ALD/ALE 2026 Program Key

AA	ALD Applications
AF	ALD Fundamentals: Growth and Characterization
ALDALE	ALD & ALE
ALE	Atomic Layer Etching
AM	ALD for Manufacturing
AS	Area Selective ALD
EM	Emerging Materials and Processes
PS	Plenary Session
TS	Tutorial

ALD/ALE 2026 Program Overview

Room /Time	HB Plant Ballroom	Tampa Bay Salons 1-2	Tampa Bay Salons 3-4	Tampa Bay Salons 5-9	Ybor Salons I-IV
SuA					TS-SuA: Tutorial Session
MoM	PS1-MoM: Plenary Session PS2-MoM: ALE Plenary Session				
MoA	ALDALE-MoA: Student Awards AF-MoA: ALD Precursor Design I	EM-MoA: ALD Supercycle Processes	ALE-MoA: Plasma and/Energy-Enhanced ALE I		AA-MoA: Quantum ALD Applications
MoP				POSTER SESSIONS: ALE, AF, AM, EM	
TuM	AF1-TuM: ALD Precursor Design II AF2-TuM: Powder ALD	EM1-TuM: Molecular Layer Deposition/ Hybrid ALD EM2-TuM: Vapor Phase Infiltration	ALE1-TuM: Wet ALE and ALE Modeling ALE2-TuM: Thermal and Gas-Phase ALE		AA1-TuM: ALD Interconnect Applications AA2-TuM: ALD Dielectric Applications
TuA	AF1-TuA: ALD Metrology/ Characterization I AF2-TuA: ALD Metrology/ Characterization II	EM1-TuA: Next Generation ALD Semiconductors EM2-TuA: ALD for 2D Materials	ALE1-TuA: Plasma and Energy-enhanced ALE II ALE2-TuA: ALD+ALE and Selective ALE		AA1-TuA: ALD for Catalysts and Fuel Cells AA2-TuA: ALD for Batteries and Energy Storage
TuP				POSTER SESSIONS: ALE, AA, AS	
WeM	AF1-WeM: Plasma Enhanced and Low Temperature ALD AF2-WeM: Plasma-enhanced ALD of Nitrides	EM1-WeM: Conductive ALD Films EM2-WeM: Energy-enhanced ALD	AS1-WeM: ASD Process I AS2-WeM: ASD Process II		AA1-WeM: ALD for Memory I AA2-WeM: ALD for Memory II
WeA	AF1-WeA: Modeling for ALD Processes I AF2-WeA: Modeling for ALD Processes II	AM1-WeA: ALD Manufacturing Equipment and Processes AM2-WeA: Digital Twins for ALD			AA-WeA: Novel ALD Applications

Sunday Afternoon, June 28, 2026

	Tutorial **Room Ybor Salons I-IV - Session TS-SuA** **Tutorial Session** **Moderators: Parag Banerjee**, University of Central Florida, **Nathan Marchak**, IBM, **Christophe Vallée**, University of Albany, **Virginia Wheeler**, U.S. Naval Research Laboratory
1:00pm	**INVITED: TS-SuA-1** Connection between Precursor Molecules and ALD/ASD/ALE Processes, ***Atsushi Sakurai,*** ADEKA CORPORATION, Japan
1:45pm	**INVITED: TS-SuA-4** Current and Future Perspectives on Atomic Layer Deposition, ***W.M.M. (Erwin) Kessels,*** Eindhoven University of Technology, Netherlands
2:30pm	**INVITED: TS-SuA-7** Current and Future Perspectives on Atomic Layer Etching, ***Thomas Tillocher,*** GREMI - Orleans University - CNRS, France
3:15pm	**BREAK**
3:30pm	**INVITED: TS-SuA-11** Current and Future Perspectives of Area-Selective Deposition, ***Han-Bo-Ram Lee,*** Incheon National University, Republic of Korea
4:15pm	**INVITED: TS-SuA-14** Atomic Layer Deposition from Lab-to-Fab, ***Paul Poodt,*** SparkNano and Eindhoven University of Technology, Netherlands
5:00pm	**INVITED: TS-SuA-17** Advances in Spectroscopic Ellipsometry for ALD and ALE Thin Film Characterization, ***Jeremy Van Derslice,*** J. A. Woollam Co., Inc.

Monday Morning, June 29, 2026

	Room HB Plant Ballroom	
8:45am	**PS1-MoM-1** ALD Welcome and Introductory Remarks	**Plenary Session** **Session PS1-MoM** **Plenary Session** **Moderators:** **Parag Banerjee**, University of Central Florida, **Virginia Wheeler**, U.S. Naval Research Laboratory
9:00am	**INVITED: PS1-MoM-2** ALD Plenary Lecture: A Legacy of Atomic–Scale Innovation - Powering the AI Era, ***Gurtej S. Sandhu,*** Micron Technology	
9:45am	**INVITED: PS1-MoM-5** ALD 2026 Innovator Awardee Talk: Atomic-Scale Engineering of Oxide Semiconductors by ALD: From Display Innovations to Semiconductor Channel Platforms, ***Jin-Seong Park,*** Hanyang University, Korea	
10:15am	**BREAK & EXHIBITS**	
10:45am	**PS2-MoM-9** ALE Welcome and Introductory Remarks	**Plenary Session** **Session PS2-MoM** **ALE Plenary Session** **Moderators:** **Nathan Marchak**, IBM, **Christophe Vallée**, University of Albany
11:00am	**INVITED: PS2-MoM-10** ALE Plenary Lecture: From Atoms to Systems: Atomic-Layer Engineering for the Next Era of Logic and Memory Technologies, ***Gaurav Thareja,*** AMAT	

