

## Zhaojing Meng

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### OBJECTIVE

Seeking a postdoctoral or a R&D position that can utilize my background and training in biological mass spectrometry

### HIGHLIGHTS

- Extensive experience in protein and nucleic acid analysis using mass spectrometry
- Research experience in developing integrated polymer microfabricated devices for mass spectrometric protein characterization involving on-chip enzymatic digestion and electrophoresis separation
- Research experience in structural characterization of nucleic acids
- Experience with IonSpec FT-ICRMS, Bruker Reflex III MALDI-TOFMS, Mariner ESI-TOFMS, Micromass MALDI TOFSPEC 2/e, Micromass Q-TOF II, Micromass MassPrep, Beckman HPLC and 1D gel electrophoresis
- Strong collaborative research experience and good presentation skills

### EDUCATION

#### **Ph.D./ Analytical Chemistry**

University of Cincinnati, Cincinnati, OH. Expected Date: Spring 2004  
Dissertation: Miniaturized sample preparation platforms for biomolecule analysis by ESI-MS(Advisor: Dr. Patrick A. Limbach)

#### **M.S./ Ceramic Science**

New York State College of Ceramics at Alfred University, New York  
Thesis: Synthesis and characterization of aluminum nitride powder from  $\text{AlCl}_3\text{-NH}_3\text{-N}_2$  system by chemical vapor reaction (Advisor: Dr. Herbert Giesche)

#### **B.S./Chemistry**

Sichuan University, Chengdu, China  
Thesis: Preparation and characterization of  $\text{SrCo}_{(0.8-x)}\text{Fe}_{0.2}\text{Mn}_x\text{O}_{(3-\delta)}$  ionic conductor by Sol-Gel Process (Advisors: Professor Qiongyu Lai and Dingkun Peng)

### EXPERIENCE

2002-present

Research Assistant, University of Cincinnati

1991-2001

Research Assistant, Louisiana State University

- Structural characterization of RNA and DNA using MALDI-TOFMS and ESI-TOFMS
- Coupling polymer-based microchip to FTICR and ESI-TOF mass spectrometers
- On-chip analysis of oligonucleotides and proteins

2001-present

Graduate Assistant in Mass Spec Facility, University of Cincinnati

- Responsible for selecting optimal sample preparation and mass spec technique to obtain required information for submitted samples

- 1-D gel electrophoresis and MassPrep for high throughput gel sample
- 1998-1999 Teaching Assistant, Louisiana State University
- Organic Chemistry Lab: lectured, graded students' lab performance, gave quizzes on experiments and graded students' lab reports
  - Analytical Chemistry Lab: helped students with their experiments and graded their lab reports
- 1996-1998 Research Assistant, Pennsylvania State University, State College, PA
- Design and construction of high temperature/high pressure test loop and test reactor
  - Familiar with fabrications of chemical sensors
- 1994-1996 Research Assistant, NYSCC, Alfred, NY
- Designed and set up a CVD apparatus for AlN synthesis
  - Gained expertise at various characterization techniques as X-ray diffraction (XRD), Scanning Electron Microscopy, Thermal analysis (DTA/TGA, DSC), Fourier transform infrared spectroscopy as well as Mercury porosimetry, BET specific surface, particle size distribution etc.

#### PROFESSIONAL AFFILIATIONS

- American Chemical Society
- American Society of Mass Spectrometry.

#### PUBLICATIONS

- Meng, Z.** and Limbach, P. A. "RNase Mapping of Intact Nucleic Acids by Electrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometry (ESI-FTICRMS) and <sup>18</sup>O labeling" *Int. J. Mass Spectrom.*, accepted
- Meng, Z.**, Simmons-Willis, T. A., and Limbach P. A. "The Use of Mass Spectrometry in Genomics" *Biomolecular Engineering* 2004, *21*, 1
- Limbach P.A. and **Meng Z.** "Integrating micromachined devices with modern mass spectrometry" *Analyst* 2002, *127*, 693
- Meng, Z.** and Limbach, P.A. "Mass Spectrometry of Nucleic Acids" Book chapter in EVOLUTION OF GENOMIC TECHNOLOGIES (2001)
- Meng, Z.**; Qi, S.; Soper, S.A.; Limbach, P. A. "Interfacing a Polymer-based Micromachined Device to a Nanoelectrospray Ionization Fourier Transform Ion Cyclotron Resonance Mass Spectrometer" *Anal. Chem.* 2001, *73*, 1286
- Xia C., Wu F., **Meng Z.** *et al.* "Boehmite sol properties and preparation of two-layer alumina membrane by a sol-gel process" *J. Membrane Science* 1996, *116*, 9

#### SELECTED PRESENTATIONS

- "Shotgun sequencing of oligonucleotides by Nozzle-Skimmer ESI-MS", Poster, June 2003, ASMS annual conference, Montreal, Canada
- "Development of an Integrated Polymer-based Microfabricated Device for the Mass Spectrometric Characterization of Proteins", Poster, June 2002, ASMS annual conference, Orlando, FL

- “Biomolecule Analysis Using Polymer-based Chip Interfaced to Nanoelectrospray Mass Spectrometry”, Oral presentation, May 31<sup>st</sup>, 2001, ASMS annual conference, Chicago, IL
- “Polymer-based Microchip Interfaced to Nanoelectrospray Mass Spectrometry”, Oral presentation, March 05, Pittcon 2001, New Orleans, LA
- “Polymer-based Microchips Interfaced to a Nanoelectrospray Source and a Fourier Transform Ion Cyclotron Resonance Mass Spectrometer”, Poster, June 2000, American Society for Mass Spectrometry(ASMS) annual conference, Long island, CA
- “Development of an Electrospray Ionization Source Interface for Micromachined Devices”, Oral presentation, Pittcon 2000, March 15, New Orleans, LA

## REFERENCES

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