
“Bionanoparticle as programmable delivery vehicle”
- 2006 Department of Chemistry, East Carolina University, Greenville, NC (02/03/06)
“Bionanoparticles – Building the New Enterprise in Biotechnology and Nanomaterials Development”
- 2005 Department of Chemistry, Francis Marion University, Florence, SC (11/18/05)
“Virus – Bridging the Biotechnology and Nanomaterials Development”
- 2005 The 61st Southwest and the 57th Southeast Joint Regional meetings of ACS, Memphis, TN
“Self-assembly and materials applications of bionanoparticles”
- 2005 ACS Colloidal Division, Washington, D.C.
“The chemistry, bioconjugation and assembly of bioparticles”
- 2005 Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, P.R. China (05/19/05)
“Surface modification and self-assembly studies of bionanoparticles”
- 2005 Institute of Chemistry, East China University of Science and Technology, Shanghai, P.R. China (05/27/05)
“New Fluorogenic Bioconjugation Reaction with ‘Click’ Chemistry”
- 2005 Department of Chemistry, Tsinghua University, Beijing, P. R. China (05/20/05)
“Bionanoparticle Technology: Synthesis, Self-assembly and Materials”
- 2005 Roche Carolina Symposium, Myrtle Beach, SC

- “New development in bioconjugation with ‘click’ reactions”
- 2005 Center for Advanced Microstructures and Devices, Louisiana State University, Barton Rouge, LA (02/25/05)
“Synthesis and self-assembly studies of bionanoparticles”
- 2004 Department of Chemistry, Georgia State University, Atlanta (11/05/05)
“Combinatorial Synthesis of Fluorescent Compounds as Bioprobes”
- 2004 École Polytechnique Fédérale de Lausanne, Switzerland (05/26/04)
“New Bioconjugation Strategy Based on ‘Click’ Chemistry”
- 2004 University of Neuchâtel, Switzerland (05/13/04)
“New Bioconjugation Strategy Based on ‘Click’ Chemistry”
- 2004 University of Bern, Switzerland (05/14/04)
“New Bioconjugation Strategy Based on ‘Click’ Chemistry”
- 2004 University of Louis Pasteur Strasbourg, France (05/19/04)
“Bionanoparticle as the Testing Scaffold for a New Bioconjugation Reaction”
- 2004 Milan Polytechnicum, Italy (05/17/04)
“Bionanoparticle as the Testing Scaffold for a New Bioconjugation Reaction”

(vii) Selected Funded Grants:

- Alfred P. Sloan Research Fellowship, \$50,000, 09/01/08-08/31/10.
- NSF-CHE-0748690, \$575,000, 02/01/08-01/31/13, “CAREER: Development of hierarchical plant virus assemblies for probing cell-matrix interactions”.
- Department of Defense, Breast Cancer Synergy Award, \$590,000, 09/01/07 – 08/31/09, "Hierarchical Assembled “Nano-Trojan Horse” for Treatment of Brain Metastatic Breast Cancer", one of the two co-PIs (the other co-PI is Dr. Shaojin You).
- NSF-DMR-0706431, \$375,000, 08/01/07-07/31/10, “Synthesis of Functional Composite Nanofibers Templated by 1D Self-assembly of Tobacco Mosaic Virus”.
- NSF-ECD-0702056, co-PI, \$96,000 to QW, 05/01/07-04/30/09, “Collaborative Research: A Miniature Implantable Device for Continuous Glucose Monitoring”.
- W. M. Keck foundation, \$800,000, 02/01/06-01/31/08, “Open Laboratory for Bionanoparticle Technology Discovery and Development”, PI (Murphy and Finn as co-PIs).
- South Carolina EPSCoR Collaborative Research Program, PI, 05/01/06 – 12/31/07, \$60,000.
- Department of Defense, MURI Award, co-PI, \$966,095 to QW (for whole project \$5.3M; T.P. Russell is the PI), 05/01/04 – 04/30/09, “Bio-Directed Hierarchical Assembly of Multifunctional Materials”.

- DOD-DURIP, \$115,836, 05/01/05-04/30/06, “AKTA Explorer Chromatography system for bionanoparticles-based chemistry and materials development”.
- USC Nanocenter Seed Grant, \$45,000, 02/15/04 – 01/31/06, "Viruses as scaffolds for novel functional nanomaterials".
- NSF, \$99,999, 06/15/05-06/14/06, “NER: Development of Turnip Yellow Mosaic Virus as Nano Delivery Vehicles”.
- Department of Defense, Breast Cancer Concept Award, \$109,125, 07/15/04 – 07/14/05, "Viral Nanoparticles as Biomolecular Sensors for Targeting Breast Cancer".
- South Carolina Research & Productive Scholarship, \$14,000, 04/01/04 - 06/30/05, “Diversity-Oriented Combinatorial Synthesis to Construct New Drug Candidates Pool”.

(viii) Other Activities

- Editorial Board Member of “Experimental Biology and Medicine” for Bionanoscience (2006 -)
- Leader of Nano-biotechnology Thrust Area at Nanocenter of USC (2005 -)
- America Regional Editor for “*Letters in Organic Chemistry*”, (2005 - 2006)
- Organizing the workshop entitled “Synthesis, Assembly and Characterization of Bionanomaterials” for the annual Brookhaven National Laboratory NSLS/CFN (Center for Functional Nanomaterials) users meeting (May 23, 2007)
- Co-Chair of “ACS Symposium - Division of Colloid and Surface Chemistry: Nanoparticles and Bionanoparticles: From Synthesis to Assembly to Materials”, Washington, D.C. (2005)
- Review panelist of the NSF NIRT-Bioengineering cluster (2004 - 2005)
- Mentor of National High School Student Summer Research Apprentice Program (2004 - 2005)
- Organizing “Summer Workshop for Bionanoparticle Technology” annually (2005-)
- Member of Nanocenter of University of South Carolina (2003 -), ACS, AAAS, MRS.

