

Sangmi Jun

718 Chevron Science Center
219 Parkman Avenue
Pittsburgh, PA 15260

Tel : 412-624-8123
Fax : 412-624-8611
E-mail : saj22@pitt.edu

Education

Sep. 2003 ~ Pursuing PhD. (Physical Chemistry), University of Pittsburgh, Pittsburgh, PA
Mar. 2000 ~ Feb. 2002 M.S. (Physical Chemistry), Hanyang University, Korea(ROK)
Mar. 1996 ~ Feb. 2000 B.S. (Chemistry), *Summa Cum Laude*, Hanyang University, Korea(ROK)

Honors and Awards

Sep. 2007 Received a Safford Award from Department of Chemistry, University of Pittsburgh.
- As an excellent Graduate Student Teacher.
Mar. 1997 ~ Aug. 1999 Received a scholarship from Hanyang University though five semesters.
- Top 10% students receive a scholarship.

Publications

- (5) "The aggregated state of amyloid- β peptide in vitro depends on Cu^{2+} concentration" **Sangmi Jun** and Sunil Saxena, *Angew. Chem. Int. Ed*, **2007**, 46, 3959 "**Hot Paper**"
- (4) "Unfolding of Alanine-based Peptides using Electron Spin Resonance Distance Measurements" **Sangmi Jun**, James S. Becker, Mike Yonkunas, Rob Coalson and Sunil Saxena, *Biochem.*, **2006**, 45, 11666
- (3) "Conformational Stabilization of Phthalan: Physical Origin of Tiny Ring-puckering Barrier" **Sangmi Jeon**, Jaebum Choo, Sungwhan Kim, Younghi Kwon, Jin-Yeol Kim, Young-Il Lee and Hoeil Chung, *J. Mol. Struct.*, **2002**, 609/1-3, 159
- (2) "Hydrogen Bonding Effects on the Conformational Changes of Polyglutamates Containing Long Flexible Side Chains" **Sangmi Jeon**, Jaebum Choo, Daewon Sohn and Soono Lee, *Polymer*, **2001**, 42/25, 9915
- (1) "Kinetic Study of α -Bromo-o-toluic Acid Using Raman Spectroscopy" **Sangmi Jeon**, Jiyoung Woo, Jin-Burm Kyong and Jaebum Choo, *Bull. Korean Chem. Soc.*, **2001**, 22, 1264

Teaching Experiences

Jan. 2006 ~ Apr. 2007 Teaching Assistant for Physical Chemistry Lab., University of Pittsburgh, PA
Sep. 2004 ~ Dec. 2004 - Prepared samples and checked instruments that students use. Senior undergraduate students learn how to operate and interpret data from a variety of modern instruments that probe physical properties of samples in the lab.
Sep. 2003 ~ May 2004 Teaching Assistant for Physical Chemistry, University of Pittsburgh, PA
- Responsible for grading of homework and tests and office hours for helping students. This course is dealing with the fundamental concepts of quantum mechanics, atomic structure, the chemical bond, symmetry and group theory, molecular spectroscopy, magnetic resonance, and diffraction methods of structure determination.

Presentations

- (7) “Unfolding of Alanine-based Peptides using Electron Spin Resonance (ESR) Distance Measurements”
50th Annual Meeting of the Biophysical Society, Salt Lake City, UT, February 18-22, **2006**
- (6) “Unfolding of Alanine-based Peptides using Electron Spin Resonance (ESR) Distance Measurements”
Science 2005, University of Pittsburgh, PA, October 6-7, **2005**
- (5) “Conformational Study of Oxygen-containing Benzene-fused Ring Molecules” *Korea Chemical Society*,
2001
- (4) “Kinetic Study of α -Bromo-o-toluic Acid Using Raman Spectroscopy” *Korea Chemical Society*, **2001**
- (3) “Conformational Properties of Oxygen Containing Indan-like Molecules in Their S₁ Electronic States: Jet-Cooled LIF, Electronic Absorption Spectroscopy and Ab initio Study” *Korea Chemical Society*, **2001**
- (2) “Infrared Spectra and Conformational Changes of Polyglutamates with Long Side Chains” *Korea Association of Physical Organic Chemists*, **2001**
- (1) “Variable-Temperature infrared Spectra and Conformational Structures of Poly(γ -stearyl α ,L-glutamate)”
Korea Chemical Society, **2000**

Technical Skills

Fourier Transform (FT) Electron Spin Resonance (ESR)

- developed new method to measure distances between two paramagnetic centers in order to measure protein unfolding at room temperature.
- determined structural transitions associated with misfolding of copper containing peptide.

Fourier Transform Infrared Spectroscopy (FTIR)

- determined structural change of Self-Assembled Layers using Grazing Angle Total Reflection Study.
- resolved hydrogen bonding effects on Polymer that has long flexible side chains using Variable Temperature Phase Transition Study.

Laser-Induced Raman Microscopy

- determined Raman Imaging and Mapping for Surface Characterization in order to investigate skin cancer.

Molecular Modeling Using Computational Methods

- investigated structure of Self-Assembled Macromolecules using DFT Computations.
- measured conformational stabilization of small molecules with Ab Initio Computation.

Society Membership

Biophysical Society

Korea Chemical Society

Korea Association of Physical Organic Chemists