Monday Afternoon, June 29, 2026

	Room HB Plant Ballroom	
1:30pm	**ALDALE-MoA-1** Physics-Informed Bayesian Active Learning Framework for Efficient Precursor Pulse Time Tuning in Atomic Layer Deposition, ***Pouyan Navabi (Graduate Student)***, *Christos Takoudis,* University of Illinois - Chicago	**ALDALE** **Session ALDALE-MoA** **Student Awards** **Moderators:** **Parag Banerjee**, University of Central Florida, **Nathan Marchak**, IBM
1:45pm	**ALDALE-MoA-2** To ALD or Not to ALD on Lithium? Controlling Growth Through Plasma Pretreatments, ***Tippi Verhelle (Graduate Student)***, *Lowie Henderick, Siebe Coessens, Matthias Minjauw, Jolien Dendooven, Christophe Detavernier,* Ghent University, Belgium	
2:00pm	**ALDALE-MoA-3** Atomic Layer Deposition of Metallic Molybdenum Dioxide Thin Films Enabling High-k Rutile Capacitors, ***Alexey Ganzhinov (Graduate Student)***, *Miika Mattinen, Marko Vehkamäki, Kenichiro Mizohata, Mykhailo Chundak,* University of Helsinki, Finland*; Georgi Popov,* ASM Microchemistry Ltd., Finland*; Mikko Ritala, Matti Putkonen,* University of Helsinki, Finland	
2:15pm	**ALDALE-MoA-4** Atomic Layer Deposition of Ultrathin Topological Semimetals with Thickness-Dependent Resistivity, ***Yea-Ji Kim (Graduate Student)***, *Il-Kwon Oh, Ae Rim Choi,* Ajou University, Republic of Korea*; Thi-Kim Hue Dinh, Bui-Nhat Le Dang,* Ajou University, Viet Nam*; Hyun-Mi Kim,* Korea Electronics Technology Institute, Republic of Korea*; Asir Intisar Khan,* UC Berkeley EECS, Bangladesh	
2:30pm	**ALDALE-MoA-5** Metal-polar AlN and GaN Atomic Layer Etching using SF$_6$ and Cl$_2$/BCl$_3$ Plasma, ***Rafael Panagiotopoulos (Graduate Student)***, Cornell University*; Michael Collings, Steven M. George,* University of Colorado at Boulder*; Jeremy Clark, Debdeep Jena, Huili Grace Xing,* Cornell University	
2:45pm	**ALDALE-MoA-6** Thermal Atomic Layer Etching of Magnesium Oxide Using Hydrochloric Acid and Acetylacetone or Tetramethylethylenediamine, ***Erin Jacoski (Graduate Student)***, *Aziz Abdulagatov, Troy Colleran, Steven George,* University of Colorado Boulder	
3:00pm		
3:15pm		
3:30pm	**BREAK & EXHIBITS**	
4:00pm	**AF-MoA-11** Bridging Code and Chemistry: The Origin of Precursor Decomposition, ***Seungjin Song***, *Ga Youn Lee, Dexter Dimova, Sean Barry,* Carleton University, Canada	**ALD Fundamentals: Growth and Characterization** **Session AF-MoA** **ALD Precursor Design I** **Moderators:** **Rick Chen**, The Electronics business of Merck KGaA Darmstadt, Germany, **Atsushi Sakurai**, ADEKA CORPORATION, Japan
4:15pm	**AF-MoA-12** Multi-Objective Discovery of New Precursors for ALD with Steerable Generative AI, ***Tristan Deleu***, Entalpic, Canada*; Alexandre Duval,* Entalpic, France	
4:30pm	**AF-MoA-13** First-Principles Screening of Precursors and Inhibitors to Achieve Enlarged-Grain MoS$_2$ Through Area-Selective Deposition, ***Bram van der Linden (Graduate Student)***, KU Leuven and Imec, Belgium*; Geoffrey Pourtois, Sergiu Clima,* IMEC, Belgium*; Ian Campbell,* IMEC*; Pierre Morin, César Javier Lockhart de la Rosa,* IMEC, Belgium*; Ageeth Bol,* University of Michigan, Ann Arbor*; Annelies Delabie,* KU Leuven and Imec, Belgium	
4:45pm	**AF-MoA-14** Molecular–Level Insight Into Thermal Stability and Substrate–Dependent Nucleation of DDAP for Platinum ALD, ***Tomohiro Tsugawa***, *Hideaki Nakatsubo, Yohei Kotsugi, Ryosuke Harada,* TANAKA PRECIOUS METAL TECHNOLOGIES Co., Ltd., Japan	
5:00pm	**AF-MoA-15** Theoretical Analysis on Organic Sulfur Sources for Atomic Layer Deposition of MoS$_2$, ***Myeong Kyun Nam (Graduate Student)***, Hongik University, Republic of Korea*; Bonggeun Shong,* Hanyang University, Republic of Korea	
5:15pm	**AF-MoA-16** A Data-Science Approach to the Analysis of Temperature-Dependent Alumina Atomic Layer Deposition Growth Per Cycle, ***Raymond Adomaitis***, University of Maryland	

