

CURRICULUM VITAE

Shengli Zou
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Education/training

Ph.D. Emory University, Atlanta, GA, 2003 (Physical Chemistry, Advisor: Joel Bowman)

M.S. Shandong University, Jinan, P.R. China, 1996 (Physical Chemistry)

B.S. Shandong University, Jinan, P.R. China, 1993 (Physical Chemistry)

Positions and employment

2012- Associate Professor, Department of Chemistry, University of Central Florida

2006-2012 Assistant Professor, Department of Chemistry, University of Central Florida

2003-2006 Postdoctoral fellow, Department of Chemistry, Northwestern University. (Advisor: George C. Schatz)

Peer reviewed papers

* **Corresponding author. (Members in the Zou lab are marked with bold font)**

88. "Quantification of the Photon Absorption, Scattering, and On-Resonance Emission Properties of CdSe/CdS Core/Shell Quantum Dots: Effect of Shell Geometry and Volumes" Joanna Xiuzhu Xu, Yucheng Yuan, **Muqiong Liu**, **Shengli Zou**, Ou Chen, Dongmao Zhang*, Analytical Chemistry, 2020, 92 (7), 5346-5355
87. "Colloidal Assembly of Au-Quantum Dot-Au Sandwiched Nanostructures with Strong Plasmon-Exciton Coupling" Yi Luo, Yongchen Wang, **Muqiong Liu**, Hua Zhu, Ou Chen, **Shengli Zou**, Jing Zhao, Journal of Physical Chemistry C, 2020, 11(7), 2449-2456
86. "Dithiosulfidene Adsorption and Reaction on Gold Nanoparticles in Water" Huan Yang, Wanying Zhang, Sumudu Athukorale, Zhiguo Liu, **Shengli Zou**, Bruno Donnadieu, Zhouyu Wang*, Dongmao Zhang*, Journal of Physical Chemistry C, 2020, 124 (1) 686-692
85. "Photothermal Effect, Local Field Dependence, and Charge Carrier Relaying Species in Plasmon-Driven Photocatalysis: A Case Study of Aerobic Nitrothiophenol Coupling Reaction" Qingfeng Zhang, **Yadong Zhou**, Xiaoqi Fu, Esteban Villarreal, Lichao Sun, **Shengli Zou**, Hui Wang*, Journal of Physical Chemistry C, 2019, 123 (43) 26695-26704
84. "A Divide-and-Conquer Strategy for Quantification of Light Absorption, Scattering, and Emission Properties of Fluorescent Nanomaterials in Solutions" Joanna Xiuzhu

- Xu, Yucheng Yuan, **Shengli Zou**, Ou Chen, Dongmao Zhang*, Analytical Chemistry, 2019, 91 (13) 8540-8548
83. "Metal and Semiconductor Nanocrystals" Jing Zhao*, Ou Chen*, Jie He*, **Shengli Zou***, Frontiers in Chemistry, 2019, 7 (310), 1-2
82. "Schrödinger equation with Coulomb potential admits no exact solutions" **Iliia Toli, Shengli Zou***, Chemical Physics Letters X, 2019, 2, 100021
81. " DNA-enabled Rational Design of Fluorescence-Raman Bimodal Nanoprobes for Cancer Imaging and Therapy" Suchetan Pal, Angana Ray, Chrysafis Andreou, **Yadong Zhou**, Tatini Rakshit, Marek Wlodarczyk, Masatomo Maeda, Ricardo Toledo-Crow, Naxhije Berisha, Jiang Yang, Hsiao-Ting Hsu, Anton Oseledchyk, Jagannath Mondal, **Shengli Zou**, Moritz F. Kircher1*, Nature Communication, 2019, 10(1), 1926
80. " Degradation kinetics of hexachlorobenzene over zero-valent magnesium/graphite in protic solvent system and modeling of degradation pathways using density functional theory" Amel M. Garbou, **Muqiong Liu, Shengli Zou**, Cherie L. Yestrebky*, Chemosphere 2019, 222 195-204
79. "Flexible bipyramid-AuNPs based SERS tape sensing strategy for detecting methyl parathion on vegetable and fruit surface " Huixiang Wu, Yi Luo, Changjun Hou*, Danqun Huo, **Yadong Zhou, Shengli Zou**, Jing Zhao, Yu Lei*, Sensors and Actuators B-Chemical, 2019, 285, 123-128
78. " Degradation and statistical optimization of 3,5,6-trichloro-2-pyridinol by zero valent iron-activated persulfate, Roaa Mogharbel, **Muqiong Liu, Shengli Zou**, Cherie Yestrebky*, Korean Journal of Chemical Engineering, 2019, 36(4), 540-550
77. "Linear Extrapolation of the Analyte-Specific Light Scattering and Fluorescence Depolarization in Turbid Samples", Joanna Xiuzhu Xu, **Muqiong Liu**, Sumudu Athukorale, **Shengli Zou***, and Dongmao Zhang*, ACS Omega 2019 4 (3), 4739–4747
76. "Remediation of Chlorinated Alkanes by Vitamin B-12 and Zero-Valent Iron " Nicole Lapeyrouse, **Muqiong Liu, Shengli Zou**, Greg Booth, Cherie L. Yestrebky *, Journal of Chemistry, 2018, 2019, 7565464
75. "Dielectric domain distribution on Au nanoparticles revealed by localized surface plasmon resonance" Yi Luo, **Yadong Zhou, Shengli Zou**, Jing Zhao*, Journal of Materials Chemistry C, 2018, 6(44), 12038-12044
74. "Excitation Wavelength-Dependent Photoluminescence Decay of Hybrid Gold/Quantum Dot Nanostructures" Terianna J. Wax, Swayandipta Dey, Shutang Chen, Yi Luo, **Shengli Zou**, Jing Zhao* , ACS Omega, 2018, 3(10), 14151-14156

73. "Efficient Circular Polarizer Using a Two-Layer Nanoparticle Dimer Array with Designed Chirality" **Yadong Zhou, Yan Zhao, Jennifer M. Reed, Patricia M. Gomez, Shengli Zou***, Journal of Physical Chemistry C, 2018, 122(23), 12428-12433
72. "Crystallization of Poly(3-hexylthiophene) on graphitic surfaces with different curvatures" Chen Shen, **Shuo Chai, Shengli Zou**, Lei Zhai*, Polymer, 2018, 144, 168-178
71. "Systematic Molecular Engineering of a Series of Aniline-Based Squaraine Dyes and Their Structure-Related Properties" Taihong Liu, Xinglei Liu, Weina Wang, Zhipu Luo, **Muqiong Liu, Shengli Zou**, Cristina Sissa, Anna Painelli, Yuanwei Zhang, Mikas Vengris, Mykhailo V. Bondar, David J. Hagan, Eric W. Van Stryland, Yu Fang, Kevin D. Belfield*, Journal of Physical Chemistry C, (2018) 122(7), 3994-4008
70. "Excitation wavelength dependent photon anti-bunching/bunching from single quantum dots near gold nanostructures" Swayandipta Dey, **Yadong Zhou**, Yonglei Sun, Julie A. Jenkins, David Kriz, Steven L. Suib, Ou Chen, **Shengli Zou**, Jing Zhao*, Nanoscale, (2018) 10(3) 1038-1046
69. "Quantification of Gold Nanoparticle Ultraviolet-Visible Extinction, Absorption, and Scattering Cross-Section Spectra and Scattering Depolarization Spectra: The Effects of Nanoparticle Geometry, Solvent Composition, Ligand Functionalization, and Nanoparticle Aggregation" Joanna Xiuzhu Xu, Kumudu Siriwardana, **Yadong Zhou, Shengli Zou**, Dongmao Zhang* , Analytical Chemistry, (2018) 90(1) 785-793
68. "Determining the Liquid Light Scattering Cross Section and Depolarization Spectra Using Polarized Resonance Synchronous Spectroscopy" Sumudu A. Athukorale, **Yadong Zhou, Shengli Zou**, Domgnao Zhang* Analytical Chemistry (2017) 89 (23) 12705-12712
67. "Programmable Supra-Assembly of a DNA Surface Adapter for Tunable Chiral Directional Self-Assembly of Gold Nanorods" Xiang Lan, Zhaoming Su, **Yadong Zhou**, Travis Meyer, Yonggang Ke, Qiangbin Wang, Wah Chiu, Na Liu, **Shengli Zou**, Hao Yan, Yan Liu* Angewandte Chemie-international Edition, (2017) 56 (46) 14632-14636
66. "Mechanistic and computational studies of PCB151 dechlorination by zero valent magnesium for field remediation optimization", Fiona M. Zullo, **Muqiong Liu, Shengli Zou**, Cherie L. Yestrebky* Journal of Hazardous Materials, (2017) 337 55–61

