

TAFDV Spring Symposium 2013

Application of Thermal Analysis in Research

Thursday, March 14, 2013

At

ASTM International
100 Barr Harbor Drive
PO Box C700
West Conshohocken, PA, 19428-2959

Andrew R. McGhie, TAFDV program chairman, at mcghie@lrsr.upenn.edu

All Inquiries to:

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Posters can still be accepted.

Registration

General registration fee: \$50
Students, Retirees, and Unemployed Scientists \$25
This fee includes lunch and all breaks.
Students giving talks or posters are free.
To register for the symposium, please contact and send appropriate fee to:

Gray Slough
TAFDV Treasurer
TA Instruments-Waters LLC
159 Lukens Drive
New Castle DE 19720
Tel. 302-427-4158 (voice)
302-427-4001 (fax)
gslough@tainstruments.com

This symposium is co-sponsored by the Laboratory for Research on the Structure of Matter,
University of Pennsylvania

Program

8:30-9:00 am Registration, coffee, donuts

Oral Presentations

1) Invited talk

Bio-Nano Hybrids for Chemical Detection
Prof. A.T. Charlie Johnson, Physics, University of Pennsylvania

2) Invited talk

A Tale of Two Oils by Thermal Analysis
Prof J. G. Matison, Gelest Inc

3) Invited talk

Solid and Liquid State Studies of a Wide Range of Polar and Non-polar Chemicals and Polymers By Dielectric Thermal Analysis
Prof. Alan Riga^{2,3,4}, D.R Mantheni¹, M P K Maheswaram¹, and K. S. Alexander³
1. Department of Chemistry, Cleveland State University, Cleveland, OH-44115.
2. TechCon Inc. 6325 Aldenham Drive 44143-3331
3. Department of Pharmacy Practice, University of Toledo, OH-43614.
4. Case WRU, MACROMOLECULAR Science and Engineering, Cleveland Ohio 44106

4) Reorganization and its Analysis by Fast Scan DSC

Dr. Larry Judovits, Arkema

5) Assessment of the thermal stability of hydrogenated amorphous carbon for next-generation hard disk applications".

F. Mangolini, F. Rose, J. Hilbert, R.W. Carpick, Dept. of Mechanical Engineering and Applied Mechanics, University of Pennsylvania

6) Nanocalorimetry for high rate thermal analysis of nanometer scale multilayer thin films".

Michael D Grapes(1,2), Parasuraman Swaminathan(1,2), Feng Yi(1), Bernadette Cannon(1), Karsten Woll(2), Sara C Barron(2), Timothy P Weihs(2), David A LaVan(1)
1. Materials Measurement Science Division, Materials Measurement Laboratory, National Institute of Standards and Technology, Gaithersburg, MD
2. Department of Materials Science and Engineering, Johns Hopkins University, Baltimore, MD

- 7) Ultrastrong Bubbles for Lightweight Materials
Teresa Brugarolas, Daniel S. Gianola, Lei Zhang, Gregory M. Campbell, Gang Feng, Myung Han Lee and Daeyeon Lee, Dept. of Chemical and Biomolecular Engineering, University of Pennsylvania
- 8) Self-Assembled Janus Salts for Lithium Batteries
 Parameswara Rao Chinnam and Stephanie L. Wunder, Chemistry, Temple Univ.
- 9) Calorimetry and Dynamic Light Scattering of DMPC, DPPC and DSPC Vesicles as a Function of Size
 Jelena Drazenovic and Stephanie L. Wunder, chemistry, Temple Univ.
- 10) Thermotropic self-assembling of novel pyridinium gemini surfactants
 Vishnu Dutt Sharma, Paul A. Heiney, Marc A. Ilies
 Temple, Pharmacy & Univ. Penn, Physics
- 11) New Technologies for Evolved Gas Detection
 Gray Slough and Steve Aubuchon, TA Instruments New Castle DE
- 12) Evolved Gas Analysis (EGA) Using TGA-GC-MS
 Keith Fahnestock, Netzsch Inc.
- 13) Prof. Chris Li group- TBA

Posters

- 1) Blends of POSS-PEG₈ and PEO(600K) with POSS Multi-ionic Lithium Salts
 Nathan Schutte, Parameswara Rao Chinnam and Stephanie L. Wunder, chemistry, Temple Univ.
- 2) Lithium Ionic Channels Formed by Co-crystallization of LiX and Organic Liquids
 Rebecca N. Clymer, Parameswara Rao Chinnam, Stephanie L. Wunder and Michael Zdilla, Chemistry, Temple Univ.
- 3) Ranking Polymers for Medical Device Development based on Thermal Analytical Properties.
Dr. Alan Riga, M. Song, A. Gawlik, M. Gwin, D. Doherty and P.Kumar CWRU
 Selecting Polymers for Medical Applications and Devices based on Poly ether ether Ketone
 Matt Tedesco, Amanda Tong and Dr. Alan Riga CWRU
- 4) A new microcalorimeter for the investigation of thermal properties of pharmaceutical and biological formulations.
 Nelson Garcia, SETARAM, Inc.