Monday Afternoon, June 29, 2026

	Emerging Materials and Processes **Room Tampa Bay Salons 1-2 - Session EM-MoA** **ALD Supercycle Processes** **Moderators: Ageeth Bol**, University of Michigan, Ann Arbor, **Venkateswara Pallem**, AirLiquide	**Atomic Layer Etching** **Room Tampa Bay Salons 3-4 - Session ALE-MoA** **Plasma and/Energy-Enhanced ALE I** **Moderators: Heeyeop Chae**, Sungkyunkwan University (SKKU), Republic of Korea, **Keren J. Kanarik**, Lam Research
1:30pm		
1:45pm		
2:00pm		
2:15pm		
2:30pm		
2:45pm		
3:00pm		
3:15pm		
3:30pm	**BREAK & EXHIBITS**	**BREAK & EXHIBITS**
4:00pm	**EM-MoA-11** From Inverse Design to Thin-Film Growth: AI-Guided Discovery of ALD Dielectrics, ***Ngoc Le Trinh (Graduate Student)****, Wonjoong Kim, Bonwook Gu, Minhyeok Lee, Dohyun Kim, Han-Bo-Ram Lee,* Incheon National University, Republic of Korea	**INVITED: ALE-MoA-11** Atomic Layer Processing of Electronic Devices*,* ***Andreas Fischer****, Thorsten Lill,* Clarycon Nanotechnology Research, Inc.*; Fred Roozeboom,* University of Twente, Netherlands
4:15pm	**EM-MoA-12** Spatial ALD of Zinc Tin Oxide by Co-Dosing and Supercycles: The Role of Persistent Ligands*,* ***Poorani Gnanasambandan****,* Eindhoven University of Technology, The Netherlands*; Melika Motaghian,* Spark Nano, Netherlands*; Mariadriana Creatore, Bart Macco,* Eindhoven University of Technology, The Netherlands	
4:30pm	**INVITED: EM-MoA-13** Atomic Layer Deposition of Epitaxial Complex Oxides for Neuromorphic and Photonic Applications*,* ***Henrik Sønsteby****,* University of Oslo, Norway	**ALE-MoA-13** Plasma-Enhanced Atomic Layer Etching of Mbe- and Ald-Grown Ultrathin HZO for Ferroelectric Tunnel Junctions*,* ***Marimuthu Rajendiran****, Nikolai Andrianov, Venkata Raveendra Nallagatla, Joaquín Miranda,* Silicon Austria Labs GmbH, Austria*; Polychronis Tsipas, Stavros Kitsios,* Institute of Nanoscience and Nanotechnology, National Center for Scientific Research “Demokritos”, Greece*; Nathan Savoiad, Alexander Flasbyd,* Integrated Systems Laboratory, D-ITET, ETH Zurich, Switzerland*; Athanasios Dimoulas,* Institute of Nanoscience and Nanotechnology, National Center for Scientific Research “Demokritos”, Greece*; Laura Bégon Loursd,* Integrated Systems Laboratory, D-ITET, ETH Zurich, Switzerland*; Deluca Marco,* Silicon Austria Labs GmbH, Austria
		ALE-MoA-14 Atomic Layer Etch Process for Nb and Ta Using CF_4/H_2 Plasma*,* ***Ryan Walsh (Graduate Student)****,* University of Nevada, Reno
5:00pm	**EM-MoA-15** Towards Fast-Growing Metal Phosphate Films with Controlled Stoichiometry Using Plasma-Enhanced ALD*,* ***Aditya Chalishazar (Graduate Student)****, Ruben Blomme, Lowie Henderick,* Ghent University, Belgium*; Sylwia Klejna,* AGH University of Krakow, Poland*; Matthias Minjauw, Arpan Dhara,* Ghent University, Belgium*; Frans Munnik,* Institute of Ion Beam Physics and Materials Research, HZDR, Germany*; Christophe Detavernier, Jolien Dendooven,* Ghent University, Belgium	**ALE-MoA-15** Uncovering Plasma-Enhanced Atomic Layer Etching of Silicon Nitride Using Molecular Dynamics Simulations with Machine Learning Force Fields*,* ***Sungwon Park****, Gyeong Hwang,* University of Texas at Austin
5:15pm	**EM-MoA-16** Uncovering Emergent Electrical Behaviour in ALD Nanolaminates Through Supercycle Engineering for SiC Gate Applications*,* ***Jesse Kalliomäki****, Soumen Mazumder, Fernanda Albrechtvechietti, Mustafa Yildirim, Safdar Muhammad,* Applied Materials, Finland	**ALE-MoA-16** Comparative Study on Atomic Layer Etching Characteristics of Conventional C_4F_8 and Low-GWP C_3F_6*,* ***Dong Ki Lee (Graduate Student)****, Chul-Hee Cho, Inho Seong, Dayeon Kang, Shinjae You,* Chungnam National University, Department of Physics, Republic of Korea

Monday Afternoon, June 29, 2026

	Room Ybor Salons I-IV	
1:30pm		**ALD Applications** **Session AA-MoA** **Quantum ALD Applications** **Moderators:** **Robert Clark**, TEL Technology Center, America, LLC, **Arpita Saha**, Oxford Instruments, UK
1:45pm		
2:00pm		
2:15pm		
2:30pm		
2:45pm		
3:00pm		
3:15pm		
3:30pm	**BREAK & EXHIBITS**	
4:00pm	**INVITED: AA-MoA-11** Two Level Systems Mitigation by Atomic Layer Deposition for Quantum Application*, **Thomas Proslier**, Yasmine Kalboussi, Théo Dejob, Fabien Eozenou, Gregoire Jullien,* CEA Saclay, France*; sandrine Tusseau-nenez,* Ecole Polytechnique - CNRS, France*; Nathalie Brun, Michael Walls,* Université Paris-Saclay, France*; frédéric miserque, Maurice Luc,* CEA Saclay, France	
4:30pm	**AA-MoA-13** Atomic Layer Deposition Based Dopant Engineering of Er-Doped CeO_2 Thin Films for Scalable Quantum Materials*, **Terrick McNealy-James (Graduate Student)**,* University of Central Florida*; Emily Miura-Stempel, Ratul Mangalr,* University of Washington*; Justin Moore, Diego Javier-Jimenez, Titel Jurca,* University of Central Florida*; Brandi Cossairt,* University of Washington*; Parag Banerjee,* University of Central Florida	
4:45pm	**AA-MoA-14** Superconducting Nitrides by Fast Remote Plasma ALD for Quantum Applications*, **Harm Knoops**, Arpita Saha, Dmytro Besprozvannyy, Nick Chittock,* Oxford Instruments Plasma Technology, UK*; Silke Peeters, W.M.M. (Erwin) Kessels,* Eindhoven University of Technology, Netherlands*; Ciaran Lennon,* Oxford Instruments Plasma Technology, UK*; Nidhi Choudhary, Robert Hadfield,* University of Glasgow, UK*; Iliya Shiravand, Davood Shahrjerdi,* New York University*; Christos Zachariadis, Alessandro Bruno,* QuantWare B.V., Netherlands	
5:00pm	**AA-MoA-15** Wafer-Scale Thermal ALD of Superconducting TiN: A Scalable Process with Room-Temperature Predictive Mapping*, **Sanaz Zarabi**, John Rönn, Otto Laitinen,* Beneq Oy, Finland	
5:15pm	**AA-MoA-16 ALD Outstanding Presentation Award Finalist**: Growth of Superconducting Trilayer NbN/AlN/NbN Structures for Photonics and Quantum Computing Applications*, **Ciaran Lennon**,* Oxford Instruments Plasma Technology, UK*; Nidhi Choudhary,* University of Glasgow, UK*; Dmytro Besprozvanny,* Oxford Instruments Plasma Technology, UK*; Valentino Seferai,* University of Glasgow, UK*; Arpita Saha,* Oxford Instruments Plasma Technology, UK*; Harm Knoops,* Oxford Instruments Plasma Technology, Netherlands*; Harriet van der Vliet,* Oxford Instruments Plasma Technology, UK*; Robert Hadfield, Martin Weides,* University of Glasgow, UK	
5:30pm		