65. "Different Transmission Enhancement Mechanisms in a Sandwiched Nanofilm" **Yadong Zhou, Yan Zhao, Shengli Zou***, Particle & Particle Systems Characterization, (2017) 1600327
64. "Electrically Modulated Localized Surface Plasmon around Self-Assembled-Monolayer-Covered Nanoparticles " Liyuan Ma, Shandong Xu, Chaoming Wang, **Haining Wang, Shengli Zou**, Ming Su*, Langmuir, (2017) 33(6) 1437-1441
63. "Mechanism and kinetic properties for the gas-phase ozonolysis of beta-ionone" **Yan Zhao***, **Shengli Zou**, RSC Advances, (2016) 6(16) 114256-114263
62. "Plasmonic coupling in single flower-like gold nanoparticle assemblies " Yi Luo, Lacie Dube, **Yadong Zhou, Shengli Zou**, Jing Zhao*, The Journal of Progress in Natural Science-Materials International, (2016) 26(9) 449-454
61. "Effects of Dipole and Quadrupole Modes on the Switchable Total Transmission and Reflection in an Array of Rectangular Silver Prisms" **Yadong Zhou, Shengli Zou***, *Journal of Physical Chemistry C*, (2016) 120(37) 20743-20748
60. "On-Resonance Fluorescence, Resonance Rayleigh Scattering, and Ratiometric Resonance Synchronous Spectroscopy of Molecular- and Quantum Dot-Fluorophores" Kumudu Siriwardana, Charles B., II Nettles, Buddhini C. N. Vithanage, **Yadong Zhou, Shengli Zou**, Dongmao Zhang*, *Analytical Chemistry*, (2016) 88(18) 9199-9206
59. "Ion Pairing as the Main Pathway for Reducing Electrostatic Repulsion among Organothiolate Self-assembled on Gold Nanoparticles in Water" Ganganath S. Perera, Manuel Gadogbe, Sandamini H. Alahakoon, **Yadong Zhou, Shengli Zou**, Felio Perez, Dongmao Zhang*, *Journal of Physical Chemistry C*, (2016) 120(35) 19878-19884
58. "Rigid Single Carbon-Carbon Bond That Does Not Rotate in Water" Manuel Gadogbe, **Yadong Zhou, Shengli Zou**, Dongmao Zhang*, *Journal of Physical Chemistry B*, (2016) 120(9), 2418-2422
57. "UV-Vis Ratiometric Resonance Synchronous Spectroscopy for Determination of Nanoparticle and Molecular Optical Cross Sections" Charles B Nettles, **Yadong Zhou, Shengli Zou**, Dongmao Zhang*, *Analytical Chemistry*, (2015) 88(5), 2891-2898
56. "Failure and Reexamination of the Raman Scattering Enhancement Factor Predicted by the Enhanced Local Electric Field in a Silver Nanorod" **Yadong Zhou, Yan Tian, Shengli Zou***, *Journal of Physical Chemistry C*, (2015) 119(49), 27683-27687

55. "Direct Observation of Ion Pairing at the Liquid/Solid Interfaces by Surface Enhanced Raman Spectroscopy" Ganganath S. Perera, Charles B. Nettle, **Yadong Zhou**, **Shengli Zou**, T. Keith Hollis, Dongmao Zhang*, *Langmuir*, (2015) 1(33), 8998-9005
54. "Structures and Conformations of Alkanedithiols on Gold and Silver Nanoparticles in Water" Manuel Gadogbe, **Yadong Zhou**, Sandamini H. Alahakoon, Ganganath S. Perera, **Shengli Zou**, Charles U., Jr. Pittman, Dongmao Zhang*, *Journal of Physical Chemistry C*, (2015) 119(32), 18414-18421
53. "Faceted Gold Nanorods: Nanocuboids, Convex Nanocuboids, and Concave Nanocuboids" Qingfeng Zhang, **Yadong Zhou**, Esteban Villarreal, Ye Lin, **Shengli Zou**, Hui Wang*, *Nano Letters*, (2015) 15(6), 4161-4169
52. "Iodide-Induced Organothiols Desorption and Photochemical Reaction, Gold Nanoparticle (AuNP) Fusion, and SERS Signal Reduction in Organothiols-Containing AuNP Aggregates" Ganganath S. Perera, Allen LaCour, **Yadong Zhou**, Kate L. Henderson, **Shengli Zou**, Felio Perez, Joseph P. Emerson, Dongmao Zhang, *Journal of Physical Chemistry C*, (2015) 119(8) 4261-4267
51. "Structural defect induced peak splitting in gold-copper bimetallic nanorods during growth by single particle spectroscopy" Srayan Thota, Shutang Chen, Yadong Zhou, **Yong Zhang**, **Shengli Zou**, Jing Zhao*, *Nanoscale* (2015) 7(35), 14652-14658
50. "An experimental and theoretical mechanistic study of biexciton quantum yield enhancement in single quantum dots near gold nanoparticles" Swayandipta Dey, **Yadong Zhou**, Xiangdong Tian, Julie A. Jenkins, Ou Chen, **Shengli Zou**, Jing Zhao*, *Nanoscale* (2015) 7(15), 6851-6858
49. "A numerical demonstration of far field photon intensity enhancement without stimulated emission" **Patricia Gomez**, **Jennifer M. Reed**, **Haining Wang**, and **Shengli Zou***, *Chemical Physics Letters* (2014) 616, 243-247
48. "Blue Shifted Narrow Localized Surface Plasmon Resonance from Dipole Coupling in Gold Nanoparticles Random Arrays" Julie Jenkins, **Yadong Zhou**, Srayan Thota, Xiangdong Tian, Xiaowen Zhao, **Shengli Zou**, and Jing Zhao*, *Journal of Physical Chemistry C* (2014) 118 (45), 26276-26283
47. "Dispersion Stability, Ligand Structure and Conformation, and SERS Activities of 1-Alkanethiol Functionalized Gold and Silver Nanoparticles" Siyam M. Ansar, Manuel Gadogbe, Kumudu Siriwardana, Jane Y. Howe, Stas Dogel, Hooman Hosseinkhannazer, Willard E. Collier, Jose Rodriguez, **Shengli Zou**, and Dongmao Zhang* *Journal of Physical Chemistry C* (2014) 118(43), 24925-24934

