



**Analytical Methods Symposium**

July 20, 2009

**51<sup>st</sup> Rocky Mountain Conference on Analytical Chemistry**

July 19-23, 2009

Snowmass Conference Center - Snowmass, Colorado

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**REGISTRATION**

**Register** at [www.rockychem.com](http://www.rockychem.com)

**Admission** to all technical sessions and the exhibition is by name badge only.

**Registration materials** may be picked up at the RMCAC registration area located at the Snowmass Conference Center between 12:00 noon and 5:00 pm on Sunday, July 19 or 8:00 am and 5:00 pm anytime Monday, July 20 through Thursday, July 23.

Conference Lunch

**Complimentary lunches** are being provided July 20, 21 and 22 to all registered symposia attendees. You will receive your luncheon ticket(s) upon check-in at the Rocky Mountain Conference registration desk. Tickets are date-specific and cannot be interchanged with another day. Lost tickets cannot be replaced. Unused tickets cannot be redeemed for another day. The lunch will be served each designated day from 12:00 noon until 1:00 pm.

**MONDAY, JULY 20, 2009**

<b>Session I - Complex Fluid Analysis Techniques, Keith Miller presiding</b>	
9:00 a.m.	<b>Prediction and Standardization of Fire Debris Analysis with the Advanced Distillation Curve: A Protocol for Forensic Analysis.</b> <u>Thomas J. Bruno</u> , National Institute of Standards and Technology
9:30 a.m.	<b>Characterization of New Gasoline and Diesel Fuel Oxygenate Mixtures with the Advanced Distillation Curve Approach.</b> <u>Jennifer R. Riggs</u> , Christopher C. Nickell and Thomas J. Bruno, National Institute of Standards and Technology
9:50 a.m.	<b>Advanced Gas Chromatography Analysis of Fisher Tropsch Products.</b> <u>Randy Shearer</u> , Rentech Inc.
10:10 a.m.	<i>Break</i>
10:40 a.m.	<b>Comparison of Fischer Tropsch Aviation Fuels With the Advanced Distillation Curve Approach.</b> <u>Eugene Baibourine</u> and Thomas J. Bruno, National Institute of Standards and Technology
11:00 a.m.	<b>Compositional Variability of Kerosene Based Fuels: Study of Rocket Propellants and Ultralow Sulfur Diesel Fuel With the Advanced Distillation Curve Approach.</b> <u>Christopher C. Nickell</u> , Jennifer R. Riggs and Thomas J. Bruno, National Institute of Standards and Technology
11:20 a.m.	<b>Decomposition and Corrosion Studies of Kerosene-based Rocket Fuels.</b> <u>Jason A. Widegren</u> and Thomas J. Bruno, National Institute of Standards and Technology
12:00 p.m.	<i>Lunch (included w/registration)</i>
<b>Session II - Materials Science</b>	
1:30 p.m.	<b>Exchangeable Cation Analyses of Montmorillonite and Zeolites Identify Industrial Applications.</b> <u>William J. Miles</u> , Miles Industrial Mineral Research
1:50 p.m.	<b>CdSe/ZnS Core-Shell Quantum Dot Cluster Fluorescence Decay on TiO<sub>2</sub>.</b> Doug Shephard, <u>Kevin Whitcomb</u> and Alan Van Orden, Colorado State University
<b>Session III - Analytical Applications SSNMR</b>	
2:15 p.m.	<b>Dynamics and Distribution of Counterions in Polyelectrolyte Complexes.</b> <u>Susanne Causemann</u> , Monika Schönhoff and Hellmut Eckert, Westfälische Wilhelms-Universität Münster
2:35 p.m.	<b>Structural Examination of Sc-Doped Glasses Using Solid-State NMR.</b> <u>Daniel Mohr</u> and Hellmut Eckert, Westfälische Wilhelms-Universität Münster
5:00-7:00 p.m.	<i>Conference Reception</i>
<b>Poster Session</b>	
7:00-9:00 p.m.	<b>Authors Present for Posters</b>

**TUESDAY, JULY 21, 2009**

<b>Session III - Chromatography / Spectroscopy / Mass Spectroscopy: Techniques and Applications, Patricia L. Sulik presiding</b>	
9:00 a.m.	<b>Application of Microwave Techniques in Analytical Chemistry - New Concepts and Developments.</b> <u>Henryk Matusiewicz</u> , Poznań University of Technology
9:30 a.m.	<b>Analytical Determination the Vapor Pressures of Biodiesel Esters by the Gas Saturation Technique.</b> <u>Jason A. Widegren</u> and Thomas J. Bruno, National Institute of Standards and Technology

9:50 a.m.	<b>Trace Detection and Quantification of Hydrogen Peroxide Permeation through Polymeric Barriers.</b> <u>Tara M. Lovestead</u> and Thomas J. Bruno, National Institute of Standards and Technology
10:10 a.m.	<i>Break</i>
10:30 a.m.	<b>Speeding Up Pharmaceutical U-HPLC Method Development with an Integrated, Ultrafast Automated Method Scouting Solution.</b> Marco Karsten, Wim Decrop, Remco Swart, Wulff Niedner, Frank Steiner, Fraser McLeod, Xiaodong Liu and <u>Guillaume Tremintin</u> , Dionex Corporation
11:00 a.m.	<b>Characterization of Nanoparticles and Colloids by Hydrodynamic Chromatography.</b> <u>Kellen J. Sorauf</u> , Daniel E. Connors, Todd A. Wells and Keith E. Miller, University of Denver
11:20 a.m.	<b>Study and Characterization of Crystalline Hydrate and Polymorph Forms of a Reverse Transcriptase Inhibitor by Solid-State NMR Spectroscopy.</b> <u>N.C. Gonnella</u> , John Smoliga, Scot Campbell, Carl Busacca and Daniel L. Norwood Boehringer Ingelheim Pharmaceuticals Inc.; Michael Cerreta Genentech, Inc.; Richard Varsolona, Wyeth Pharmaceuticals
11:40 a.m.	<b>Where did the Drug Go? -- An Undergraduate Laboratory in Analytical Chemistry Based on Food Safety.</b> Holly Appleberry, Michelle Collier, Elizabeth Dressen, Arsalan Rizvi, Samuel Schroeder and <u>Keith E. Miller</u> , University of Denver
12:00 p.m.	<i>Lunch (included w/registration)</i>
2:00 p.m.	<b>Fast and Effective Determination of Aflatoxins in Grains or Food Using Accelerated Solvent Extraction followed by HPLC.</b> Marco Karsten, Remco Swart, Fraser McLeod, Brett Murphy, <u>Sheldon Henderson</u> and Bruce Richter, Dionex Corporation
2:20 p.m.	<b>Detection of Poultry Spoilage Markers from Headspace Analysis with Cryoadsorption on a Short Alumina PLOT Column.</b> <u>Tara M. Lovestead</u> and Thomas J. Bruno, National Institute of Standards and Technology
2:40 p.m.	<b>Development of Fourier Transform mid Infrared Spectroscopy as a Metabolomic Technique for Characterizing Natural Antioxidants.</b> <u>Vicki Schlegel</u> , University of Nebraska Lincoln
3:00 p.m.	<b>Sensitive Screening of Pesticides in Food Using High Mass Resolving Power and Accuracy.</b> <u>Michael Zumwalt</u> and J.A. Zweigenbaum, Agilent Technologies