ALD for Manufacturing
Room Tampa Bay Salons 5-9 - Session AM-MoP
ALD for Manufacturing Poster Session
5:45 – 7:00pm

AM-MoP-1 Implementing Statistical Process Control for Atomic Layer Deposition Tools in an Academic Facility to Meet Industrial Expectations, *Ronald Reger,* Birck Nanotechnology Center, Purdue University; ***Anh Ho,*** Birck Nanotechnology Center, Purdue University.; *Rich Hosler,* Birck Nanotechnology Center, Purdue University

AM-MoP-2 Anti-Deposition ALD–Al_2O_3 Coatings against Silicon Chloride Byproduct for Capacitance Manometers, ***Hidenobu Tochigi***, *Keigo Iwamoto, Takuya Ishihara,* Azbil corporation, Japan

AM-MoP-3 Enabling Vacuum Process Monitoring with Time-of-Flight Spectroscopy, *Klaus Bergner, Marco John, Andreas Trützschler,* VACOM, Germany; ***Christopher Gray***, VACOM, Belgium

AM-MoP-4 Additively Manufactured Silicon Carbide Process Components Enabling Stable ALD/ALE Under Harsh Semiconductor Manufacturing Environments, ***Youngsuk Jung***, *Ji-Won Oh, Shinhu Cho,* MADDE, Republic of Korea

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ALD Fundamentals: Growth and Characterization
Room Tampa Bay Salons 5-9 - Session AF-MoP
ALD Fundamentals: Growth and Characterization Poster Session
5:45 – 7:00pm

AF-MoP-1 Novel In/Ga Precursors for Atomic Layer Deposition of IGZO Thin Film Transistors, ***Eunsu Kang***, *Hyunkyung Lee, Ki-yeung Mun, Kyu Hyun Yeom, Hyunkee Kim, Dae Won Ryu,* Hansol Chemical, Republic of Korea; *Jin-Seong Park,* Hanyang University, Korea

AF-MoP-2 Optimization of Ferroelectric Ga-Doped HfO_2 Thin Films via Peald for Enhanced Phase Stability and Memory Performance, ***Jiseop Byeon (Graduate Student)***, *Suhyeon Park, Minjae Kwon,* Kyungpook National University, Republic of Korea; *Roy Byung Kyu Chung,* Kyungpook National University

AF-MoP-3 $AlPO_4$ and AlPxOy by Dual-Source and Supercycle PEALD Approaches, ***Florian Preischel***, Leibniz Institute for Solid State and Materials Research, Germany; *Karl Rönnby, Michael Nolan,* Tyndall National Institute, University College Cork, Ireland; *Harish Parala, Anjana Devi,* Leibniz Institute for Solid State and Materials Research, Germany

AF-MoP-4 Correlative AFM-SEM for ALD Characterisation, ***Satyam Ladva***, Quantum Design inc.

AF-MoP-5 A Versatile Low-Temperature Pathway for Epitaxial Integration of Functional Nitrides via Hydrogen-Manipulated Atomic Layer Epitaxy, ***Kuan-Cheng Huang (Graduate Student)***, *Fong-Jyun Jhong, Yu-Sen Jiang, Miin-Jang Chen,* Department of Materials Science and Engineering, National Taiwan University, Taiwan

AF-MoP-6 Study of the Chemical Stability of Precursors Used for ALD of Lithium-Containing Films by Structural and Thermal Analyses, ***Nicolas Massoni***, *Manon Letiche, Sylvain Poulet,* CEA/LETI-University Grenoble Alpes, France; *Pierre-Alain Bayle,* CEA-University Grenoble Alps, France; *Névine Rochat,* CEA/LETI-University Grenoble Alpes, France; *Rodica Chiriac, François Toche,* Université Claude Bernard Lyon 1, LMI, UMR CNRS 5615, France; *Messaoud Bedjaoui,* CEA/LETI-University Grenoble Alpes, France

AF-MoP-7 Deposition and Electrical Characterization of Hafnia ALD Thin Films Using Cp–Based Precursors, ***Hyun Woo Jeong (Undergraduate)***, CN1 Co.,Ltd, Republic of Korea

AF-MoP-8 Low-Temperature High-Quality Epitaxial Aluminum Nitride Films Deposited by Plasma-Enhanced Atomic Layer Deposition, *Pini Medved,* Ariel University, Ariel 40700, Israel; *Silvia Piperno,* Bar-Ilan University, Ramat Gan 5290002, Israel; ***Valentina Korchnoy***, Technion Israel Institute of Technology, Israel; *Gili Cohen-Taguri,* Bar-Ilan University, Ramat Gan 5290002, Israel; *Asaf Albo,* Ariel University, Ariel 40700, Israel