46. "Comparative Study of the Self-assembly of Gold and Silver Nanoparticles onto Thiophene Oil" Manuel Gadogbe, Siyam M. Ansar, I-Wei Chu, **Shengli Zou**, and Dongmao Zhang * *Langmuir* (2014) 30 (39), 11520–11527
45. "Numerical Study of Mode Excitation in a Partially Illuminated Silver Rod" **Yadong Zhou**, **Brian Allen**, **Jennifer M. Reed**, and **Shengli Zou*** *Journal of Physical Chemistry A* (2014) 118 (39), 8971–8976
44. "Wavelength-Dependent Correlations between UV-Vis Intensities and SERS Enhancement Factors of Aggregated Gold and Silver Nanoparticles" Fathima S. Ameer, **Yadong Zhou**, **Shengli Zou**, and Dongmao Zhang* *Journal of Physical Chemistry C* (2014) 118 (38), 22234–22242
43. "Fluorescence Quenching of Quantum Dots by Gold Nanoparticles: a Potential Long Range Spectroscopic Ruler" Anirban Samanta, **Yadong Zhou**, **Shengli Zou**, Hao Yan, and Yan Liu* *Nano Letters* (2014) 14 (9), 5052–5057
42. "Plasmonic Coupling in Single Silver Nanosphere Assemblies by Polarization Dependent Dark-Field Scattering Spectroscopy" Xiangdong Tian, **Yadong Zhou**, Sravan Thota, **Shengli Zou**, and Jing Zhao* *Journal of Physical Chemistry C* (2014) 118 (25), 13801–13808
41. "Ligand Adsorption and Exchange on Pegylated Gold Nanoparticles" Kumudu Siriwardana, Manuel Gadogbe, Siyam M. Ansar, Erick S. Vasquez, Willard E. Collier, **Shengli Zou**, Keisha B. Walters, and Dongmao Zhang* *Journal of Physical Chemistry C* (2014) 118(20) 11111-11119
40. "Ligand Desorption and Desulfurization on Silver Nanoparticles Using Sodium Borohydride in Water" Ganganath S. Perera, Siyam M. Ansar, Shanshan Hu, Maodu Chen, **Shengli Zou**, Charles U. Pittman, Jr., and Dongmao Zhang* *Journal of Physical Chemistry C* (2014) 118(19) 10509-10518
39. "Mechanistic Study of Continuous Reactive Aromatic Organothiols Adsorption onto Silver Nanoparticles" Siyam M. Ansar, Ganganath S. Perera, **Patricia Gomez**, George Salomon, Erick S. Vasquez, I-Wei Chu, **Shengli Zou**, Charles U. Pittman, Jr., Keisha B. Walters, and Dongmao Zhang * *Journal of Physical Chemistry C* (2013) 117 (51), 27146–27154
38. "Subwavelength light confinement and propagation: a numerical study of a two-layer silver film with perforated holes" **Jennifer M. Reed**, **Haining Wang**, **Yingnan Guo**, **Shengli Zou*** *Applied Physics Letters* (2013) 103(16) 161114
37. "A generalized electrodynamics model for surface enhanced Raman scattering and enhanced/ quenched fluorescence calculations" **Haining Wang**, **Shengli Zou*** *Royal Society of Chemistry Advances* (2013) 3(44) 21489-21493

36. "Direction-selective waveguide of a two-layer silver film with angled holes" **Haining Wang, Yingnan Guo, Jennifer M. Reed, Shengli Zou*** *Chemical Physics Letters* (2013) 587(0) 81-84
35. "High-Resolution Imaging of Electric Field Enhancement and Energy-Transfer Quenching by a Single Silver Nanowire Using QD-Modified AFM Tips" Zheng Liu, Allen M. Ricks, **Haining Wang**, Nianhui Song, Fengru Fan, **Shengli Zou***, Tianquan Lian* *Journal of Physical Chemistry Letters* (2013) 4(14) 2284-2291
34. "Desulfurization of Mercaptobenzimidazole and Thioguanine on Gold Nanoparticles Using Sodium Borohydride in Water at Room Temperature" Siyam M. Ansar, Ganganath S. Perera, Fathima S. Ameer, **Shengli Zou**, Charles U. Jr. Pitman, Dongmao Zhang* *Journal of Physical Chemistry C* (2013) 117(26) 13722-13729
33. "Effective light bending and controlling in a chamber-channel waveguide system" **Yingnan Guo, Haining Wang, Jennifer M. Reed, Shi Pan*, and Shengli Zou*** *Optics Letters* (2013) 38(13) 2209-2211
32. "Quantum Efficiency Modification of Organic Fluorophores Using Gold Nanoparticles on DNA Origami Scaffolds" Suchetan Pal, Palash Dutta, **Haining Wang**, Zhengtao Deng, **Shengli Zou**, Hao Yan, Yan Liu* *Journal of Physical Chemistry C* (2013) 117(24) 12735-12744
31. "Polyelectrolyte Multilayers Stabilized Plasmonic Nanosensors" Chaoming Wang, **Haining Wang, Shengli Zou**, Liyuang Ma* *Sensor Letters* (2013) 11(3) 519-525
30. "Removal of Molecular Adsorbates on Gold Nanoparticles Using Sodium Borohydride in Water" Siyam M. Ansar, Fathima S. Ameer, **Wenfang Hu, Shengli Zou**, Charles U. Jr. Pittman, Dongmao Zhang* *Nano Letters* (2013) 13(3) 1226-1229
29. "Robust and Reproducible Quantification of SERS Enhancement Factors Using a Combination of Time-Resolved Raman Spectroscopy and Solvent Internal Reference Method" Fathima S. Ameer, **Wenfang Hu**, Siyam M. Ansar, Kumudu Siriwardana, Willard E. Collier, **Shengli Zou**, and Dongmao Zhang* *Journal of Physical Chemistry C* (2013) 117(7) 3483-3488
28. "Inner Filter Effect on Surface Enhanced Raman Spectroscopic Measurement" Fathima S. Ameer, Siyam M. Ansar, **Wenfang Hu, Shengli Zou**, Dongmao Zhang* *Analytical Chemistry* (2012) 84(20) 8437-8441
27. "Optical properties and coherent vibrational oscillations of gold nanostars" Damon A. Wheeler, Thomas D. Green, **Haining Wang**, Cristina Fernández-López, Luis Liz-Marzán, **Shengli Zou**, Kenneth L. Knappenberger, Jin Z. Zhang, *Chemical Physics Letters* (2012) 543 127-132

26. "Biomimic Light Trapping Silicon Nanowire Arrays for Laser Desorption/Ionization of Peptides" Chaoming Wang, **Jennifer M. Reed**, Liyuan Ma, Yong Qiao, Yang Luo, **Shengli Zou**, James J. Hickman, and Ming Su, *Journal of Physical Chemistry C*, (2012) 116(29), 15415-15420
25. " Photo- and Thermal-Induced Isomerization of Diels-Alder Adducts of Pentacene and TCNE " Valentine K. Johns, Zheng Shi, **Wenfang Hu**, Jaime B Johns, **Shengli Zou**, Yi Liao*, *European Journal of Organic Chemistry* (2012) 2012 (14), 2707-2710
24. "Quantitative Comparison of Raman Activities, SERS Activities, and SERS Enhancement Factors of Organothiols: Implication to Chemical Enhancement" Siyam M. Ansar, Xiaoxia Li, **Shengli Zou**, and Dongmao Zhang*, *Journal of Physical Chemistry Letters*, (2012) 3(5), 560-565
23. "Shape of Fano resonance line spectra calculated for silver nanorods" **Jennifer M. Reed**, **Haining Wang**, **Wenfang Hu**, and **Shengli Zou***, *Optics Letters* (2011) 36(22), 4386-4388
22. "DNA directed self-assembly of anisotropic plasmonic nanostructure" Suchetan Pal, Zhengtao Deng, **Haining Wang**, **Shengli Zou**, Yan Liu*, and Hao Yan*, *Journal of American Chemical Society* (2011) 133 (44), 17606–17609
21. "Remarkable radiation efficiency through leakage modes in two dimensional silver nanoparticle arrays" **Wenfang Hu** and **Shengli Zou*** *Journal of Physical Chemistry C.*, (2011) 15(35), 17328-17333
20. "Proposed substrates for reproducible surface-enhanced Raman scattering detection" **Wenfang Hu** and **Shengli Zou*** *Journal of Physical Chemistry C*, (2011) 115(11), 4523-4532
19. " Coherent Vibrational Oscillations of Hollow Gold Nanospheres" Rebecca J. Newhouse, **Haining Wang**, Jennifer K. Hensel, Damon A. Wheeler, **Shengli Zou** and Jin Z. Zhang* *Journal of Physical Chemistry Letters*, (2011) 2(3), 228-235
18. "Identification of Single Nanoparticles " Yujun Song*, Zongsuo Zhang, Hani E. Elsayed-Ali, **Haining Wang**, Laurence L. Henry, Ququan Wang, **Shengli Zou**, Tao Zhang, *Nanoscale* (2011) 3(1), 31-44
17. " Direct Visualization of Molecular Scale Chemical Adsorptions on Solids Using Plasmonic Nanoparticle Arrays " Chaoming Wang, Liyuan Ma, Mainul Hossain, Minghui Zhang, **Haining Wang**, **Shengli Zou**, James Hickman, Ming Su*, *Sensor Actuator B-Chemistry*, (2010) 150(2) 667-672

