



Annual Meeting of the AES Electrophoresis Society

November 9-11, 2015 @Salt Palace Convention Center, UT

THANKS to our organizers Nathan S. Swami and Mike Hughes!

visit www.aesociety.org for a comprehensive resource on electrokinetics, microfluidics and related techniques

		MONDAY, November 9	TUESDAY, November 10	WEDNESDAY, November 11		
8:30 to 11:00 AM	Electrokinetics for Protein Separation and Analysis <i>Location: Salt Palace CC, Ballroom E</i> Chair: Frank Jahnke		Electrokinetics in Non Polar Media <i>Location: Salt Palace CC, Ballroom E</i> Chairs: Sven Behrens and Hitomi Mukaibo			
	9:00	Characterization of an Internal Standard for Phosphotyrosine Western Blotting (N. Kendrick)	9:00	Conductivity Theory Fitting Measured Data for Various Alcohol-Toluene Mixtures (A. Dukhin)		
	9:15	New Strategies for Preconcentration, CE Injection, & Ionization for Mass Spectrometry (R. Kelly)	9:15	Electrochemical Impedance Spectroscopy of Doped Nonpolar Liquids (B. Yezer)		
	9:30	Analysis of Amyloid Oligomers Using Microchannel Electrophoresis (C. N. Hestekin)	9:30	Transition from Steric to Electrostatically Stabilized Carbon Black Suspensions (L. M. Walker)		
	9:45	Surface Isoelectric Focusing (sIEF) for Qualitative Protein Separation (A. Minerick)	9:45	The Acid-Base Mechanism for the Charging of Colloidal Particles in Apolar Media (J. C. Berg)		
Electroporation and Electrophysiology <i>Location: Salt Palace CC, Ballroom E</i> Chairs: Michael B. Sano		10:00	Mechanisms of Electric Charging By Surfactants in Nonpolar Dispersions (J. Lee)	10:00	Measurements of the Transverse Migration of Polyelectrolytes in Microfluidic Channels Induced By Combined Electric and Flow Fields (J. E. Butler)	
	10:15	mRNA Extraction from Mycobacteria M. Smegmatis Utilizing Ultrahigh Field Intensity Electrolysis (S. Ma)	10:15	Contact Charge Electrophoresis: Experiment and Theory (K. J. M. Bishop)	10:15	Moderately Nonlinear Diffuse Charge Dynamics Under an AC Voltage (R. Stout)
	10:30	Electrophysiological Rhythms in Red Blood Cells (E. A. Henslee)	10:30 to 11	DISPERSION TECHNOLOGY EXHIBITOR PRESENTATION: Electroacoustics – High frequency Electrokinetics, for characterizing zeta potential in concentrated dispersion, emulsions and porous materials (Andrei Dukhin)	10:30	Resolving Overlimiting Current Mechanisms in Micro-Nanochannel Interface Devices (G. Yossifon)
	10:45	EXHIBITOR PRESENTATION			10:45	GE HEALTHCARE EXHIBITOR PRESENTATION: How to get the most out of your Western Blotting experiments (Phil Beckett)
11:30 - 12:30 PM	LUNCH WITH LEADERS \$15 (payable at door) Salt Palace CC, Ballroom E		Business Meeting @ <i>Location: Ballroom E</i> GET INVOLVED! Organizers of 2016 meeting: Lisa Flanagan Fatima Labeed		Lunch on your own	
1 – 3 PM	Electrokinetics for Cellular Separation & Analysis <i>Location: Salt Palace CC, Ballroom E</i> Chairs: Fatima Labeed and Lisa Flanagan		Electrokinetics and Microfluidics for Biomolecular Analysis <i>Location: Salt Palace CC, Ballroom E</i> Chairs: Zachary Gagnon and Sagnik Basuray		Soft Matter Electrokinetics: Particles, Drops and Bubbles <i>Location: Salt Palace CC, Ballroom E</i> Chairs: Stuart Williams and Christopher Wirth	
	1:00	On the Influence of Outer Membrane Cytochromes on Cell Polarizability (C. Buie)	1:00	Autonomous Multiplex Nanomembrane Sensor Array with Ionic Memristor Based Fluidic Resistive Random-Access Memories (G. Sun)	1:00	Trapping and Sorting of Bacteria in an Optoelectric Trap (A. Mishra)
	1:15	Monitoring of Microbial Hunger Games: Dielectrophoretic Analysis of Inter-Strain C.Difficile Antagonisms (N. Swami)	1:15	Enabling Ultrafast Immunoassays By Dielectrophoretic Biomarker Enrichment on a Nanoslit (N. Swami)	1:15	Dielectrophoresis in Porous Media: Electrically Switchable Filtration (G. R. Pesch)
	1:30	Dielectrophoretic Separation of Babesia-Infected Erythrocytes (E. Adekanmbi)	1:30	Diffusion-Based Microfluidic Bisulfite Conversion for DNA Methylation Detection (S. Ma)	1:30	Comprehensive Micro RNA Profiling By Nanoparticle Electrophoresis in a Gel-Membrane Medium (S. Marczak)
	1:45	Optimizing Neural Stem Cell Sorting with Dielectrophoresis (L. Flanagan)	1:45	Salt Gradient Regulation of Ion and Nanoparticle Transport in Nanopores with Bipolar Charges (C. Y. Lin)	1:45	The Effect of the Structure of Ion-Exchange Membranes on Ion Concentration Polarization and Associated Electrokinetics (Z. Slouka)
	2:00	Identification of Stages of Induced Apoptosis in Non-Small Cell Lung Carcinoma Using Dielectrophoresis (R. T. K. Kumar)	2:00	Performing Gene Mapping on DNA Unraveled on Patterned Lipid Bilayers (H. J. Guo)	2:00	Microfluidic Free Flow Electrophoresis Using Conductive PDMS Polymer Membranes (X. Fu)
	2:15	Robust Dielectrophoretic Cell Aggregation in Biocompatible Hydrogels (E. A. Henslee)	2:15	An Integrated Diagnostic Platform for Biomolecule Detection (S. Senapati)	2:15	Discussion on Nontraditional Methods of Addressing of Liquid Droplets By DC Electric Field (M. Pribyl)
	2:30	Measuring Electrical Properties of Cancer Cells Via Electro-rotation (T. Lannin)	2:30	Selective Biomolecular Detection Using Interfacial Electrokinetic Transduction (Z. R. Gagnon)	2:30	The Response of an Anisotropic Colloid to a Nearby DC Electrode (C. Wirth)
2:45	One Step Microfluidic Immunomagnetic Separation of Tumor Initiating Cells Based on Multiple Markers (C. Sun)	2:45	Sensitive, Multiplexed Electrophoretic miRNA Detection Using Peptide Nucleic Acids (J. W. Schneider)	2:45	Liquid Crystals Enabled Electrokinetics (O. Lavrentovich)	