AF-MoP-9 ALD of Zinc Phosphate films with Tuneable Structure and Stoichiometry, ***Aditya Chalishazar (Graduate Student)***, *Arpan Dhara,* Ghent University, Belgium; *Sylwia Klejna,* AGH University of Krakow, Poland; *Matthias Minjauw,* Ghent University, Belgium; *Eduardo Solano,* ALBA Synchrotron, Spain; *Frans Munnik,* Institute of Ion Beam Physics and Materials Research, HZDR, Germany; *Christophe Detavernier, Jolien Dendooven,* Ghent University, Belgium

AF-MoP-10 Non–Magnetizing Microwave PEALD Enabled via Magnetic Shielding for Highly Uniform Double-Sided Al_2O_3 Film Deposition, *Michel Marti,* ***Alejandra Vanessa***, *Ramis Hertwig, Dominik Hartmann,* Evatec AG, Switzerland

AF-MoP-11 Amine Adducts of Cyclopentadienyl Magnesium as Precursors for Magnesium Containing Films Deposition, ***Anuththara Arachchige***, *Hima Kumar Lingam, David Roberts,* Ereztech Labs LLC

AF-MoP-12 Kinetics of the Atomic Layer Deposition Trimethyl Aluminum – Ozone Reaction Studied Through Variations of Surface Area and Temperature with *in-Situ* Quadrupole Mass Spectrometry, ***Eric Bissell (Graduate Student)***, *Jacob Furst,* University of Central Florida; *Nicholas G. Rudawski,* University of Florida, Gainesville; *Fernando Uribe-Romo, Titel Jurca, Kathleen Richardson, Parag Banerjee,* University of Central Florida

AF-MoP-13 Phase-engineered TiO_2–RuO_2 top interface for a High-k TiO_2 dielectric with bottom interfacial stabilization via a ZrO_2 layer in Tin-based DRAM capacitors, ***Kyungmo Yang (Graduate Student)***, *Woojin Jeon, Chaeyeong Hwang,* Kyung Hee University, Republic of Korea

AF-MoP-14 Influence of Process Pressure on the Growth Kinetics and Electrical Properties of NbN Thin Films Prepared by PEALD using TBTDEN, ***Hae Yong Jeong***, *Shin Keun Kim, Taek Kim,* Korea Advanced Nano-fab Center, Republic of Korea

AF-MoP-15 Oxide Film Properties Using OH Radicals Generated by Water Vapor Mixed Pure Ozone Gas as ALD Oxidant, ***Naoto Kameda***, MEIDENSHA corp., Japan; *Kenichi Uehara, Shigeo Yasuhara,* Japan Advanced Chemicals Ltd., Japan; *Soichiro Motoda, Tetsuya Nishiguchi,* MEIDEN NANOPROCESS INNOVATIIONS Inc., Japan

AF-MoP-16 Expanding the Zinc Precursor Toolbox for Thermal ALD of ZnO, ***Jorit Obenlüneschloß***, Leibniz Institute, IFW Dresden, Germany; *Jeffrey W. Elam,* Argonne National Laboratory; *Anjana Devi,* Leibniz Institute, IFW Dresden, Germany

AF-MoP-17 Comparative Study of Ga Precursors for Low-Temperature PEALD GaN: Trimethylgallium vs. Tris(dimethylamido)gallium, ***Taeyoon Kwon (Graduate Student)***, *Jian Heo, Okhyeon Kim, Hye-Lee Kim, Won-Jun Lee,* Sejong University, Republic of Korea

AF-MoP-18 Structural and Electrical Characteristics of Vanadium Oxide Thin Films Grown by ALD Using a Precursor with High Thermal Stability, ***Iksun Kwon (Graduate Student)***, *Seungwoo Lee,* Kyung Hee University, Republic of Korea; *Hyunseok Oh, Donghun Shin, Yongjoo Park,* SK Trichem Co., Republic of Korea; *Woojin Jeon,* Kyung Hee University, Republic of Korea

AF-MoP-19 Engineering Black TiOx: Kinetic Tuning of Ti^{3+} Defects and Polymorph Stability via ALD Pulse Control, ***Jan Leithäuser (Graduate Student)***, Heinrich-Buff-Ring 16, Germany; *Jörg Schörmann, Martin Becker, Sangam Chatterjee,* Justus Liebig University Giessen, Germany

AF-MoP-20 Studies of Pt ALD Film Conformality and Conductivity with Pillarhall Test Structures, *Jussi Kinnunen,* Chipmetrics Oy, Finland; *Anish Philip, Girish C. Tewari, Mahtab Salari Mehr,* Aalto University, Finland; ***Kalle Eskelinen***, Chipmetrics Oy, Finland; *Thomas Werner,* Chipmetrics GmbH, Germany; *Ramin Ghiyasi,* Aalto University, Finland; *Stefan Polzin,* Chipmetrics GmbH, Germany; *Maarit Karppinen,* Aalto University, Finland

AF-MoP-21 Growth Rate of ALD Al_2O_3 on Nanocellulose – Quantification Technique and Analysis, ***Hugo Patureau***, SIMAP, Grenoble-INP, CNRS, France; *Erwan Gicquel,* Cilkoa, France; *Frédéric Mercier, Elisabeth Blanquet, Arnaud Mantoux,* SIMAP, Grenoble-INP, CNRS, France

AF-MoP-22 Self-Assembled Monolayers of Phosphorus–Nitrogen Cages, *Justin Lomax,* Western University, Canada; *Michael-John Treanor,* St. Andrews, UK; *Michael Land,* Dalhousie University, Canada; *Wai-Tung Shiu, Bentley Jordan,* Western University, Canada; *Saurabh Chitnis,* University of Victoria, Canada; *Christopher Baddeley,* University of St. Andrews, UK; ***Paul Ragogna***, Western University, Canada

