



ALD Nano, Steven George Group, and Al Weimer Group Presentations at ALD 2017

Sunday July 16th

Sunday 2.00pm

Atomic Layer Etching, Room Plaza D - Session ALE-SuA Atomic Layer Etching Session I

ALE-SuA3 *Thermal Atomic Layer Etching of SiO₂ by a "Conversion-Etch" Mechanism*, J. DuMont, A. Marquardt, A. Cano, **Steven M. George**, University of Colorado

Sunday 5.15pm

High Aspect Ratios & High Surface Areas, Room Plaza E

INVITED: AF-SuA16 *ALD onto Particles: Batch and Continuous Processes for Industry*, Joseph Spencer II, ALD NanoSolutions, Inc.

Monday July 17th

Monday 8.00am

Atomic Layer Etching, Room Plaza D

INVITED: ALE-MoM1 *Selectivity in Thermal Atomic Layer Etching*, Younghee Lee, S.M. George, University of Colorado

Monday 8.30am

ALD Applications Energy: Catalysis and Fuel Cells, Room Plaza I

Session AA+NS-MoM-3 *Cobalt/Alumina Interactions in ALD Synthesized Catalysts for Fischer-Tropsch Synthesis*, **Jacob Clary**, S. Van Norman, H. Funke, J. Falconer, C. Musgrave, A. Weimer, University of Colorado – Boulder

Monday 9.00am

ALD Applications, Room Plaza E

AA+NS-MoM-5 *Particle Atomic Layer Deposition for Stabilization of Pt/C Fuel Cell Catalysts*, **William McNeary**, A. Lubers, M. Maguire, University of Colorado - Boulder; S. van Rooij, Ecole Polytechnique Fédérale de Lausanne, Switzerland; S. Bull, A. Weimer, University of Colorado – Boulder

Monday 11.45am

Emerging Applications, Room Plaza F

AF+AA-MoM16 *Improving Processability of Poorly Flowing Pharmaceutical Powders by Atomic Layer Deposition*, **Tommi Kääriäinen**, University of Helsinki, Finland; J. Nyman, Åbo Akademi University, Finland; M.-L. Kääriäinen, P. Hoppu, NovaldMedical Ltd Oy, Finland; N. Sandler, Åbo Akademi University, Finland; S.M. George, University of Colorado; M. Ritala, M. Leskelä, University of Helsinki, Finland

Monday 4.00pm

ALD Fundamentals: Process Development, Room Plaza D

ALE+AF-MoA11 *Boron Nitride Growth at Room Temperature Using Electron Enhanced Atomic Layer Deposition (EE-ALD)*, **Jaclyn Sprenger**, H. Sun, A. Cavanagh, S.M. George, University of Colorado - Boulder



Monday 4.15pm

Catalysis and Fuel Cells II, Room Plaza E

EM+AA-MoA12 *Effects of Alumina Incorporation by Particle Atomic Layer Deposition on Sintering and Microstructure of Yttria-Stabilized Zirconia (8YSZ)*, Christopher Bartel, R. O'Toole, M. Kodas, A. Drake, **A. Horrell**, University of Colorado - Boulder; R. Hall, ALDNanoSolutions, Inc.; C. Musgrave, A. Weimer, University of Colorado - Boulder

Tuesday

Tues 9.00am

ALD Applications, Room Plaza ABC

AA-TuM5 *Comparing Temporal and Spatial Atomic Layer Deposition for Enhanced Performance of Li Ion Battery Electrodes*, **Alexander Yersak**, A. Dameron, University of Colorado - Boulder; X. Li, Y. Yang, Colorado School of Mines; K. Hurst, R. Tenet, National Renewable Energy Laboratory; S.M. George, University of Colorado - Boulder

Tues 2.30pm

ALD for Manufacturing, Room Plaza F

AM+EM-TuA5 *Growth Rates During Silicon Spatial Electron-Enhanced Atomic Layer Deposition: Role of Dangling Bond Lifetime*, **Andrew Cavanagh**, S.M. George, University of Colorado

Tues 2.45pm

ALD Applications: Batteries II, Room Plaza ABC

AA1-TuA6 *Improving Interfacial Stability of Sulfide-Based Lithium-Ion- Conducting Solid Electrolytes with ALD*, **Jasmine Wallas**, A. Heist, S. Lee, S.M. George, University of Colorado - Boulder

Tues 4.00pm

MLD II, Room Plaza F

AM+EM-TuA11 *All-Organic Spatial MLD: Troubleshooting Deposition onto Porous Substrates*, **Daniel Higgs**, ALD NanoSolutions, Inc.; Y. Wang, GE; E. Chan, National Institute of Standards and Technology; H. Wang, GE; C. Stafford, National Institute of Standards and Technology; S.M. George, University of Colorado - Boulder

Tues 4.15pm

Emerging Apps III, Room Plaza ABC

AA1-TuA-12 *Nano-Structured Ceramic ALD Coatings to Stabilize SiC Against Reaction in High Temperature Steam*, **Amanda Hoskins**, A. Coffey, C. Musgrave, A. Weimer, University of Colorado - Boulder

5.30pm on Saturday, Sunday and Monday Evenings

Poster Sessions, Room Plaza Exhibit

ALE-SaP5 *In Situ Mass Spectrometer Studies of Volatile Etch Products During Thermal Al₂O₃ Atomic Layer Etching Using HF and Trimethylaluminum*, **Joel Clancey**, S.M. George, University of Colorado - Boulder

ALE-SaP8 *Thermal Atomic Layer Etching of ZnO by "Conversion-Etch" Using Hydrogen Fluoride and Trimethylaluminum*, **David Zywojtko**, S.M. George, University of Colorado - Boulder

ALE-SaP10 *SF₄ as a New Fluorine Reagent for Thermal ALE: Application to Al₂O₃ and VO₂ ALE*, **Jonas Gertsch**, N. Johnson, V. Bright, S.M. George, University of Colorado - Boulder