- (ix) **South Carolina Research Group** (in order of their appearance, including **11** graduate students, **9** postdoctoral researchers/senior scientists, **17** undergraduates and **4** high school students trained in research lab since 2003)

Visiting Professor/Scientist

Seokjoon Lee, 01/05 – 12/06

Yong Ju, 11/05 – 02/06

Kris Varazo, 06/06 – 08/06

Daiki Kyotani, 02/07 – 07/07

Chuanlian Xu, 11/07 – 02/08

Postdoctoral Associates

K. Sivakumar, 11/03 -11/04

S. Chittaboina, 11/03 – 11/05

V.S. Kotakadi, 01/05 – 04/05
Zhongwei Niu, 04/05 -
Qingbing Zeng, 06/05 – 11/05
Céline le Droumaguet, 09/07 –
Jianhua Rong, 02/08 –
Yi Chen, 02/08 –

Graduate Students and Rotation Students

Brandon Cash, 10/03 - 08/05 (M.S.)
Su Long, 10/03 - 05/06 (M.S.)
Hannah Barnhill, 10/03 – 08/07 (Ph.D.)
Fang Xie, 10/03 – 02/08 (Ph.D.)
Haiwei Lu, 01/04 - 05/04 (Rotation)
Siqi Li, 06/04 -
Michael Bruckman, 11/04 -
Dieu Nguyen, 04/05 - 08/05 (Rotation)
Gagandeep Kaur, 05/05 -
William Carroll, 06/05 - 09/05 (Rotation)
L. Andrew Lee, 08/05 -
Tao Li, 06/06 -
Saswat Kabisatpathy, 08/06 –
Jerry Oxsher, 10/06 –
Laying Wu, 04/07 –
Kai Li, 09/07 –
Elizabeth Balizan, 10/07 –
Sharmistha Saha, 10/07 -
“Eve” Nisaraporn Suthiwangcharoen, 11/07 -

Undergraduate Students

Lisa Alexander, 09/03 - 05/05
Thomas Styslinger, 08/03 - 05/05
Andrew Spencer, 08/04 - 12/04
Xin Wang, 06/04 - 08/04
Blake Hodges, 02/05 – 05/07
Courtney N. Greggs, 11/05- 05/06
Derrick D. Bell, 12/05 – 12/06
Leah Stavish, 01/06 - 05/06
Jennifer Sepulveda, 01/06 – 12/06
Samuel H. Jacobs, 06/06 - 08/06
Usman Ghazi, 05/06 - 08/06
Brittany Williams, 06/06 – 09/06
Brandon Harp, 01/07 –
Giang Nguyen, 01/07 –
James A. Worley, 01/07 – 05/07
Jessica Brunson, 01/07 – 05/07
Simon Brown, 08/07-09/07

Dustin Rawlinson, 01/07 –
Craig Thompson, 08/07 –
Preston Thompson, 08/07 –
Erin Davis, 10/07 –
Dennis Jeffords, 11/07 –
Vaughn Braxton, 01/08 –
Matt Slack, 01/08 –
Sana Khaliq, 01/08 -

High School Student

Kimberly McIntee, 06/04 - 08/04; 06/05 - 08/05
Michelle Zhang, 06/06 -
Parag Raychoudhury, 07/06 - 08/06
Jordan Anderson, 06/07 – 07/07

(x) Research Publications (* indicates independent work at USC):

- *1. Xie, F.; Sivakumar, K.; Zeng, Q.; Bruckman, M. A.; Hodges, B.; Wang, Q.; “A Fluorogenic Cu(I) Catalyzed Azide-Alkyne Cycloaddition Reaction of Azidoanthracene Derivatives”, *Bioconjugate Chem.*, submitted.
- *2. Yang, L.; Wang, S.; Fukuto, M.; Checco, A.; Niu, Z.; Wang, Q.; “In-situ x-ray studies of self-assembled ordered virus arrays on a lipid layer”, *J. Am. Chem. Soc.* Submitted.
- *3. Niu, Z.; Liu, J.; Lee, L. A.; Bruckman, M.; Zhao, D.; Koley, G.; Wang, Q.; “Biological templated synthesis of water-soluble conductive polymeric nanowires”, *Nano Lett.* **2007**, ASAP paper.
- *4. Shin, D.; Molnar, L. K.; Kim, S. H.; Xu, T.; Wang, Q.; Russell, T. P.; “Co-Assembly of Bionanoparticles and Water-Insoluble Block Copolymers in a Thin Film”, *Adv. Mater.* Submitted.
- *5. Zhao, Y. J.; Li, S.; Davidson, A.; Yang, B.; Bain, J.; Wang, Q.; Lin, Q.; “A MEMS Viscometric Device for Continuous Glucose Monitoring”, *J. Micromechanics and Microengineering*, **2007**, *17*, 2528-2537.
- *6. Bruckman, M.; Kaur, G.; Lee, L. A.; Xie, F.; Sepulveda, J.; Breitenkamp, R.; Zhang, X.; Joralemon, M.; Russell, T. P.; Emrick, T.; Wang, Q.; “Surface modification of tobacco mosaic virus with click chemistry and cell adhesion properties”, *ChemBiochem*, **2008**, *9*, 519-523. (Cover Story)
- *7. Lin, Y.; Su, Z.; Niu, Z.; Li, S.; Kaur, G.; Lee, L. A.; Wang, Q.; “Layer-by-Layer Assembly of Viral Capsid for Cellular Adhesion”, *Acta Biomater.*, Submitted.
- *8. Lee, B.; Lo, C.-T.; Thiyagarajan, P.; Lee, D. R.; Niu, Z.; Wang, Q.; “Structural characterization using the multiple scattering effects in grazing incidence small-angle x-ray scattering”, *J. Appl. Crystallography*, **2008**, *41*, 134-142.
- *9. Niu, Z.; Li, S.; Bruckman, M.; Lee, L. A.; Lee, B.; Pingali, S. V.; Thiyagarajan, P.; Wang, Q.; “Synthesis and Characterization of Tobacco Mosaic Virus Templated Polymeric Nanomaterials”, *ACS Symposium Series*, Invited.