AF-MoP-23 Mophological Analysis of ALD HZO Thin Films Using Cp-Based Hf/Zr Precursors, ***Chang Ho Lee***, CN1 Co., Ltd, Republic of Korea

AF-MoP-24 Indium Precursor Development for High Quality InOx-based Film for Future Oxide Semiconductor Applications, ***Nana Okada***, *Atsushi Sakurai, Ryota Fukushima, Keisuke Takeda, Masaki Enzu,* ADEKA CORPORATION, Japan; *Tomoharu Yoshino,* ADEKA KOREA CORPORATION, Korea (Democratic People's Republic of); *Atsushi Yamashita, Yoshiki Oe, Yutaro Aoki,* ADEKA CORPORATION, Japan; *Akihiro Nishida,* a.nishida@adeka.co.jp

AF-MoP-25 Novel Tantalum Precursor for High-Quality Ta_2O_5 Thin Films by Atomic Layer Deposition, ***Luis Misal***, *Sunao Kamimura,* Air Liquide Laboratories, Japan; *Nicolas Blasco,* Air Liquide, France

AF-MoP-26 Growth and Characterization of Bi_2O_3 Thin Films Prepared by Atomic Layer Deposition from $Bi(O^tBu)_3$, ***Hyo Jin Park (Graduate Student)***, Sookmyung Women's University, Republic of Korea; *Injeong Ryu, Gwon Deok Han,* Sookmyung Women's University, Republic of Korea

AF-MoP-27 Effect of Temperature and Oxidant on Structural, Chemical, Optical and Morphological Properties of ALD Grown Cobalt Oxide, *Swapnil Nalawade, Ahmed Wasif Mustakim,* ***Shyam Aravamudhan,*** North Carolina A&T State University

AF-MoP-28 Hybrid 1D/3D Analytical Step–Coverage Modeling for Inhibitor-Free Superconformal Molybdenum Gap-Fill, ***David Mandia,*** *Lee Brogan, Matthew Griffiths, Jennifer O'Loughlin Petraglia,* Lam Research Corporation

AF-MoP-29 Low Temperature ALD Vanadium Nitride Using Anhydrous Hydrazine, *Dan Le, Austen Adams,* ***Lorenzo Diaz,*** RASIRC; *Dushyant Narayan, Minjong Lee, Thi Thu Huong Chu,* University of Texas at Dallas; *Adrian Alvarez,* RASIRC; *Jiyoung Kim,* University of Texas at Dallas

AF-MoP-30 Non-Destructive Characterization of Alumina Film Thickness and Fractional Coverage Utilizing XPS and StrataPHI for Metrological Analysis, ***Amy Ferryman,*** *Norb Biderman, Kateryna Artyushkova,* Physical Electronics

AF-MoP-31 Effect of Pnictogen Hydrides XH_3 (X=P, As, Sb) Doping on Silicon Deposition: A First-Principles Study, ***Rabi Khanal,*** *Raymond Joe, Anthony Dip,* Tokyo Electron America, Inc.

AF-MoP-32 Rutile TiO_2 Thin Films Grown by Remote Plasma ALD on RuO_2 Seed Layers for Advanced Capacitor Structures, ***Yongwoon Jang (Graduate Student),*** *Jiwon Kim, Byungwook Kim, Minkyun Kang, Hyeonwu Nam, Changbun Yoon,* Tech University of Korea

AF-MoP-33 2.5 Å/cycle PEALD of SiO_2 Using a Tri-Silyl Precursor for Advanced Gap-Fill Applications, ***Wonyong Koh,*** *Byung-Kwan Kim, Won-Jeong Hwang, Su-Yeon Lee, Seung-Gyun Hong, Jin-Sik Kim, Hyun-Kyu Ryu,* UP Chemical Co., Ltd., Republic of Korea

AF-MoP-34 Non-Pyrophoric Zinc Precursor AP–MDS™131: Extended ALD Window and Benchmarking Against Diethylzinc, ***Lukas Mai,*** *Jan-Lucas Wree,* EMD Electronics, Germany; *Bhushan Zope, Randall Higuchi, Khang Ngo,* EMD Electronics; *Holger Heil,* EMD Electronics, Germany; *Sergei Ivanov,* EMD Electronics

AF-MoP-35 Indium Precursors Targeting ALD of Indium Films, ***David Ermert,*** Entegris, Inc.

AF-MoP-36 Imaging Spectroscopic Ellipsometry as a Wafer-Scale Metrology Tool 2D TMDs, ***Mangesh Diware,*** Park Systems Inc; *Michael Curtis,* Micron School of Materials Science and Engineering, Boise State University; *Ashton Enrriques,* Park Systems Inc; *David Estrada,* Micron School of Materials Science and Engineering, Boise State University

AF-MoP-37 Developments in low growth rate aluminum oxide ALD with AP-MDS™ 026 and AP-MDS™ 027, ***Jan-Lucas Wree,*** *Lukas Mai,* EMD Electronics, Germany; *Bhushan Zope,* EMD Electronics, USA; *Randall Higuchi,* EMD Electronics; *Khang Ngo,* EMD Electronics, USA; *Holger Heil,* EMD Electronics, Germany; *Sergei Ivanov,* EMD Electronics, USA

AF-MoP-38 Inline XPS and Raman Metrology for Evaluating Integrity of Selectively Deposited Graphene During Thin Film Deposition, *Dominic Esan, Kitty Kumar, Ahmad Al-Kukhun, Wing-Shun Lam, Sisi Cao,* Intel Corp.; ***Ganesh Vanamu,*** Nova Ltd.; *Yinon Katz, Haim Prigozin, Lior Neeman, Tamar Hess,* Nova Ltd., Israel; *Sumegha Godara, Roland Barbosa,* Nova Ltd.