16. "Optical Properties and Persistent Spectral Hole Burning of Near-Infrared-Absorbing Hollow Gold Nanospheres" Damon A. Wheeler, Rebecca J. Newhouse, **Haining Wang, Shengli Zou** and Jin Z. Zhang* *Journal of Physical Chemistry C* (2010) 114(42), 18126-18133
15. "Surface-plasmon-assisted electromagnetic wave propagation" **Wenbo Yang, Jennifer M. Reed, Haining Wang, Shengli Zou***, *Physical Chemistry Chemical Physics* (2010) 12, 12647 - 12652
14. "Efficient and tunable light trapping thin films" **Feng Yu, Haining Wang, and Shengli Zou***, *Journal of Physical Chemistry C* (2010) 114(5) 2066-2069
13. "Subnanogram Mass Measurements on Plasmonic Nanoparticles for Temperature-Programmed Thermal Analysis" Chaoming Wang, Minghui Zhang, **Haining Wang, Shengli Zou**, and Ming Su*, *Journal of Physical Chemistry Letters* (2010) 1 (16) 79-84
12. "Photonic interaction between quantum dots and gold nanoparticles in discrete nanostructures through DNA directed self-assembly" Qiangbin Wang*, **Haining Wang**, Chenxiang Lin, Jaswinder Sharma, **Shengli Zou***, and Yan Liu*, *Chem. Commun.* (2010) 46 (2) 240-242
11. "Distance-dependent interactions between gold nanoparticles and fluorescent molecules with DNA as tunable spacers" Rahul Chhabra, Jaswinder Sharma, **Haining Wang, Shengli Zou**, Su Lin, Hao Yan, Stuart Lindsay*, Yan Liu*, *Nanotechnology* (2009) 20(48) 485201
10. "Gain and loss of propagating electromagnetic wave along a hollow silver nanorod" **Haining Wang**, and **Shengli Zou*** *Physical Chemistry Chemical Physics* (2009) 11(28) 5871-5875 (invited contribution)
9. "Electric field confinement and enhancement in a silver film Fabry-Pérot interferometer" **Feng Yu, Haining Wang**, and **Shengli Zou*** *Journal of Physical Chemistry A* (2009) 113(16):4217-4222 (invited contribution)
8. "Extremely low scattering cross section of a perforated silver film" **Haining Wang** and **Shengli Zou***, *Applied Physics Letters* (2009) 94(7),073119
7. Curved Microwell Arrays Created by Diffusion-Limited Chemical Etching of Artificially Engineered Solids" Zeyu Ma, Yan Hong, Liyuan Ma, **Yicun Ni, Shengli Zou**, and Ming Su* *Langmuir* (2009) 25(2), 643-647.
6. "Light driven circular plasmon current in a silver nanoring" **Shengli Zou*** *Optics Letters* (2008) 33 (18) 2113-2115

5. "Electromagnetic wave propagation in a multilayer silver particle" **Shengli Zou*** *Chemical Physics Letters* (2008) 454(4-6) 289-293.
4. "Dark-Field Microscopy Studies of Single Metal Nanoparticles: Understanding the Factors that Influence the Linewidth of the Localized Surface Plasmon Resonance" Min Hu, Carolina Novo, Alison Funston, **Haining Wang**, Hristina Petrova, **Shengli Zou**, Paul Mulvaney, Younan Xia, and Gregory V. Hartland*, *Journal of Material Chemistry* (2008) 18(17) 1949-1960.
3. "Near-field polarization effects in molecular-motion-induced photochemical imaging" Christophe Hubert*, Renaud Bachelot*, Jérôme Plain, Sergeï Kostcheev, Gilles Lerondel, Mathieu Juan, Pascal Royer, **Shengli Zou**, George C. Schatz, Gary P. Wiederrecht, and Stephen K. Gray, *Journal of Physical Chemistry C* (2008) 112 (11), 4111-4116.
2. "Surface Plasmon Enhancement at a Liquid-Metal-Liquid Interface " Ion Cohanoschi, Arthur Thibert, Carlos Toro, **Shengli Zou** and Florencio E. Hernández*, *Plasmonics* (2007) 2(2), 89-94
1. "Plasmonic properties of anchored nanoparticles fabricated by reactive ion etching and nanosphere lithography" Erin M. Hicks, Olga Lyandres, Paige W. Hall, **Shengli Zou**, Matthew R. Glucksberg, Richard P. Van Duyne*, *Journal of Physical Chemistry C* (2007) 111(11), 4116-4124

Book chapters:

1. "Surface Plasmon of Metal Nanoparticles: Theory and Sensing Applications " **Haining Wang** and **Shengli Zou***, *NANOPARTICLES: From Synthesis to Applications*. Ramesh Chaughule and Raju Ramanujan editor (2009)

Conference proceedings:

3. "Effect of surrounding medium on the optical properties of a two layer silver film" **Wenbo Yang**, **Jennifer Reed**, and **Shengli Zou***, *the International Society for Optics and Photonics proceedings*, (Plasmonics: Nanoimaging Nanofabrication, and Their Applications V) (2009) 7395, 73951R-1-8
2. "Reflectivity of a glass thin film with different nanostructures " **Haining Wang** and **Shengli Zou***, *the International Society for Optics and Photonics proceedings*, (Plasmonics: Nanoimaging Nanofabrication, and Their Applications IV) (2008) 7033, 70331S1-7
- 1 "Distance, shape, and arrangement pattern dependence of the extinction spectra for hole arrays in a silver film" **Haining Wang**, **Shengli Zou***, *the International Society*

for Optics and Photonics proceedings, (Plasmonics: Nanoimaging Nanofabrication, and Their Applications III) (2007) 6642, 66420R1-8.

Professional presentation:

* Speaker or presenter

66. "DNA-Enabled Rational Design of a bimodal Fluorescence-Raman Nanoprobe for Cancer Imaging and Therapy" Suchetan Pal, Angana Ray, Chrysafis Andreou, **Yadong Zhou**, Tatini Rakshit, Marek Wlodarczyk, Masatomo Maeda, Ricardo Toledo-Crow, Naxhije Berisha, Jiang Yang, Hsu Hsiao-Ting, Anton Oseledchyk, Jagannath Mondal, **Shengli Zou**, Moritz F. Kircher*, World molecular imaging Congress Montreal, Canada, September 4-7 2019 (invited talk)
65. "Optical and chemical properties of metallic nano clusters " **Shengli Zou***, Xihua University, Chengdu, Sichuan, P. R. China, May 14 2019 (invited talk)
64. "Computational prediction of activation energy without transition state calculation" **Muqiong Liu, Shengli Zou***, Spring 2019 American Chemical Society National Meeting, Orlando, Fl, March 31-April 4 2019 (talk)
63. "Schrödinger equation with Coulomb potential admits no exact solutions " **Ilia Toli,* Shengli Zou**, University of South Florida Castle Conference 2019 , Tampa, Fl, March 30 2019 (talk)
62. "Surface Enhanced/Quenched Fluorescence near a nanorod" **Yadong Zhou*, Shengli Zou**, The 94th Florida Annual Meeting and Exposition (FAME) conference, Tampa, Fl, May 4-5 2018 (invited talk)
61. " Big impact of tiny metal nanoparticles " **Shengli Zou***, Florida Gulf Coast University, Fort Myers, FL November 19 2017 (invited talk)
60. " Different mechanisms for the enhanced transmission in a nanoparticle array" **Shengli Zou***, 254nd American Chemical Society National Meeting & Exposition, Washington, DC, PA, August 20-24th 2017 (invited talk)
59. " A Mechanistic Investigation on Biexciton Emission Enhancement of Single Quantum Dots near Gold Nanoparticles" Swayandipta Dey*; David Kriz; Julie Jenkins; **Shengli Zou**; Ou Chen; Steven L. Suib; Jing Zhao, A Meeting of the Materials Research Society, Boston, Massachusetts, November 27-December 2 2016 (talk)
58. " Plasmonic Hot Electrons Driven Photocatalytic Reactions-New Insights Gained from Plasmon-Enhanced Spectroscopic Studies" Qingfeng Zhang*; **Yadong Zhou; Shengli Zou** ; Hui Wang, A Meeting of the Materials Research Society, Boston, Massachusetts, November 27-December 2 2016 (talk)