- *10. Lee, B.; Lo, C.-T.; Thiyagarajan, P.; Winans, R. E.; Li, X.; Niu, Z.; Wang, Q.; “Effect of Interfacial Interaction on the Cross-Sectional Morphology of Tobacco Mosaic Virus Using GISAXS”, *Langmuir*, **2007**, *23*, 11157-11163.
- *11. Wang, X.; Niu, Z.; Li, S.; Wang, Q.; Li, X.; “Nanomechanical characterization of polyaniline coated tobacco mosaic virus nanotubes”, *J. Biomedical Mater. Res. Part A*. **2007**, in print.
- *12. Niu, Z.; Bruckman, M.; Li, S.; Lee, L. A.; Lee, B.; Pingali, S. V.; Thiyagarajan, P.; Wang, Q.; “Assembly of Tobacco Mosaic Virus into Fibrous and Macroscopic Bundled Arrays by Aniline Polymerization on its Surface”, *Langmuir*, **2007**, *23*, 6719-6724.
- *13. Barnhill, H. N.; Claudel-Gillet, S.; Ziessel, R.; Charbonnière, L.; Wang, Q.; “A Prototype Protein Assembly as Scaffold for Time-Resolved Fluoroimmuno Assays”, *J. Am. Chem. Soc.* **2007**, *129*, 7799-7806.
- *14. Barnhill, H. N.; Reuther R.; Ferguson, P. L.; Dreher, T.; Wang, Q.; “Turnip Yellow Mosaic Virus as A Chemoadressable Bionanoparticle”, *Bioconj. Chem.* **2007**, *18*, 852-859.
- *15. Bruckman, M.; Niu, Z.; Li, S.; Lee, L. A.; Varazo, K.; Nelson, T.; Lavigne, J. J.; Wang, Q.; “Development of Nanobiocomposite Fibers by Controlled-Assembly of Rod-Like Tobacco Mosaic Virus”, *NanoBiotechnology*, **2007**, *3*, 31-39.
- *16. Zeng, Q.; Li, T.; Cash, B.; Li, S.; Xie, F.; Wang, Q.; “Chemoselective derivatization of a bionanoparticle by click reaction and ATRP reaction“, *Chem. Commun.* **2007**, 1453-1455.
- *17. Niu, Z.; Lee, L. A.; Sikha, G.; He, J.; Yang, L.; Popov, B. N.; Emrick, T.; Russell, T. P.; Wang, Q.; “Synthesis and characterization of bionanoparticles-silica composites and mesoporous silica with large pores”, *Chem. Mater.* Submitted.
- *18. Lee, L. A.; Wang, Q.; “Adaptations of Nanoscale Viruses and Other Protein Cages for Medical Applications”, *Nanomedicine*, **2006**, *2*, 137-149.
- *19. Lin, N.; Yan, J.; Huang, Z.; Altier, C.; Carrasco, N.; Suyemoto, M.; Johnston, L.; Wang, Q.; Fang, H.; Wang, S.; Wang, B.; “Design and synthesis of boronic acid-modified thymidine triphosphate for incorporation into DNA”, *Nucleic Acid Res.* **2007**, *35*, 1222-1229.
- *20. Beatty, K. E.; Liu, J. C.; Xie, F.; Dieterich, D. C.; Schuman, E. M.; Wang, Q.; Tirrell, D. A.; “Fluorescence Visualization of Newly Synthesized Proteins in Mammalian Cells”, *Angew. Chem. Int. Ed.* **2006**, *45*, 7364-7367.
- *21. Lee, L. A.; Barnhill, H. N.; Wang, Q.; “Bionanoparticles and the Biomedical Applications”, in “Nanomaterials for Medical Diagnosis and Therapy (Series: *Nanotechnologies for Life Sciences, Vol. 9*), Ed. Challa S. S. R. Kumar, Wiley-CH, Weinheim, pp 557-596 (2007).
- *22. Lee, S.; Wang, Q.; “Recent Development of Small Molecular Specific Inhibitor of Protein Tyrosine Phosphatases 1B”, *Medicinal Research Reviews*, **2007**, *27*, 553-573.
- *23. Niu, Z.; Bruckman, M.; Kotakadi, V.S.; He, J.; Emrick, T.; Russell, T.P.; Yang, L.; Wang, Q.*; “Study and characterization of tobacco mosaic virus head-to-tail assembly assisted by aniline polymerization”, *Chem. Commun.* **2006**, 3019-3021.
- *24. Lee, S.; Sivakuma, K.; Shin, W.-S.; Xie, F.; Wang, Q.; “Synthesis and Anti-angiogenesis Activity of Coumarin Derivatives”, *Bioorg. Med. Chem. Lett.*, **2006**, *16*, 4596-4599.