AF-MoP-39 Design of Experiments Approach to Controlling ALD-Grown Hafnium Oxide Film Properties, *Emily Wang, Tarun Maredla, Iryna Golovina, David Barth,* ***Lucas Barreto,*** University of Pennsylvania

Atomic Layer Etching
Room Tampa Bay Salons 5-9 - Session ALE-MoP
Atomic Layer Etching Poster Session
5:45 – 7:00pm

ALE-MoP-1 Low-Temperature Isotropic ALE of Oxides for 3D Nanostructures and Quantum Device Fabrication, ***Maria Efthymiou Tsironi,*** LBNL

ALE-MoP-2 Active-Learning Accelerated Atomistic Modeling of ALE Processes, ***Fedor Goumans,*** Software for Chemistry & Materials, Netherlands; *Nestor Aguirre,* Softare for Chemistry & Materials, Netherlands; *Nicolas Onofrio,* Software for Chemistry & Materials, Netherlands

ALE-MoP-3 Stabilization of Etch Rate in SiO_2 Quasi-ALE Using an O_2 Plasma, ***Akimi Uchida,*** *Tomoyuki Nonaka, Koshi Hanada,* Samco Inc., Japan

ALE-MoP-4 Ion-beam Atomic Layer Etching for Effective Damage Removal in Vertical GaN-Based Devices, ***Sung Hyun Kim (Graduate Student),*** *Jong Soon Park, Geun Young Yeom,* Sungkyunkwan University (SKKU), Republic of Korea

ALE-MoP-5 Highly Selective Atomic Layer Etching of Mo using O_2/Cl_2 by Formation of MoO_xCl_y, ***Su Jeong Yang (Graduate Student),*** *Yun Jong Jang, Geun Young Yeom,* Sungkyunkwan University (SKKU), Republic of Korea

ALE-MoP-6 Improving Optical Resonator Quality Factors in Thin-Film Lithium Niobate with Atomic Layer Etching, ***Ivy Chen (Graduate Student),*** *Selina Zhou, Alireza Marandi, Austin Minnich,* California Institute of Technology

ALE-MoP-7 Recovery of Plasma-Induced Surface Damage in Gan-Based Led via Atomic Layer Etching, ***Young Woo Jeon (Undergraduate),*** *Jong Woo Hong, Geun Young Yeom,* Sungkyunkwan University, Republic of Korea

ALE-MoP-8 Development Atomic Layer Etching of Ga_2O_3 Using CF_4 Plasma and $Sn(acac)_2$, *To-En Hsu, Yu-Hsuan Yu,* ***Chien-Wei Chen,*** National Center for Instrumentation Research, National Institutes of Applied Research, Taiwan

ALE-MoP-9 Thermal Atomic Layer Etching of Yttrium-Doped Hafnium Oxide Using Hydrofluoric Acid and Boron Trichloride, ***Aziz Abdulagatov,*** *Andrew Cavanagh,* University of Colorado Boulder; *Florian Wunderwald, Uwe Schroeder,* NaMLab gGmbH, Germany; *Steven George,* University of Colorado Boulder

ALE-MoP-10 Thermal Gas-Phase Etching of Silicon Materials by Chlorination Using $SOCl_2$, SO_2Cl_2, and HCl, ***Troy Colleran (Graduate Student),*** University of Colorado at Boulder

ALE-MoP-11 Atomic Layer Etching of Metal Oxides Using Halogen-Free Liquid Phase Organic Etchants, ***Hana Kim,*** *Hyeon Sik Cho, Hyun Ju Jung, Myeong Il Kim, Jaemin Kim, Duck Hyeon Seo, Juhwan Jeong, Sun Young Baik, Kyuho Cho,* EGTM Co. R&D Center, Republic of Korea

ALE-MoP-12 Reaction Mechanism of Isotropic Atomic Layer Etching of Zirconium Oxide: An *In Vacuo* X-ray Photoelectron Spectroscopy Study, ***Hye-Lee Kim,*** *Mi-Soo Kim, Eunju Ham, Sejeong Jo, Hyun-Jeong Yoo,* Sejong University, Republic of Korea; *Youn Seoung Lee,* Hanbat National University, Republic of Korea; *Sun-Jae Kim, Won-Jun Lee,* Sejong University, Republic of Korea

ALE-MoP-13 Numerical and Experimental Investigations on Tailored Waveforms, ***Sebastian Mohr,*** *Hyungseon Song,* Quantemol Ltd., UK; *Ben Harris, Daryl White, Geoff Hassall,* Oxford Instruments Plasma Technology, UK; *James Ellis,* Oxford Instruments, UK

ALE-MoP-14 Thermal Etch and SEM3D–Modeling Driven Profile Engineering for Metal–Gate Corner Preservation in Advanced MEOL SAC Processing, ***Prabhat Kumar,*** Lam Research Corporation

ALE-MoP-15 Modelling Atomic Layer Etching of a ZnO Surface Using Thermogravimetric Analysis and Solvothermal Synthetic Methods, ***Justin Moore (Graduate Student),*** *Titel Jurca,* University of Central Florida

ALE-MoP-16 Exploring Hydrofluorocarbons for Thermal ALE of High-k Oxides, ***Michael Nolan,*** Tyndall Institute, Ireland; *Rita Mullins,* Tyndall National Institute, University College Cork, Ireland

ALE-MoP-17 Halogen-Free ALE of Copper, *Persi Panariti, Asare Dua,* ***Adam Hock,*** Illinois Institute of Technology

Emerging Materials and Processes
Room Tampa Bay Salons 5-9 - Session EM-MoP
Emerging Materials and Processes Poster Session
5:45 – 7:00pm

EM-MoP-1 Chromium-Doped ALD Lead Telluride Thin Films with Additional Iodine Coating, ***Haifeng Cong (Graduate Student),*** *Helmut Baumgart,* Old Dominion University; *Tarek Abdel-Fattah,* Christopher Newport University

