



**WORKSHOP ON SAMPLING AND ANALYTIC ADVANCES IN FORMALDEHYDE
AND OTHER CARBONYL COMPOUNDS' DETERMINATION IN AIR**

Sponsored by ASTM Committee D22.05 on Indoor Air

April 12, 2018
Sheraton San Diego Hotel & Marina
San Diego, CA

Workshop Chairs: Kurt Thaxton
GERSTEL Inc.
Linthicum, Maryland, USA

Xiaoyu Liu
U.S. EPA
Durham, North Carolina, USA

THURSDAY, APRIL 12, 2018

8:00 AM
Opening Remarks
Xiaoyu Liu, Workshop Chair

**SESSION I: FORMALDEHYDE AND OTHER CARBONYLS CHAMBER EMISSION
TESTING**

8:10 AM
**A Method Comparison for Measuring Emissions of Aldehydes from Molded Polyurethane
Foam Used in Automotive Interiors**
John Sebroski, Covestro LLC, Pittsburgh, USA

8:35 AM
Formaldehyde Analysis in Air Purifying Product Development
J. Crank, 3M Corporate Research Analytical Lab, St. Paul, Minnesota, USA

9:00 AM
**Impact of Differing ACH/LF Combinations on Formaldehyde Emission Rates at Constant
Q/A**
S. Laughlin, UL Verification Services Inc., Marietta, Georgia, USA

9:25 AM

Improved C-history Method for Measuring the Emission Characteristic Parameters of Formaldehyde/VOCs in Building Materials

X. Zhang, Tsinghua University, Beijing, China

9:50 AM BREAK

10:15 AM

NIST Formaldehyde Reference Material for Characterizing the Performance of Volatile Organic Compound (VOC) Emissions Test Chambers

D. Poppendieck, National Institute of Standards and Technology, Gaithersburg, Maryland, USA

SESSION II: IMPROVEMENTS ON ASTM D5197 AND RELATED DNPH METHODS

10:40 AM

The Struggle for Automation: Advantages and Obstacles for Automating ASTM D5197 and Related DNPH Methods

K. Thaxton, GERSTEL Inc., Maryland, USA

SESSION III: NON-DNPH APPROACHES FOR FORMALDEHYDE AND OTHER CARBONYLS SAMPLING AND ANALYSIS

11:05 AM

Real-time, Ultrasensitive, Portable Formaldehyde Monitor: Comparison to ASTM D5197

J. J. Scherer, Aeris Technologies, Inc., Redwood City, California, USA

11:30 AM

Near-real Time Field-portable Submillimeter-wave Spectrometer for the Measurement of Formaldehyde and Other Carbonyls at Trace (~ppb) Levels in Ambient Air

C. F. Neese, Ohio State University, Columbus, Ohio, USA

11:55 PM LUNCH (on your own)

1:30 PM

Quantification of Formaldehyde in Ambient Air by Near-infrared Cavity Ring-down Spectroscopy

C. W. Rella, Picarro, Inc., Santa Clara, California, USA

1:55 PM

Ethanol Plant Emissions Monitoring with GC-FTIR Technology

K. McPartland, MAX Analytical Technologies, Inc., East Windsor, Connecticut, USA

2:20 PM

Advanced Approaches to Formaldehyde Monitoring by Thermal Desorption (TD)-GCMS

N. Watson, Markes International Inc., Gold River, California, USA

2:45 PM BREAK

3:15 PM

Quantification of Formaldehyde Using Portable Multi-dimensional Gas Chromatography Equipped with Photo-ionization Detector

H. Zhu, University of Michigan, Ann Arbor, Michigan, USA

3:40 PM

Simple High-Throughput Formaldehyde Analysis Using Automated SIFT-MS

B. Mills, Syft Technologies Limited, Christchurch, New Zealand

4:05 PM

Discussion on Measurement of Formaldehyde Related ASTM Method Development

X. Liu, K. Thaxton

4:30 PM

Closing Remarks

Xiaoyu Liu, Workshop Chair