- *25. Zhou, J.; Long, S.; Wang, Q.; Dinsmore, A.D.; “Direct Measurement of Forces inside a Three-Dimensional Pile of Frictionless Droplets”, *Science*, **2006**, *312*, 1631-1633.
- *26. Zhao, Y.; Mahajan, N.; Long, S.; Wang, Q.; Fang, J.; “Probing Mechanical Properties of Cowpea Mosaic Virus Capsids on Substrates with Atomic Force Microscope”, *Micro & Nano Lett.*, **2006**, *1*, 1-4.
- *27. Oh, S.; Jeong, I. H.; Shin, W.-S.; Wang, Q.; Lee, S.; “Synthesis and biological activity of (+)-hedychilactone A and its analogs from (+)-sclareolide”, *Bioorg. Med. Chem. Lett.* **2006**, *16*, 1656-1659.
- *28. Chittaboina, S.; Hodges, B.; Wang, Q.; “A Facile Route for the Regioselective Deacylation of Peracetylated Carbohydrates at Anomeric Position”, *Lett. Org. Chem.* **2006**, *3*, 35-38.
- *29. Beatty, K. E.; Xie, F.; Wang, Q.; Tirrell, D. A.; “Selective Dye-Labeling of Newly Synthesized Proteins in Bacterial Cells”, *J. Am. Chem. Soc.* **2005**, *127*, 14582-14583.
- *30. Wang, Q.; Chittaboina, S.; Barnhill, H. N.; “Advances in 1,3-Dipolar Cycloaddition Reaction of Azides and Alkynes – A Prototype of ‘Click’ Chemistry”, *Lett. Org. Chem.* **2005**, *2*, 293-301.
- *31. Wu, C.; Barnhill, H.; Liang, X.; Wang, Q.; Jiang, H.; “A New Probe Using Virus-Dye Nanoparticles for Near-Infrared Fluorescence Tomography”, *Optics Commun.* **2005**, *255*, 366-374.
- *32. Zhan, W. H.; Barnhill, H. N.; Sivakumar, K.; Tian, H.; Wang, Q.; “Facile Synthesis of New Cyanine Dyes for Bioconjugation of Bionanoparticles with ‘Click’ Chemistry”, *Tetrahedron Lett.* **2005**, *46*, 1691-1695.
- *33. Chittaboina, S.; Xie, F.; Wang, Q.; “One-Pot Synthesis of Triazole-Linked Glycoconjugates”, *Tetrahedron Lett.* **2005**, *46*, 2331-2336.
- *34. Lin, Y.; Böker, A.; He, J.; Sill, K.; Xiang, H.; Abetz, C.; Li, X.; Wang, J.; Emrick, T.; Long, S.; Wang, Q.; Balazs, A.; Russell, T.P.; “Self-directed Assembly of Nanoparticle/Copolymer Mixtures”, *Nature* **2005**, *434*, 55-59.
- *35. Lin, Y.; Böker, A.; Russell J. T.; Long, S.; Carl, P.; Zettl, H.; He, J.; Sill, K.; Tangirala, R.; Emrick, T.; Littrell, K.; Thiyagarajan, P.; Cookson, D.; Fery, A.; Wang, Q.; Russell, T.P.; “Self-assembly and Cross-linking of Bionanoparticles at Liquid-Liquid Interfaces”, *Angew. Chem. Int. Ed.* **2005**, *44*, 2420-2426 (cover).
- *36. Sivakumar, K.; Xie, F.; Cash, B.; Long, S.; Barnhill, H.N.; Wang, Q.; “A Fluorogenic 1,3-Dipolar Cycloaddition Reaction of 3-Azidocoumarins and Acetylenes”, *Org. Lett.* **2004**, *6*, 4603-4606.
- *37. Raja, K.S.; Wang, Q.; “Bionanoparticles and Nanotechnology”, *Encyclopedia of Nanoscience and Nanotechnology, Vol B*, Marcel Dekker, New York, 321 - 330 (**2004**).
- *38. Schlosser, M.; Wang, Q.; Cottet, F.; “An Issue of Synthesis Strategy: To Make or Rather to Transform Organofluorine Compounds”, in “Current Fluoroorganic Chemistry (*ACS Symposium Series 949*)”, Ed. Soloshonok, V. A.; Mikami, K.; Yamazaki, T.; Welch, J. T.; Honek, J. F.; American Chemical Society, Washington, D.C. pp 39-53 (**2007**).