57. " A generalized model for the Surface Enhanced Raman Scattering and Surface Enhanced/Quenched Fluorescence" **Shengli Zou***, 252nd American Chemical Society National Meeting & Exposition, Pennsylvania, PA, August 21-25th 2016 (invited talk)
56. " Structure and plasmonic properties of single Au-Cu alloy nanorod during galvanic replacement reaction." Sravan Thota, Shutang Chen, Jing Zhao* and **Shengli Zou**, 252nd American Chemical Society National Meeting & Exposition, Pennsylvania, PA, August 21-25th 2016 (invited talk)
55. "Effect of water in the degradation of Polychlorinated biphenyls using ZVMg and ZVMg/Carbon with acidified ethanol or ethanol/ethyl lactate solvent systems" Fiona M.Zullo, Nicole Lapeyrouse, **Muqiong Liu, Shengli Zou**, Christian A. Clausen, and Cherie Yestrebky*, 251st American Chemical Society National Meeting & Exposition, San Diego, CA, March 13-17th 2016 (poster)
54. " A significant deviation of the calculated Raman scattering enhancement from the factor predicted by the enhanced local electric field in a silver nanorod" **Yadong Zhou* and Shengli Zou**, International Conference on Theoretical and High Performance Computational Chemistry 2015 (ICT-HPCC15), Qingdao, China, September 26-29th 2015 (Talk)
53. "Synthesis Pathways of Liquid Oxygen at Room Temperature for Use as Propellant" **Elia Toli * and Shengli Zou**, The 18th Annual International Mars Society Convention, Washington, D.C., August 13-16th 2015 (Talk)
52. " A numerical demonstration of far field photon intensity enhancement without stimulated emission" **Patricia Gomez***, **Jennifer M. Reed, Haining Wang, and Shengli Zou**, Southeast Theoretical Chemistry Association Annual Meeting , Orlando, Fl, May 24-26th 2015 (poster)
51. " Numerical Study of Mode Excitation in a Partially Illuminated Silver Rod " **Yadong Zhou***, **Brian Allen, Jennifer M. Reed, Shengli Zou** Southeast Theoretical Chemistry Association Annual Meeting , Orlando, Fl, May 24-26th 2015 (poster)
50. " Squeezing far field photons using metal nanoparticle arrays " **Shengli Zou***, Southeast Theoretical Chemistry Association Annual Meeting , Orlando, Fl, May 24-26th 2015 (Invited talk)
49. " A mechanistic study towards biexciton emission enhancement of single quantum dots near gold nanoparticles " Swayandipta Dey, **Yadong Zhou**, Xiangdong Tian, Julie Jenkins, Ou Chen, **Shengli Zou**, Jing Zhao*, 20 years of Quantum dots at Los Alamos, New Mexico Consortium/ Santa Fe, NM, USA, April 11-17th 2015 (poster)

48. " Modification of photon antibunching behavior of single quantum dots near gold nanoparticles " Swayandipta Dey, **Yadong Zhou**, Xiangdong Tian, Julie Jenkins, Ou Chen, **Shengli Zou**, Jing Zhao*, SPIE Photonics West/ San Francisco, CA, USA, February 6-12th 2015
47. " Splitting of plasmon bands by structural defects in gold copper bimetallic nanorods " Sravan Thota, Shutang Chen, **Yadong Zhou**, **Shengli Zou**, Jing Zhao*, Gordon Conference/ ventura beach, CA, February, 27 2015 (poster)
46. " Some New Non-Cryogenic Rocket Fuels " **Ilia Toli***, **Shengli Zou**, The Florida Undergraduate Research Conference/ Dytona, Fl , February, 27 2015 (poster)
45. " Localized Surface Plasmon Resonance of Gold Nanoparticle Random Arrays " Julie A Jenkins, **Yadong Zhou**, Sravan Thota, Xiangdong Tian, Xiaowen Zhao, **Shengli Zou**, Jing Zhao* 2014 Eastern Analytical Symposium/ Somerset, NJ, November 19, 2014 (poster)
44. " Surface plasmons of metal nanoparticles: Theoretical study and applications " **Shengli Zou***, Shandong University, Jinan, China, June 24 2014 (Invited talk)
43. " Plasmonic coupling between metal nanoparticles " **Haining Wang**, **Jennifer M. Reed**, **Patricia Gomez**, and **Shengli Zou***, Dalian University of Technology, Dalian, China, July 23 2013 (Invited talk)
42. " A generalized electrodynamics model for the surface enhanced Raman scattering and enhanced/quenched fluorescence calculations" **Haining Wang*** and **Shengli Zou**, International Conference on Theoretical and High Performance Computational Chemistry, Dalian, China, July 21-25 2013 (Invited talk)
41. " Subwavelength light confinement and propagation: a numerical study of a two-layer silver film with perforated holes" **Jennifer M. Reed***, **Haining Wang**, **Yingnan Guo**, and **Shengli Zou**, 2013 EnergyMaterials Nanotechnology, Orlando, Fl, April 11-18 2013
40. "Controlling light propagation direction in a nanodevice" **Shengli Zou***, ONR-BRC meeting, New York University, New York, 07/25/2012
39. "Controlling light propagation direction at nanometer scaled metallic clusters" **Haining Wang**, **Jennifer Reed**, **Wenfang Hu**, and **Shengli Zou***, International Conference on Theoretical and High Performance Computational Chemistry Nanjing, Nanjing, China, July 09 2012 (Invited talk)
38. " Understanding plasmonics of metal nanoparticles using numerical tools" **Haining Wang**, **Jennifer Reed**, **Wenfang Hu**, and **Shengli Zou***, Dalian University of Technology, Dalian, China, June 14 2012 (Invited talk)

37. " Sensing and waveguide applications of noble metal nanoparticles" **Haining Wang, Jennifer Reed, Wenfang Hu, and Shengli Zou***, The Second International Symposium on Nucleation and Growth of Crystals, Shandong University, Jinan, China, June 08 2012 (Invited talk)
36. " Subwavelength confinement and propagation in a two-layer silver film with angled holes: a numerical study" **Jennifer M. Reed*** and **Shengli Zou**, ACS FAME conference, Tampa, Florida, May 17-18, 2012
35. " Propagating and trapping light at subwavelength dimension with silver nanostructures" **Haining Wang* and Shengli Zou**, ACS FAME conference, Tampa, Florida, May 17-18, 2012 (invited talk)
34. " Abnormal line shape in the optical spectra of silver rods and particle arrays" **Haining Wang, Wenfang Hu, Jennifer Reed, Patricia Gomez, Jamie Moore, and Shengli Zou***, EMN 2012 Conference, Orlando, FL, April 16-20, 2012
33. " Nanophotonics: controlling energy transfer and propagation at nanometer scale" **Wenfang Hu, Haining Wang, Jennifer Reed, Patricia Gomez, and Shengli Zou***, workshop on Multiscale Modeling, Analysis, and Computation of Nano-Optics, Michigan State University, East Lansing, MI, April 6-7 2012 (Invited plenary talk)
32. " Surface plasmons of metal nanoparticles and their sensing applications" **Haining Wang, Jennifer Reed, Wenfang Hu, Patricia Gomez, Jamie Moore, and Shengli Zou***, University of Florida, Jacksonville, FL, February 8th, 2012 (Invited talk)
31. "Coupling between 2-Mercaptobenzimidazole molecules and silver clusters for enhanced Raman scattering of the molecules" **Wenfang Hu, and Shengli Zou***, Second Annual EPSCoR Workshop: Modeling Advanced Materials, Systems Biology and Alternative Energy Sources, University of Tennessee Conference Center, Knoxville, TN, October 10-12, 2011 (Invited talk)
30. "Sensing and waveguide applications of noble metal nanoparticles" **Wenfang Hu, and Shengli Zou***, ACS meeting, Denver, CO, August 28-September 1, 2011 (session chair)
29. " Sensing and waveguide applications of noble metal nanoparticles" **Haining Wang, Jennifer M. Reed, Wenfang Hu, and Shengli Zou***, State Key Laboratory of Molecular Reaction Dynamics, Institute of Chemistry, Chinese Academy of Sciences, Beijing, China, July 24, 2011 (invited talk)
28. "Controllable waveguide in nano-structured metallic clusters" **Haining Wang, Jennifer M. Reed, Wenfang Hu, and Shengli Zou***, Wuhan University, Wuhan, China, July 15, 2011 (invited talk)