3:15-5:00 PM	Electrokinetics for Sample Preparation <i>Location: Salt Palace CC, Ballroom E</i> Chairs: Jorg Kutter and Stig Pedersen-Bjergaard		Plenary Session of the AES Electrophoresis Society <i>Location: Salt Palace CC, Ballroom E</i> Chairs: Nathan Swami and Mike Hughes		Award Session of the AES Electrophoresis Society in honor of Cornelius Ivory, Washington State Univ. <i>Location: Salt Palace CC, Ballroom E</i> Chairs: Rodrigo Martinez-Duarte and Mark Hayes			
	3:15	Deterministic Absolute Negative Mobility for Sub-Micrometer Bioparticle Separation (A. Ros)	3:15	Antonio Ramos (U. Seville): AC Electrokinetics of conducting micro- and nano- particles	3:15	Jonathan Posner (U of W): Isotachophoretic Preconcentration on Paper-Based Microfluidic Devices		
	3:30	A Bias-Free Method for Concentrating Proteins (F. Jahnke)	3:45	Amy Herr (UC, Berkeley): Targeted Proteomics with Single-Cell Resolution	3:45	Jeffrey Burke (Circulomics Inc.): Inline Sample Preconcentration for Single Molecule DNA sizing		
	3:45	Enrichment of Small Cell Populations from Large Sample Volumes Using 3D Carbon-Electrode Dielectrophoresis (M. Islam)	4:15	Sue Lunte (U Kansas): Determining Reactive Oxygen and Nitrogen Species in Cells By Microchip Electrophoresis	4:15	Mike Ramsey (UNC, Chapel Hill): Microfluidic Separations Devices with Integrated Nano-Electrospray Ionization		
	4:00	Dielectrophoretic Behavior of Pegylated Ribonuclease A in a Microdevice with Diamond-Shaped Insulating Posts (M. A. Mata-Gómez)	4:45	James Lee (Ohio State Univ – Presented by Daniel Gallego-Perez): Non-Viral Gene and Biomolecule Delivery By Nanochannel Electroporation	4:45	Adam Woolley (BYU): Electrokinetically Driven Microfluidic Analyzers		
	4:15	Design of Insulator-Based Dielectrophoretic Devices: Effect of Insulator Posts Characteristics (M. Saucedo-Espinosa)	5:15	Hsueh-Chia Chang (Notre Dame): A Conic Nanopore Array for Point-of-Care MicroRNA Profiling	5:15	Neil Ivory (WSU): Microchannel Dispersion during Isotachopheresis		
4:30	DEP Isolation and Detection of Cf-DNA and Cf-RNA Biomarkers from Hematological Cancer, Solid Tumor and TBI Patient Blood and Plasma Samples (M. J. Heller)							
4:45	Actuated Tweezers for Electrokinetic Sample Separation (D. Kinnamon)							
6-7:30 PM	Poster Session <i>Location: Salt Palace CC, Ballroom E</i> Chairs: Blanca Lapizco-Encinas and Victor Ugaz AWARDS GIVEN TO BEST STUDENT POSTER!		6-9 PM	Banquet. \$55 (payable at door) @ Buca di Beppo 202 West 300 South		7-8 PM	Networking Event @ Copper Canyon Grill House & Tavern 215 South Temple	

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