39. Punna, S.; Kuzelka, J.; Wang, Q.; Finn, M.G.; “Head-to-Tail Peptide Cyclodimerization by Copper-Catalyzed Azide-Alkyne Cycloaddition”, *Angew. Chem. Int. Ed.* **2005**, *44*, 2215-2220.
40. Rae, C. S.; Khor, I. W.; Wang, Q.; Destito, G.; Gonzalez, M. J.; Singh, P. R.; Thomas, D. M.; Estrada, M. N.; Powell, E.; Finn, M. G.; Manchester, M.; “Systemic trafficking of plant virus nanoparticles in mice via the oral route”, *Virology* **2005**, *343*(2), 224-235.
41. Taylor, D.; Wang, Q.; Bothner, B., Natarajan, P.; Finn, M.G.; Johnson, J.E.; “Correlation of the Chemical Reactivities of Nudaurelia Capensis Omega Virus with a pH-Induced Conformational Change”, *Chem. Commun.*, **2003**, 2770 - 2771.
42. Raja, K.S.; Wang, Q.; Finn, M.G.; “‘Sweet’ Viruses: Artificial Carbohydrate-Decorated Virus Particles”, *ChemBiochem*, **2003**, *4*, 1348 – 1351.
43. Raja, K.S.; Wang, Q.; Gonzalez, M.J.; Manchester, M.; Johnson, J.E.; Finn, M.G.; “Hybrid Virus-Polymer Materials. 1. Synthesis and Properties of PEG-Decorated Cowpea Mosaic Virus”, *Biomacromolecules*, **2003**, *4*, 472 – 476.
44. Smith, J. C.;[¶] Lee, K.-B.;[¶] Wang, Q.;[¶] Finn, M.G.; Johnson, J.E.; Mrksich, M.; Mirkin, C.A.; “Nanopatterning the Chemospecific Immobilization of Cowpea Mosaic Virus Particle”, *Nano Lett.* **2003**, *3*, 883 – 886. ([¶] Three authors contribute equally to the paper)
45. Wang, Q.; Chan, T.; Hilgraf, R.; Finn, M.G.; V.F. Valery; Sharpless, K.B.; “Ligation to Protein by Copper(I)-Catalyzed Azide-Alkyne Cycloaddition”, *J. Am. Chem. Soc.* **2003**, *125*, 3192 - 3193.
46. Wang, Q.; Deredas, D.; Huynh, C.; Schlosser, M.; “Sequestered Alkylolithiums: Why Phenyllithium Alone is Practicable for Betaine-Ylid Generation”, *Chem. Euro. J.* **2003**, *9*, 570 – 574.
47. Wang, Q.; Raja, K.S.; Janda, K.D.; Lin, T.; Finn, M.G.; “Natural Supramolecular Building Blocks: Blue Fluorescent Antibodies as Reporters of Steric Accessibility in Virus Conjugates”, *Bioconjugate Chem.* **2003**, *14*, 38 – 43.
48. Wang, Q.; Kaltgrad, E.; Lin, T.; Johnson, J.E.; Finn, M.G.; “Natural supramolecular building blocks: wild-type cowpea mosaic virus”, *Chem. & Biol.* **2002**, *9*, 805 – 811.
49. Wang, Q.; Lin, T.; Johnson, J.E.; Finn, M.G.; “Natural supramolecular building blocks: cysteine-added mutants of cowpea mosaic virus”, *Chem. & Biol.* **2002**, *9*, 813 - 819.
50. Wang, Q.; Lin, T.; Tang, L.; Johnson, J.E.; Finn, M.G.; “Icosahedral virus particles as addressable nanoscale building blocks”, *Angew. Chem. Int. Ed.* **2002**, *41*, 459 – 462.
51. Yang, L.; Tan, R.-x.*; Wang, Q.*; Huang, W.-y.; Yin, Y.-x.; “New antifungal cyclopeptides from *Halobacillus litoralis* YS3106 of marine origin”, *Tetrahedron Lett.* **2002**, *43*, 6545 – 6548.
52. Wang, Q.; Finn, M.G.; “2H-Chromenes from Salicylaldehyde by a Catalytic Pétasis Reaction”, *Org. Lett.* **2000**, *2*, 4063 – 4065.
53. Baston E.; Wang, Q.; Schlosser, M.; "The Rate Retarding Effect of Alkyl Groups on Arene Metalation Quantified", *Tetrahedron Lett.* **2000**, *41*, 667 - 670.