27. "Coherent coupling between metallic nanoparticles in one and two dimensional arrays" **Haining Wang, Jennifer M. Reed, Wenfang Hu, and Shengli Zou***, Jiangxi Science and Technology Normal University, Nanchang, China July 08, 2011 (invited talk)
26. " Surface plasmons assisted light propagation and confinement" **Jennifer M. Reed, Haining Wang, Shengli Zou***, Nanoprint, Singapore, July 4-5, 2011 (invited talk, session chair)
25. " Surface plasmons of metal nanoparticles: Theory and applications" **Haining Wang, Jennifer M. Reed, Wenfang Hu, and Shengli Zou***, Nanyang Technological University, Singapore, July 03, 2011 (invited talk)
24. "Surface plasmons assisted light propagation and harvesting" **Haining Wang, Jennifer M. Reed, Shengli Zou***, ICMAT, Singapore, June 26-July 1, 2011 (invited talk, session chair)
23. "Coherent Vibrational Oscillations of Hollow Gold Nanospheres" Rebecca Newhouse*, Damon Wheeler, **Shengli Zou** and Jin Zhang, MRS meeting, San Francisco, California, April 26 - 29, 2011
22. "Effect of surface plasmons on waveguide and light harvesting" **Jennifer M. Reed, Haining Wang, and Shengli Zou***, Villa Conferences on Energy, Materials and Nanotechnology, Las Vegas, Nevada, US, on April 21-25, 2011. (invited talk, session chair)
21. "Sub wavelength waveguide " **Haining Wang, Jennifer Reed, Shengli Zou***, ONR-BRC meeting, Arizona State University, Tempe, AZ, 04/01/2011
20. "Surface plasmons assisted light absorption and propagation" **Haining Wang, Jennifer Reed, Shengli Zou***, ACS FAME conference, Tampa, Florida, May 13-15, 2010 (invited talk)
19. "Sub-nano-gram Mass Measurements on Plasmonic Nanoparticles for Temperature-programmed Thermal Analysis " Chaoming Wang, Minghui Zhang, **Haining Wang, Shengli Zou** and Ming Su* MRS meeting, San Francisco, California, April, 6-9, 2010
18. "Efficient and tunable light trapping thin film " **Haining Wang***, **Shengli Zou**, ACS meeting, San Francisco, California, March 22-25 2010 (poster)
17. "Nanophotonics: Theoretical modeling and applications" **Shengli Zou***, ONR-BRC meeting, Columbia University, New York, December 15, 2009.

16. "Improved waveguide and solar energy harvesting using surface plasmons" **Haining Wang, Feng Yu, and Shengli Zou***, Southeastern regional American Chemical Society meeting, San Juan, Puerto Rico, November 21-24, 2009. (Invited talk)
15. "Thin films with enhanced solar energy conversion efficiency" **Haining Wang, Feng Yu, and Shengli Zou***, ACS meeting, Washington DC, August 16-20, 2009.
14. "Film with reduced scattering and enhanced absorption" **Wenbo Yang, Jennifer Reed, and Shengli Zou***, the International Society for Optics and Photonics, San Diego, California, August 02-06, 2009 (Invited talk).
13. "Identification of Single Nanoparticle and Nanoparticle Arrays and their Localized Surface Plasmon Resonance" Yujun Song*, Tao Zhang, Han Elasyed Ali, Zongsuo Zhang, Ququan Wang, **Haining Wang, Shengli, Zou**, 16th International Symposium on Metastable, Amorphous and Nanostructured Materials, Beijing, China July 5 - 9, 2009
12. "Raman scattering enhancement and fluorescence quenching around a metal nanoparticle" **Haining Wang, Feng Yu, Shengli Zou***, Duke University, Durham, North Carolina, May 15-16, 2009. (Invited talk)
11. "Thin films with reduced scattering and enhanced absorption" **Haining Wang, Feng Yu, and Shengli Zou***, George C. Schatz 60th Birthday conference, Northwestern University, Evanston, Illinois April 17-18, 2009 (Organization committee)
10. "Optical properties of metal nanoparticles and particle array: Theory and sensing applications" **Shengli Zou***, Albany State University, Albany, Georgia, November, 25, 2008. (Invited talk)
9. "Reduced scattering of a nanostructured particle or film" **Haining Wang, Feng Yu, and Shengli Zou***, the International Society for Optics and Photonics, San Diego, California, August 14, 2008 (Invited talk).
8. "Metal nanoparticles and their sensing applications" **Shengli Zou***, Particles 2008, Wyndham Orlando Resort Orlando, Florida May 12, 2008 (Invited talk)
7. "Deterministic Positioning of Photonic Elements on Self-assembled DNA Nanostructures" Rahul Chhabra, Jaswinder Sharma, Yan Liu, **Shengli Zou, Hao Yan*** 5th Annual Conference on FOUNDATIONS OF NANOSCIENCE: SELF-ASSEMBLED ARCHITECTURES AND DEVICES (FNANO08), Snowbird Cliff Lodge, Snowbird, Utah, USA, April 22 – 25, 2008
6. "Surface plasmon of metal nanoparticles and the sensing and waveguide applications" **Shengli Zou***, ACS April meeting, New Orleans, Louisiana, April 09, 2008. (Session chair)

5. “Novel properties of nanostructured metal particles and films”**Shengli Zou***, APS March meeting, New Orleans, Louisiana, March 12, 2008.
4. “Surface Plasmon Enhancement at a Liquid-Metal-Liquid Interface”, Florencio E. Hernández*, Ion Cohanoschi, Arthur Thibert, Carlos Toro, **Shengli Zou**, FACSS’07, Memphis, USA, September 2007 (Invited Talk)
- 3 “Distance, shape and arrangement pattern dependence of the extinction spectra for hole arrays in a silver film” **Haining Wang** and **Shengli Zou***, the International Society for Optics and Photonics, San Diego, California, August 27-31, 2007 (Invited talk).
2. “Sensing and waveguide applications of noble metal nanoparticles” **Shengli Zou*** SXICC, Taiyuan, Shanxi, P.R. China, April, 27-30, 2007 (Invited talk)
1. “Surface plasmon of metal nanoparticles: Sensing and waveguide applications” **Shengli Zou*** Department of chemistry and biochemistry, Arizona state University, Tempe, AZ March 09, 2007 (Invited talk)

Work finished before joining the UCF

Book chapters:

3. "Coupled plasmonic/photonic resonance effects in SERS" Shengli Zou, G. C. Schatz, *Surface Enhanced Raman Scattering – Physics and Applications*, Katrin Kneipp, Martin Moskovits, Harald Kneipp, editors, (2006) 103, 67-85
2. "Electrodynamics in Computational Chemistry." Linlin Zhao, Shengli Zou, Encai Hao and G. C. Schatz, *Theory and Applications of Computational Chemistry: The First 40 Years, A Volume of Technical and Historical Perspectives*, Clifford E. Dykstra, Gernot Frenking, Kwang S. Kim, and Gustavo Scuseria, editors, (2005), 47-65.
1. "The challenge of high-resolution dynamics: Rotationally mediated unimolecular dissociation of HOCl" J. M. Bowman, S. Skokov, S. Zou, K. Peterson in "LOW-LYING POTENTIAL ENERGY SURFACES" M. Hoffman and K. Dyall eds., *ACS SYMPOSIUM SERIES Washington DC*, (2002) PP: 346-360

Peer reviewed papers:

44. "Size-Dependent Angular Distributions of Low Energy Photoelectrons emitted from NaCl Nanoparticles" Kevin R. Wilson, Shengli Zou, Jinian Shu, Eckart Rühl, Stephen. R. Leone, George C. Schatz and Musahid Ahmed, *Nano Letters* (2007) 7(7); 2014-2019
43. "Interaction of plasmon and molecular resonances for rhodamine 6G adsorbed on silver nanoparticles " Jing Zhao, Lasse Jensen, Jiha Sung, Shengli Zou, George C. Schatz, and Richard P. Van Duyne, *Journal of American Chemical Society* (2007) 129 (24): 7647-7656
42. "Rings of Single-Walled Carbon Nanotubes: Molecular-Template Directed Assembly and Monte Carlo Modeling" Shengli Zou, Daniel Maspoth, Yuhuang Wang, Chad A. Mirkin, and George C. Schatz, *Nano Letters* (2007) 7(2), 276-280
41. "Combining micron size glass spheres with silver nanoparticles to produce extraordinary field enhancements for surface enhanced Raman scattering applications" Shengli Zou, and George C. Schatz, *Israel Journal of Chemistry* (2006) 46(3) 293-297
40. "Metal nanoparticle array waveguides: Proposed structures for subwavelength devices" Shengli Zou, George C. Schatz, *Physical Review B* (2006) 74, 125111
39. "Designing, fabricating, and imaging Raman hot spots" Lidong Qin, Shengli Zou, Can Xue, Ari Atkison, George C. Schatz, Chad A. Mirkin., *Proceedings of the National Academy of Sciences, USA* (2006) 103,13300-13303

38. "Localized Surface Plasmon Resonance Spectroscopy near Molecular Resonances" Amanda J. Haes, Shengli Zou, Jing Zhao, George C. Schatz, Rick, P. Van Duyne, *Journal of American Chemical Society* (2006) 128 (33), 10905-10914.
37. "Theoretical studies of plasmon resonances in one-dimensional nanoparticle chains: narrow lineshapes with tunable widths" Shengli Zou and George C. Schatz, *Nanotechnology* (2006) 17(11), 2813-2820
36. "Controlling the Shape, Orientation and Pitch of Carbon Nanotube Features Using Nano Affinity Templates" Yuhuang Wang, Daniel Maspoch, Shengli Zou, George C. Schatz, Richard E. Smalley, Chad A. Mirkin, *Proceedings of National Academy of Sciences, USA* (2006) 103,2026-2031
35. "Optical Properties of Film Over Nanowell Substrates Fabricated using Nanosphere Lithography." Erin M. Hicks, Xiaoyu Zhang, Shengli Zou, Olga Lyandres, Kenneth G. Spears, George C. Schatz, Richard P. Van Duyne, *Journal of Physical Chemistry B* (2005) 109 (47), 22351-22358
34. "Optical Monitoring of Atomic Layer Depositing with the Localized Surface Plasmon Resonance Nanosensor" Alyson V. Whitney, Jeffrey W. Elam, Shengli Zou, Alex V. Zinovev, Peter C. Stair, George C. Schatz, and Richard P. Van Duyne *Journal of Physical Chemistry B* (2005) 109 (43), 20522-20528
33. "Solution-Phase, Triangular Ag Nanotriangles Fabricated by Nanosphere Lithography" Amanda J. Haes, Jing Zhao, Shengli Zou, Christopher S. Own, Laurence D. Marks, George C. Schatz, and Richard P. Van Duyne, *Journal of Physical Chemistry B* (2005) 109(22) 11158-11162
32. "Controlling Plasmon Line Shapes through Diffractive Coupling in Linear Arrays of Cylindrical Nanoparticles Fabricated by Electron Beam Lithography" Erin M. Hicks, Shengli Zou, George C. Schatz, Kenneth G. Spears, and Richard P. Van Duyne, Linda Gunnarsson, Tomas Rindzevicius, Bengt Kasemo, and Mikael Käll, *Nano Letters* (2005) 5(6); 1065-1070.
31. "Plasmonic Materials for Surface-Enhanced Sensing and Spectroscopy," Amanda J. Haes, Christy L. Haynes, Adam D. McFarland, Shengli Zou, George C. Schatz, and Richard P. Van Duyne, *Material Research Society Bulletin*, (2005) 30, 368-375.
30. Reply to "Silver nanoparticle array structures that produce remarkable narrow plasmon lineshapes" [Journal of Chemical Physics 130, 10871 (2004)], Shengli Zou and George C. Schatz, *Journal of Chemical Physics*, (2005) 122 097102.
29. "Silver nanoparticle array structures that produce giant enhancements in electromagnetic fields" Shengli Zou and George C. Schatz, *Chemical Physics Letters*, (2005) 403(1-3) 62-67.

28. "Narrow plasmonic/photonic extinction and scattering lineshapes for one and two dimensional silver nanoparticle arrays" Shengli Zou, George C. Schatz, *Journal of Chemical Physics* (2005) 121, 12606-12612.
27. "Confined plasmons in nanofabricated single silver particle pairs - experimental observations of strong interparticle interactions." Linda Gunnarsson, Tomas Rindzevicius, Juris Prikulis, Bengt Kasemo, Mikael Kall, Shengli Zou and George C. Schatz, *Journal of Physical Chemistry B*, (2005) 109(3), 1079-1087.
26. "A Global ab Initio Potential Energy Surface for Formaldehyde" Zhang, X.; Zou, S.; Harding, L. B.; Bowman, J. M.; *Journal of Physical Chemistry A*, (2004) 108(41), 8980-8986.
25. "Comparative analysis of Localized and Propagating Surface Plasmon Resonance Sensors: The Binding of Concanavalin A to a Monosaccharide Functionalized Self-Assembled Monolayer." Chanda Ranjit Yonzon, Eunhee Jeoung, Shengli Zou, George C. Schatz, Milan Mrksich and Richard P. Van Duyne, *Journal of American Chemical Society*, (2004) 126,12669-12676.
24. "Silver nanoparticle array structures that produce remarkably narrow plasmon lineshapes", Shengli Zou, Nicolas Janel, George C. Schatz, *Journal of Chemical Physics*, (2004) 120, 10871-10875.
23. "The optical Properties of Metal Nanoshells" Encai Hao, Shuyou Li, Ryan C. Bailey, Shengli Zou, George C. Schatz, Joseph T. Hupp, *Journal of Physical Chemistry B*, (2004) 108, 1224-1229.
22. "A Nanoscale Optical Biosensor: The Short Range Distance Dependence of the Localized Surface Plasmon Resonance of Noble Metal Nanoparticles", Amanda J. Haes, Shengli Zou, George C. Schatz, and Richard P. Van Duyne, *Journal of Physical Chemistry B*, (2004) 108, 6961-68.
21. "A Nanoscale Optical Biosensor: The Long Range Distance Dependence of the Localized Surface Plasmon Resonance of Noble Metal Nanoparticles", Amanda J. Haes, Shengli Zou, George C. Schatz, and Richard P. Van Duyne, *Journal of Physical Chemistry B*, (2004) 108, 109-116.
20. "A scaled ab initio potential energy surface for acetylene and vinylidene" D. G. Xu, H. Guo, Shengli Zou, Joel M. Bowman *Chemical Physics Letters* (2003) 377 (5-6): 582-588
19. "Full dimensionality quantum calculations of acetylene/vinylidene isomerization" Shengli Zou, Joel M. Bowman, and Alex Brown *Journal of Chemical Physics*, (2003) 118 (22): 10012-10023

