

André A. Adams

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Education

Ph.D., Biological Analytical Chemistry (Anticipated 7/2007); Louisiana State University, Baton Rouge, La., (GPA 4.00/4.00) Adviser: Professor Steven A. Soper
B.S., Chemistry with Honors (05/2000); Grambling State University, Grambling, La., (GPA 3.25/4.00) Adviser: Professor Connie Walton

Expertise

- Design and microfabrication of mould inserts and polymeric microdevices via UV and x-ray LIGA as well as direct and indirect micromilling intended for microchip capillary electrophoresis as well as on-chip single cell manipulations to isolate low abundant adenocarcinoma related cellular events from biological fluids
- Culture and maintenance of adenocarcinoma related cell lines and well as tumor specific antigens that served as biomarkers
- Protein, DNA, and polymeric surface conjugation using carbodiimides and succinimidyl esters
- Thoroughly experienced in instrumentation, analytical techniques, and methods development involving bright-field and fluorescence microscopy, SEM, UV-Visible, Fluorescence, AAS, FT-IR, SPME/GC/MSⁿ, ICP, IC, HPLC, and CE

Research Experience

- 2001-Present Bioanalytical Chemist: Steven A. Soper, LSU Chemistry, Baton Rouge, La.
- Design, fabrication, and assembly of polymer-based microfluidic devices for bioassays
 - Electrophoretic and hydrodynamic biological cell manipulations in polymer-based microfluidic devices
 - Development of on-chip clinical diagnostics and prognostics using polymer-based BioMEMS
- 2000-2001 Analytical Chemist: Susan B. Butts, DOW Chemical Company, Plaquemine, La.
- QC/QA plant support via XRF, ICP, IC, and AAS method development
 - Wet and dry ashing of polymer samples
 - Automated titrations and chemical extractions
- 1999 Research Assistant: Dr. William T. Stringfellow, Lawrence Berkeley National Laboratory, Berkeley, Ca.
- Developed SPME/GC/MSⁿ methods for MTBE and MTBE metabolite determinations
 - Developed SPME/GC/MS methods for BTEX compound determinations
 - Facilitated biodegradation of MTBE contaminated water in pilot scale bioreactors
- 1998-2000 Research Assistant/Teaching Assistant: Professor Danny Hubbard, Grambling State University, Grambling, La.
- Analyzed water samples for lead using AAS
 - Molecular modeling of inorganic complexes
 - Managed chemistry departmental computer lab

Teaching Experience

Teaching Assistant, Louisiana State University, Department of Chemistry

- Instrumental Characterization of Organic Compounds (Senior Level-1.5 yrs.)
- Quantitative Analysis (Sophomore-0.5 yrs.)
- General Chemistry (Freshmen-0.5 yrs.)

Publications

1. André A. Adams, Paul I. Okagbare, and Steven A. Soper, "Low Abundant Bladder Cancer Cell Isolation from Urine Samples Using High-Throughput Anti-EpCAM Immobilized Microdevices", (In Preparation)
2. André A. Adams, Mateusz Hupert, Paul I. Okagbare, Michael C. Murphy, Robin L. McCarley, and Steven A. Soper, "Circulating tumor cell speciation from peripheral blood with polymeric microfluidic devices", (In Preparation).
3. André A. Adams, Suying Wei, Juan Feng, Robin L. McCarley, Michael C. Murphy, David Spivak and Steven A. Soper, "Low Abundant Biomarker Screening in Poly(methylmethacrylate) High Aspect Ratio Microstructures Using Immunoaffinity-Based Molecular Recognition", Special Publication: Royal Society of Chemistry – Miniaturized Total Analysis Systems, 2004, v.1, pp. 296.
4. Malgorzata A. Witek, Suying Wei, Bikas Vaidya, André A. Adams, Li Zhu, Wieslaw Stryjewski, Robin L. McCarley and Steven A. Soper, "Cell transport *via* electromigration in polymer-based microfluidic devices", Lab on a Chip, 2004, v.4, pp. 464.

Presentations

- Circulating Tumor Cell Capture from Peripheral Blood Using PMMA Microdevices, 17th Annual NSF/EPSCoR National Conference, Lexington, Ky., 2006.
- Isolation and Enumeration of Circulating Tumor Cells Using Antibody Immobilized Polymer-Based High Throughput Microsampling Units, LSU Chemistry Departmental Research Seminar, Baton Rouge, La., 2006.
- Isolation and Enumeration of Circulating Tumor Cells from Peripheral Blood Using Antibody Immobilized Polymer-Based High Throughput Microsampling Units, CBM2 Colloquium Baton Rouge, La., 2006.
- Low Abundant Biomarker Screening In Poly (Methylmethacrylate) High Aspect Ratio Microstructures Using Immunoaffinity-Based Molecular Recognition, Micro Total Analysis Systems Conference, Malmo, Sweden, 2004.
- Cell Transport in Pristine and UV Modified Polymer Based Microfluidic Devices: A Precursor for Low Abundant Biomarker Screening, 31st Annual National Organization of Black Chemists and Chemical Engineers Conference, San Diego, Ca., 2004.
- MTBE Analysis in Water Employing SPME-GC/MS, 4th Annual DOE/EPSCoR HRD and LS-Lamp Research Conference, Baton Rouge, La., 2000.
- Determinations of MTBE in H₂O with SPME-GC/MS, 27th Annual National Organization of Black Chemists and Chemical Engineers Conference, Miami, Fl., 2000.
- SPME-GC/MS Determinations of MTBE in Bioremediated Water, Department of Energy/Energy Research Undergraduate Laboratory Fellowship Symposium, Berkeley, Ca., 1999.
- MTBE Analysis in Water Using SPME-GC/MS, 26th Annual National Organization of Black Chemists and Chemical Engineers Conference, San Diego, Ca., 1999.
- MTBE Analysis in Water Using SPME-GC/MS, 3rd Annual DOE EPSCoR HRD and LS-Lamp Research Conference, Baton Rouge, La., 1999.
- Lead Determinations in Human Hair using Atomic Absorption Spectroscopy, 2nd Annual DOE EPSCoR HRD and LS-Lamp Research Conference, Baton Rouge, La., 1998.

Selected Awards

- 1st Place Research Seminar Award, Louisiana State University, Department of Chemistry, 2007
- 2nd Place Poster Presentation Award, Center for Bio-Modular Multi-Scale Systems Poster Competition, 2006
- 1st Place Poster Presentation Award, 8th Annual Miniaturized Total Analysis Systems Conference, Malmo, Sweden, 2004
- First Place in oral presentation competition at the 4th Annual DOE EPSCoR HRD and LS-Lamp Research Conference, 2000
- Annual Richard Rayford Outstanding Chemistry Major Award recipient, 1999, 2000
- Department of Energy/Energy Research Undergraduate Laboratory Fellowship recipient, 1999
- United States Achievement Academy, All-American Scholar nominee, Fall 1999

Affiliations

- Gordon Research Conferences, Gordon-Kenan Seminars on Bioanalytical Sensors, (Co-Chair 2007-2008, Vice Chair 2006), 2006-Present
- American Academy for the Advancement of Science, 2001-Present
- American Chemical Society, 1998-Present
- Chemistry Graduate Student Council, 2003-2004
- National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (Student Affiliate Chapter, President, 1999-2000, 2002-2003), 1996-Present
- Beta Kappa Chi (Scientific Honor Society)
- Pi Mu Epsilon (Mathematics Honor Society)

References

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