

NCCAUS Symposium on Atomic Layer Processing

AM Session (Chair/Moderator: Donley Henson/Somil Rathi)

Tutorials on Atomic Layer Deposition (ALD) and Atomic Layer Etching (ALE)

9:00-9:15 AM: Welcome Remarks, **Donley Henson**, and **Somil Rathi**, NCCAUS

9:15-10:15 AM: *One Atom at a Time: ALD Adoption by Semiconductor Industry*, **Dr. Mihaela Balseanu**, Corporate Director, ASM

10:15-10:30 AM: Coffee Break, Exhibits, Student Poster Setup

10:30-11:30 AM: *Wearing The Hat Backwards: Two Decades of Atomic Layer Deposition—From Applications to Fundamentals*, **Prof. Parag Banerjee**, Materials Science and Engineering, University of Central Florida

11:30 AM-12:30 PM: *Fundamentals of Low-Temperature Plasmas and Their Applications in Atomic Layer Processing*, **Prof. Sumit Agarwal**, Chemical Engineering, Colorado School of Mines

12:30-2:00 PM: Lunch, Exhibits, Networking

PM Session (Chair/Moderator: Somil Rathi/Peter Meisenheimer)

Invited and Contributed Talks

2:00-2:30 PM: **(INVITED)** *Enabling High-Performance Logic Technology at 2 nm Nodes via ALD and ALE Process Engineering*, **Dr. Gaurav Thareja**, Director, Applied Materials

2:30-3:00 PM: **(INVITED)** *Piezoelectric and Ferroelectric ALD Thin Films for Next-Generation MEMS*, **Dr. Nicholas Strnad**, Materials Research Engineer, Army Research Lab

3:00-3:15 PM: Sponsor Presentations - Coffee Break, Exhibits, Student Poster Setup

3:15-3:30 PM: *IR-PiFM: Nanoscale Chemical Analysis and Mapping for ALD Process Development and Control*, **Dr. Sung Park**, CEO, Molecular Vista

3:30-4:00 PM: **(INVITED)** *Precursor Design for Atomic Layer Deposition and Future Trends*, **Dr. Corbin Feit**, Research Scientist, Air Liquide

4:00-4:30 PM: **(INVITED)** *Panmo Cloud - Design-of-Experiments and Process Modeling for Advanced Semiconductor Processing*, **Dr. Muthiah Annamalai**, Founder, PanMo LLC

4:30-4:45 PM: *Atomic Layer Etch Process for Nb and Ta Using CF₄/H₂ Plasma*, **Dr. Russ Renzas**, Director, Davidson Foundation Cleanroom, University of Nevada, Reno

Student Posters:

4:00-5:30 PM: *All student posters will be displayed and judged*