18. "A new ab initio potential energy surface describing acetylene/vinylidene isomerization" Shengli Zou, and Joel M. Bowman, *Chemical Physics Letters* (2003) 368 (3-4): 421-424
17. "Full dimensionality quantum calculations of acetylene/vinylidene isomerization" Shengli Zou, and Joel M. Bowman, *Journal of Chemical Physics* (2002) 117 (12): 5507-5510
16. "Reduced dimensionality quantum calculations of acetylene \leftrightarrow vinylidene isomerization" Shengli Zou, and Joel M. Bowman *Journal of Chemical Physics* (2002) 116(15) 6667-6673
15. "Characterization of the sulfur fluoride radical in the ground electronic state" Ida M. B. Nielsen Shengli Zou, Joel M. Bowman, Curtis L. Janssen *Chemical Physics Letters* (2002) 352(1,2) 26-32
14. "Ab initio calculation of resonance energies and widths of HOCl($7\nu_{OH}$ and $8\nu_{OH}$) and comparison with experiment", S. Zou, S. Skokov, and J. M. Bowman, *Chemical Physics Letters* (2001), 339(3,4), 290-294.
13. "Adiabatic Rotation, Centrifugal Sudden, and Exact Calculations of Rotationally Mediated Fermi Resonances in HOCl ", Shengli Zou, Sergei, Skokov, Joel M. Bowman, *Journal of Physical Chemistry A* (2001), 105(11), 2423-2426.
12. "Thermal and State-Selected Rate Coefficients for the O(3P) + HCl Reaction and New Calculations of the Barrier Height and Width" , Sergei Skokov, Shengli Zou, Joel M. Bowman, Thomas C. Allison, Donald G. Truhlar, Yongjing Lin, B. Ramachandran, Bruce C. Garrett, and Benjamin J. Lynch, *Journal of Physical Chemistry A* (2001), 105(11),2298-2307.
11. "State distribution of NH $_2$ (A 2 A $_1$) produced in the collision of Ar($^3P_{0,2}$) + NH $_3$ ", Shengli Zou, Feng Dong, Liming Wang, Xuechu Li, and Zhifeng, Cui, *Huaxue Wuli Xuebao* (2000), 13(1), 1-5.
10. "Rotational inelastic collisions of NH $_2$ (A 2 A $_1$, (0, 9, 0)) under single collisional condition", Feng Dong, Shengli Zou, Hong Chen, Xuechu Li , Nanquan Lou, *Wuli Huaxue Xuebao* (1999), 15(9), 812-818.
9. "Propensity rules in rotational inelastic collisions of NH $_2$ (A 2 A $_1$) under molecular beam condition" , Feng Dong, Shengli Zou, Hong Chen, Xuechu Li, Nanquan Lou, *Chinese Chemical Letters* (1999), 10(2),147-150
8. "Penning ionization process of CO + He(2^3S) under single collision condition", Shengli Zou, Yongbin Ma, Feng Dong, Xiaofeng Tan, Hong Chen, Lianhong Sun, Dadong Xu, Xuechu Li, *Progresses of National Sciences*. (1998), 8(4), 451-456

7. "Ionization process of collision of Ne($^3P_{0,2}$) with CO under molecular beam condition", Hong Chen, Yongbin Ma, Shengli Zou, Feng Dong, Xiaofeng Tan, Lianhong Sun, Dadong Xu, Xuechu Li, *Chinese Science Bulletin* (1998), 43(6), 477-480
6. "The Application of the Computer Simulation in the Study of the Vibrational Distributions for the Products from the Energy Transfer Reaction", Shengli Zou, Chuanpu Liu, Jingzhong Guo, Yueshu Gu, Xuechu Li, Dadong Xu, *Guangpuxue Yu Guangpu Fenxi* (1998), 18(6), 654-657.
5. "Quenching rate constants for PCl(b, $v'=0$)", Chuanpu Liu, Shengli Zou, Jingzhong Guo, Yueshu Gu, Dezhao Cao, Yannan Chu, D. W. Setser, *Journal of Physical Chemistry B* (1997), 101, 7345-7349
4. "Quenching rate constants for metastable molecule (b, $v'=0$)", Chuanpu Liu, Shengli Zou, Jingzhong Guo, Yueshu Gu, Dezhao Cao, Yannan Chu, *Chinese Science Bulletin*, 1997, 42(17), 1433
3. "A study of the quenching of PCl(b) by the E-V model", Chuanpu Liu, Shengli Zou, Jingzhong Guo, Yueshu Gu, Yannan Chu, Dezhao Cao, *Chinese Journal of Chemistry*, 1997, 15(3), 211.
2. "Quenching rate constants for metastable molecule (b, $v'=0$)", Chuanpu Liu, Shengli Zou, Jingzhong Guo, et al. *Chinese Science Bulletin*, 1997, 42(10), 1074
1. "Measurement and calculation of quenching rate constants for PCl(b)", Shengli Zou, Chuanpu Liu, Jingzhong Guo, Yueshu Gu, et al., *Chinese Chemical Letters*, 1996, 7(12), 1125

Proceedings:

- 5 "Alkanethiol Mediated Release of Surface Bound Nanoparticles Fabricated by Nanosphere Lithography" Jing Zhao, Amanda J Haes, Xiaoyu Zhang, Shengli Zou, Erin M Hicks, George C Schatz, Richard P Van Duyne *Material Research Society Proceedings Volume* (2006) 900E, 0900-O13-08
- 4 "Investigating Narrow Plasmons in Nanoparticle Arrays Fabricated Using Electron Beam Lithography." Erin M. Hicks, Linda Gunnarsson, Tomas Rindevicius, Shengli Zou, Bengt Kasemo, Mikael Käll, George C. Schatz, Kenneth G. Spears, Richard P. Van Duyne, *Material Research Society Proceedings Volume* (2005) 872 ,J6.1
- 3 "Optical Properties of One-Dimensional Metal Nanostructures" Encai Hao, Shengli Zou, and George C. Schatz *Material Research Society Proceedings Volume* (2004) 818, M3.8

- 2 “Generating narrow plasmon resonances from silver nanoparticle arrays: influence of array pattern and particle spacing.” Shengli Zou, George C. Schatz, *the International Society for Optics and Photonics Proceedings*, (2004).
1. “Extinction spectra of silver nanoparticle arrays”, Shengli Zou, Linlin Zhao, George C. Schatz, *the International Society for Optics and Photonics Proceedings*, 5221 (Plasmonics: Metallic Nanostructures and Their Optical Properties), (2003) 174-181.

Presentation:

10. “Chemical sensing with nanorods of different materials: which one is better?” Shengli Zou, Norman Mangeret, George C. Schatz, American chemistry society’s 229th meeting in San Diego, California. March 13-17, 2005 (Talk)
9. “Sensing capabilities of whispering gallery mode resonances in glass spheres” Shengli Zou, George C. Schatz, American chemistry society’s 229th meeting in San Diego, California. March 13-17, 2005 (Talk)
8. “Biological sensing with silver nanoparticles and nanoparticle arrays: theoretical studies” George C. Schatz, Shengli Zou, American chemistry society’s 229th meeting in San Diego, California. March 13-17, 2005 (Talk)
- 7 “Biological sensing with silver nanoparticles and nanoparticle arrays” Shengli Zou, Department of Chemistry, Texas A&M University, December 7, 2004 (Seminar)
- 6 “Synthesis and Optical Properties of Anisotropic Metal Nanocrystals” Encai Hao, George. C. Schatz, and Joel. T. Hupp Shengli Zou, Annual meeting for the international society for optical engineering in Denver, Colorado, 2-6 August 2004 (Talk)
- 5 “Generating narrow plasmon resonances from silver nanoparticle arrays: influence of array pattern and particle spacing.” Shengli Zou, George C. Schatz, Annual meeting for the international society for optical engineering in Denver, Colorado, 2-6 August 2004 (Talk)
4. “Extinction spectra of nanoparticle arrays: The influence of size, shape and interparticle spacing” Shengli Zou, Linlin Zhao, Nicolas Janel, George C. Schatz American chemistry society’s 227th meeting in Anaheim, California. March 28-April 1, 2004 (Talk)
3. “Extinction spectra of silver nanoparticle arrays”, Shengli Zou, Linlin Zhao, George C. Schatz, Annual meeting for the international society for optical engineering in San Diego, California, 3–8 August 2003 (Talk)

2. "Full dimensional quantum calculation of isomerism of acetylene and vinylidene"
Shengli Zou, Joel M. Bowman, Southeast Theoretical Chemistry Association meeting.
May 24-25 2002. (Poster)
1. "Ab initio calculation of resonance energies and width of HOCL($7\gamma_{OH}$ and $8\gamma_{OH}$) and comparison with experiment" Shengli Zou, Sergei Skokov, Joel M. Bowman, Cordou Conference on Molecular Energy Transfer. Jan 14-19 2001 (Poster)