54. Wang, Q.; El-Khoury, M.; Schlosser, M.; "Bridging the Final Gap in Stereocontrolled Wittig Reactions: Methoxymethoxy-Armed Allylic Phosphorus Ylids Affording Conjugated Dienes with High *cis*-selectivity", *Chem. Euro. J.* **2000**, *6*, 420 - 426.
55. Wang, Q.; Wei, H.-x.; Schlosser, M.; "Simultaneous *in situ* Generation of Aldehydes and Phosphorus Ylids: A Convenient Multi-Step One-Action Olefination Protocol", *Euro. J. Org. Chem.* **1999**, 3263 – 3268.
56. Wang, Q.; Lu, H.-y.; Zhao, Y.-f.; "Effect of Silyl Mobility on the Reaction of *O,O'*-Phenylenephosphoryl Chloride with *N*-Silylvaline Silyl Ester", *Chin. Chem. Lett.* **1997**, *8*, 1017 – 1018.
57. El-Khoury, M.; Wang, Q.; Schlosser, M.; "A New Generation of 'Instant Ylids': Powder Mixtures of Phosphonium Salts and Potassium Hydride as Storable Precursors to Wittig Reagents", *Tetrahedron Lett.* **1996**, *37*, 9047 - 9048.
58. Shi, G.-q.; Wang, Q.; Schlosser, M.; "Versatile 2-Fluoroacrylic Building Blocks for the Synthesis of Fluorinated Heterocyclic Compounds", *Tetrahedron* **1996**, *52*, 4403 - 4410.
59. Li, Y.-f.; Zhou, W.-h.; Wang, Q.; Liu, H.; Zhao, Y.-f.; "Hydrolysis Reaction of *N*-Phosphoamino Acids - A Model for Protein Dephosphorylation", *Phosphorus, Sulfur Silicon Relat. Elem.* **1996**, *116*, 15 - 28.
60. Zhao, Y.-f.; Yan, Q.-j.; Wang, Q.; "Phosphoryl Transfer Reaction Regulated by Amino Acid Side Chains - A Model for Phosphoproteins", *Int. J. Peptide & Protein Res.* **1996**, *47*, 276 - 281.
61. Yan, Q.-j.; Wang, Q.; Zhao, Y.-f.; "Kinetics of Phosphoryl Transfer Reaction of Phosphoamino Acids and Esters in the Presence of Imidazole", *Phosphorus, Sulfur and Silicon Relat. Elem.* **1995**, *107*, 181 - 188.
62. Li, Y.-f.; Wang, Q.; Zhao, Y.-f.; Ji, G.-j.; Li, Y.-c.; "The Chemical Properties of *N*-(*O,O*-Diisopropyl)arginine", *Phosphorus, Sulfur Silicon Relat. Elem.* **1995**, *106*, 131 - 136.
63. Zhao, Y.-f.; Ju, Y.; Li, Y.-m.; Wang, Q.; Yin, Y.-w.; Tan, B.; "Self-activation of *N*-Phosphoamino Acids and *N*-Phosphodipeptides in Oligopeptide Formation", *Int. J. Peptide & Protein Res.* **1995**, *45*, 514 - 518.
64. Yan, Q.-j.; Yin, Y.-w.; Wang, Q.; Mao, Y.-q.; Zhao, Y.-f. "The Activated Reaction of *N*-Phospho-*homo*-serine and Threonine Catalyzed by Imidazole", *Gaodeng Xuexiao Huaxue Xuebao* **1995**, *16*, 1563 - 1566.
65. Yan, Q.-j.; Yin, Y.-w.; Wang, Q.; Zhao, Y.-f. "Differentiation between *N*-Phospho-*homo*-serine and Serine", *Chin. Chem. Lett.* **1995**, *6*, 267 - 270.
66. Wang, Q.; Zhao, Y.-f.; An, F.-l.; Mao, Y.-q.; Wang, Q.-z.; "Trapping of Pentacoordinate Phosphorus Compounds in the Reaction between *O,O'*-Phenylene Phosphorochloridate and Trimethylsilyl Protected Amino Acids", *Science in China (B)* **1995**, *25*, 683 - 689.
67. Li, Y.-d.; Fang, F.; Han, L.-n.; Wang, Q.; Shi, D.-h.; "Synthesis of 2-Cyano-2-(4'-*n*-pentyl-4-biphenyl)pyrimidine", *Chin. Chem. Lett.* **1992**, *3*, 699 - 702.
68. Li, Y.-d.; Wang, Q.; Shi, D.-h.; Fang, F.; "Synthesis of 5-*n*-Pentyl-2-(4'-cyanophenyl)pyrimidine", *J. Tsinghua University* **1992**, *32(6)*, 86 - 93.

Conference Papers

1. Li, T.; Li, S.; Zeng, Q.; Wang, Q.; "Synthesis of bionanoparticle-polymer conjugates via in situ atom transfer radical polymerization (ATRP) reaction". *Am. Chem. Soc., Div. Polym. Mater. Sci. Eng., Proc.* **2007**, 97, 621-622
2. Li, S.; Niu, Z.; Wang, Q.; "Preparation and characterization of polypyrrole nanodisc templated by tobacco mosaic virus". *Am. Chem. Soc., Div. Polym. Mater. Sci. Eng., Proc.* **2007**, 96, 876-877.
3. Zhao, Y. J.; Davidson, A.; Bain, J.; Li, S.; Wang, Q.; Lin, Q.; "A MEMS Viscometric Glucose Monitoring Device," Int. Conf. on Solid-State Sensors, Actuators and Microsystems (Transducers '05), Seoul, Korea, June 2005, conference paper.
4. Barnhill, H. N.; Zhan, W.; Tian, H.; Wang, Q.; "Display of Image Contrast Agents on Bionanoparticles and Their Potential Applications for *In Vivo* Imaging", *Am. Chem. Soc., Div. Polym. Mater. Sci. Eng., Proc.* **2006**, 92, 398.
5. Niu, Z.; Long, S.; Bruckman, M.; Kotakadi, V. S.; Sikha, G.; Popov, B. N.; Yang, L.; Wang, Q.; "Fabricate bionanoparticles templated silica composite materials", American Chemistry Society Meeting, March 2006, Atlanta, *Am. Chem. Soc., Div. Polym. Mater. Sci. Eng., Proc.* **2006**, 94, 393-394.
6. Barnhill, H. N.; Kotakadi, V. S.; Ziessel, R.; Charbonniere, L.; Wang, Q.; "Dual Modification of Turnip Yellow Mosaic Virus: Synthesis of a Biotinylated Luminescent Nanoparticle", *Am. Chem. Soc., Div. Polym. Mater. Sci. Eng., Proc.* **2006**, 94, 379-380.
7. Wang, Q.; Long, S.; Lin, Y.; Boker, A.; He, J.; Russell, T. P.; "Surface modification and self-assembly studies of bionanoparticles". *Am. Chem. Soc., Div. Polym. Mater. Sci. Eng., Proc.* **2005**, 92, 50.

Patents

- Wang, Q.; Sivakumar, K. Preparation of triazolylchromenones as chemoselective fluorogenic molecular linkers. PCT Int. Appl. (**2005**), 85 pp. WO 2005103705.
- Wang, Q.; Niu, Z.; Long, S. Bionanomaterials and their synthesis from viruses and virus-like particles. PCT Int. Appl. (**2007**), 52pp. WO 2007120193 A2 20071025 CAN 147:464538 AN 2007:1209117.

Selected Presentations at Conference (For Work at USC)

1. Rawlinson, R. D.; Li, T.; Niu, Z.; Wang, Q.; "Decoration of Cowpea Mosaic Virus by Noncovalent Interaction". 59th Southeast Regional Meeting of the American Chemical Society, Greenville, SC, United States, October 24-27 (**2007**)

2. Harp, B. L.; Lin, Y.; Su, Z.; Niu, Z.; Wang, Q.; „Electrostatic Layer-by-Layer Assembly of Virus”. 59th Southeast Regional Meeting of the American Chemical Society, Greenville, SC, United States, October 24-27 (2007)
3. Zeng, Q.; Barnhill, H.; Lee, L. A.; Oxsher, J.; Kaur, G.; Dreher, T.; Wang, Q.; “Post-Functionalization of Turnip Yellow Mosaic Virus with CuI Catalyzed Azide-Alkyne Cycloaddition Reaction and Cell Binding Study”. 59th Southeast Regional Meeting of the American Chemical Society, Greenville, SC, United States, October 24-27 (2007)
4. Bruckman, M.; Kaur, G.; Emrick, T.; Wang, Q.; “Surface Modification of Tobacco Mosaic Virus Using Click Chemistry”. 59th Southeast Regional Meeting of the American Chemical Society, Greenville, SC, United States, October 24-27 (2007)
5. Niu, Z.; Bruckman, M.; Lee, L. A.; Li, S.; Wang, Q.; Pingali, S. V.; Lee, B.; Thiyagarajan, P.; “Development of Nanobiocomposite Fibers by Controlled-Assembly of Rod-Like Tobacco Mosaic Virus”. 59th Southeast Regional Meeting of the American Chemical Society, Greenville, SC, United States, October 24-27 (2007)
6. Li, S.; Anderson, J.; Wang, Q.; “Synthesis and Preparation of a Novel Glucose Sensing Fluid”. 59th Southeast Regional Meeting of the American Chemical Society, Greenville, SC, United States, October 24-27 (2007)
7. Li, T.; Li, S.; Zeng, Q.; Wang, Q.; “Synthesis of bionanoparticle-polymer conjugates via in situ atom transfer radical polymerization (ATRP) reaction”. 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007 (2007)
8. Xie, F.; Zeng, Q.; Hodges, B.; Wang, Q.; “Triggering the fluorescence of anthracene derivatives by click reaction”. 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007 (2007)
9. Zeng, Q.; Barnhill, H.; Lee, L. A.; Tzanetakis, I. E.; Dreher, T.; Wang, Q.; “Chemo selective modification of turnip yellow mosaic virus by Cu(I) catalyzed azide-alkyne 1,3-dipolar cycloaddition reaction”. 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007 (2007)
10. Zeng, Q.; Li, T.; Cash, B. M.; Li, S.; Xie, F.; Wang, Q.; “Chemoselective derivatization of a bionanoparticle by click reaction and ATRP reaction”. 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007 (2007)
11. Kaur, G.; Bruckman, M.; Niu, Z.; Pingali, S. V.; Thiyagarajan, P.; Lee, B.; Emrick, T.; Russell, T. P.; Wang, Q.; “2-D Assembly of viral particles and their application in cell binding”. 234th ACS National Meeting, Boston, MA, United States, August 19-23, 2007 (2007)
12. Wang, Q.; “Biological Particles Directed Chemistry and Nanomaterials Development”, June 17-22, 2007, Gordon Conference Polymer East, Mount Holyoke College, MA (Contributed Poster)
13. Bruckman, M. A.; Niu, Z.; Lee, L. A.; Lee, B.; Wang, Q.; “Controlling the morphology of 1-D tobacco mosaic virus assembly assisted by aniline polymerization”, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, 2007. (Contributed poster)

14. Li, S.; Niu, Z.; Bruckman, M.; Wang, Q.; “Synthesis of thiophene derivatives and their applications in developing tobacco mosaic virus composite fibers”, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, **2007**. (Contributed poster)
15. Bruckman, M. A.; Kaur, G.; Joralemon, M.; Emrick, T.; Wang, Q.; “Click chemistry as an efficient method for chemoselective modification of tobacco mosaic virus”, , 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, **2007**. (Contributed poster)
16. Hodges, B. M.; Xie, F.; Wang, Q.; “Fluorogenic 1,3-dipolar cycloaddition reaction between 9-azidomethylanthracenes and acetylenes and fluorescent properties study”, 233rd ACS National Meeting, Chicago, IL, United States, March 25-29, **2007**. (Contributed poster)
17. Wang, B.; Li, S.; Zhao, Y.; Schultz, J.; Wang, Q.; Lin, Q.; "Characterization of a MEMS continuous glucose monitoring device", DTT conference, Nov **2006**, conference paper.
18. Bruckman, M.; Niu, Z.; Lee, L. A.; Wang, Q.; "Modulating the Assembly of Tobacco Mosaic Virus/Polyaniline Composites by Particle Surface Modification", June **2006**, PASI Conference, San Jose, Costa Rica. (Contributed poster/presentation)
19. Wang, Q.; “Materials Development by Hierarchical Self-assembly of Tobacco Mosaic Viruses”, April 24, **2006**, Materials Research Society Meeting, San Francisco, CA (Contributed Talk)
20. Z. Niu, S. Long, M. Bruckman, V.S. Kotakadi, G. Sikha, B.N. Popov, L. Yang, Q. Wang, “Fabricate bionanoparticles templated silica composite materials”, American Chemistry Society Meeting, March **2006**, Atlanta, PMSE, preprint. (Contributed Poster)
21. H. N. Barnhill, V.S. Kotakadi, R. Ziessel, L. Charbonniere, Q. Wang, “Dual Modification of Turnip Yellow Mosaic Virus: Synthesis of a Biotinylated Luminescent Nanoparticle”, American Chemistry Society Meeting, March **2006**, Atlanta, PMSE, preprint. (Contributed Talk)
22. Wang, Q.; “Plant viruses based self-assembly and cell-binding study”, March 26-30, **2006**, American Chemical Society Meeting, Colloidal Division, Atlanta, GA (Contributed Talk)
23. Long, S.; He, J.; Lin, Y.; Boker, A.; Niu, Z.; Russell, T.P.; Wang, Q.; “Self-Assembly of bionanoparticles at liquid/liquid interface”, March 26-30, **2006**, American Chemical Society Meeting, Colloidal Division, Atlanta, GA (Contributed Poster)
24. Barnhill, H. B.; “Turnip yellow mosaic virus – A bionanoparticle”, March 26-30, **2006**, American Chemical Society Meeting, Colloidal Division, Atlanta, GA (Contributed Poster)
25. Bruckman, M.; Niu, Z.; Wang, Q.; “Synthesis of biocomposite nanofibers with surface modified Tobacco Mosaic Virus”, American Chemistry Society Meeting, March **2006**, Atlanta, PMSE, preprint. (Contributed Poster)
26. Zeng, Q.; Cash, B.; Wang, Q.; “Horse Spleen Apoferritin as Building Block for Chemoselective Modification”, March 26-30, **2006**, American Chemical Society Meeting, Colloidal Division, Atlanta, GA (Contributed)

27. Zeng, Q.; Cash, B.; Wang, Q.; “Horse Spleen Apoferritin as Building Block for Chemoselective Modification and Self-assembly”, March 9-10, **2006**, The 79th Annual Meeting of South Carolina Academy of Science, Columbia, SC (Contributed)
28. Wang, Q.; "Synthesis of plant viruses based composite materials", March 9-10, **2006**, The 79th Annual Meeting of South Carolina Academy of Science, Columbia, SC (Contributed)
29. Chittaboina, S.; Hodges, B.; Fang, X.; Wang, Q.; “Synthesis of Salic Acids and the Bioconjugation Study”. Abstracts, 57th Southeast/61st Southwest Joint Regional Meeting of the American Chemical Society, Memphis, TN, United States, November 1-4 (**2005**)
30. Wang, Q.; “The chemistry, bioconjugation and assembly of bioparticles”. Abstracts of Papers, 230th ACS National Meeting, Washington, DC, United States, Aug. 28-Sept. 1 (2005)
31. Wang, Q.; “Surface modification and self-assembly studies of bionanoparticles”, June 12-17, **2005**, Gordon Conference Supermolecules&Assemblies, Colby College, ME (Contributed Poster)
32. Wang, Q.; “Surface modification and self-assembly studies of bionanoparticles”, June 19-24, **2005**, Gordon Conference Polymer East, Mount Holyoke College, MA (Contributed Poster)
33. Wang, Q.; “Bionanoparticle Technology and Its Potential Applications for In Vivo Imaging”, June 8-11, **2005**, The 4th Era of Hope Breast Cancer Research Program Meeting, Philadelphia, PA (Contributed Poster)
34. Barnhill, H.N.; Zhan, W.; Tian, H; Wang, Q.; “Display of image contrast agents on bionanoparticles and their potential applications for in vivo imaging”. 229th ACS National Meeting, San Diego, CA, United States, March 13-17 (**2005**) (Contributed Poster)
35. Xie, F.; Sivakumar, K.; Cash, B.M.; Wang, Q.; “A "Click" approach to the synthesis of coumarin-based fluorescent molecules”. 229th ACS National Meeting, San Diego, CA, United States, March 13-17 (**2005**) (Contributed Poster)
36. Wang, Q.; Long, S.; Lin, Y.; Boker, A.; He, J.; Russell, T.P.; “Surface modification and self-assembly studies of bionanoparticles”. Abstracts of Papers, 229th ACS National Meeting, San Diego, CA, United States, March 13-17 (**2005**)
37. Alexander, L. A.; Wang, Q.; “Detailed reactivity study of cysteine-inserted cowpea mosaic virus extracted from primary and secondary leaves”. Abstracts of Papers, 229th ACS National Meeting, San Diego, CA, United States, March 13-17 (**2005**)
38. Wang, Q.; “A Fluorogenic [2+3] Cycloaddition of Alkynes and Azides for Chemoselective Bioconjugation”. Abstracts, 56th Southeast Regional Meeting of the American Chemical Society, Research Triangle Park, NC, United States, November 10-13 (**2004**)
39. Chittaboina, S.; Styslinger, T.J.; Wang, Q.; “An efficient route to construct multivalent carbohydrate based dendrimers”. Abstracts, 56th Southeast Regional Meeting of the American Chemical Society, Research Triangle Park, NC, United States, November 10-13 (**2004**) (Contributed Talk)

40. Wang, Q.; “Click Chemistry’ toward Function Diversity”, Nov. 10, **2004**, Diversity-Oriented Synthesis and Natural Product Chemistry, Boston (Invited Talk)
41. Wang, Q.; “Self-assembly and Cross-linking of Bionanoparticles at Liquid-Liquid Interfaces”, **2004**, DOE-EPSCoR Symposium, Argonne, IL (Contributed Poster)