EM-MoP-2 Formation of Multi-Heterojunctions via Atomic Layer Etching for High Performance MoS_2 Photodetectors, ***Si Yeon Kim (Graduate Student),*** *Sun Jae Jeong, Ji Eun Kang, Geun Young Yeom,* Sungkyunkwan University (SKKU), Republic of Korea

EM-MoP-3 Plasma-Assisted Defect Engineering of MoS_2 for Controlled N-Type Doping and Phase Transition, ***Ga-Hee Oh (Graduate Student),*** *Sun Jae Jeong, Ji Eun Kang, Geun Young Yeom,* Sungkyunkwan University (SKKU), Republic of Korea

EM-MoP-4 Fabrication of p-type Al-doped SnO_x Thin Films via Supercycle ALD using Sn4+-based Precursor, ***Suhyeon Park (Graduate Student),*** *Jiseop Byeon, Minjae Kwon,* Kyungpook National University, Republic of Korea; *Roy Byung Kyu Chung,* Kyungpook National University

EM-MoP-5 Molecular Layer Deposited Hf-Based Hybrid Photoresists for Dual-Tone EUV Lithography, ***Thi Thu Huong Chu,*** *Dan N. Le, Minki Choe, Dushyant M. Narayan, Minjong Lee, Soham Shirodkar,* University of Texas at Dallas; *Nikhil Tiwale, Chang-Yong Nam,* Brookhaven National Laboratory; *Jiyoung Kim,* University of Texas at Dallas

EM-MoP-6 Deterministic Resistive Switching via Atomic-Layer Control of 2D WS_2 and Confined Ag Electrodes*,* ***Sihoon Son****, Taesung Kim, Hyunbin Choi, Geonwook Kim,* Sungkyunkwan University (SKKU), Republic of Korea

EM-MoP-7 BEOL Compatible Direct Growth of MoS_2 for Cu free Hybrid Bonding*,* ***Hyunbin Choi (Graduate Student)****,* Department of Semiconductor Convergence Engineering, Sungkyunkwan University, Republic of Korea*; Sihoon Son,* SKKU Advanced Institute of Nanotechnology (SAINT), Sungkyunkwan University, Republic of Korea*; Geonwook Kim, Taesung Kim,* School of Mechanical Engineering, Sungkyunkwan University (SKKU), Republic of Korea

EM-MoP-8 Monolithic 3D Artificial Intelligence Hardware Using four-Tier Vertically Integrated IGZO-Based HZO Ferroelectric Transistors*,* ***Geonwook Kim (Graduate Student)****, Sihoon Son, Hyunbin Choi, Taesung kim,* Sungkyunkwan University (SKKU), Republic of Korea

EM-MoP-9 Annealing-Induced Structural Evolution and Crystallization Behavior of $CuNb_2O_6$*, Deug Hyun Nam,* Korea institute of industrial Technology, Republic of Korea*; Chan Woong Na,* Korea Institute of industrial technology, Republic of Korea*;* ***Yoon Myung****,* Korea Institute of Industrial Technology, Republic of Korea

EM-MoP-10 Bias-Modulated ALD of Zinc Oxide*,* ***Jessica Jones****,* Argonne National Laboratory, USA*; Shi Li,* Argonne National Laboratory*; Rajeev Assary, Jeffrey Elam,* Argonne National Laboratory, USA

EM-MoP-11 Plasma-Enhanced Atomic Layer Deposition of Ferroelectric Aluminum Nitride*,* ***Nicholas Strnad****,* US Army Research Laboratory*; Gilbert B. Rayner Jr., Noel O'Toole,* The Kurt J. Lesker Company*; Nastazia Moshirfatemi,* General Technical Services, LLC*; Daniel Drury, Brendan Hanrahan,* US Army Research Laboratory*; Glen Fox,* Fox Materials Consulting, LLC*; Jeffrey Pulskamp,* US Army Research Laboratory

EM-MoP-12 Thermal Atomic Layer Deposition and Post-Deposition Annealing of Molybdenum Oxide and Sulfide Thin Films*, Wesley Jen,* ***Nolan Olaso (Graduate Student)****, Icelene Leong, Steven M. Hues, Elton Graugnard,* Micron School of Materials Science and Engineering, Boise State University

EM-MoP-13 Phase Complexity in Two-Dimensional Iron Sulfide on Au(111)*,* ***Alessandro Baraldi****,* University of Trieste, Italy

EM-MoP-14 Research on New-material Screening Methods toward the Development of Chemical-reaction-based Surface-roughness Reduction Processes*,* ***Taiki Kato****, Hirokazu Ueda, Mitsuhiro Tachibana,* Tokyo Electron Ltd., Japan*; Peter Ventzek,* Tokyo Electron Ltd.

EM-MoP-15 Molecular Layer Deposition of Metalcones Using Salicylaldehyde as an Organic Precursor*,* ***Henry Yu-Jun Tang (Graduate Student)****, Hao-Wei Chan, Bo-Yuan Gu, Zhen-Rou Chang, Fang-Yu Lin, Yi-Jung Liao, Feng-Yu Tsai,* National Taiwan University, Taiwan

EM-MoP-16 The Effect of Remote Ar Plasmas on the Crystalline Structure of VO_2*, Peter Litwin,* U.S. Naval Research Laboratory*; Neeraj Nepal,* US Naval Research Laboratory*; Andrew Lang,* U.S. Naval Research Laboratory*; David Boris,* US Naval Research Laboratory*; Michael Johnson,* Naval Research Laboratory, USA*; Scott Walton,* US Naval Research Laboratory*;* ***Virginia Wheeler****,* U.S. Naval Research Laboratory

EM-MoP-17 Vapor Phase Infiltration of Metal Oxides into Polymeric Water Treatment Membranes*, Jiaman Wang, Daewon Kim, Soobin Cho,* ***Bezawit Getachew****,* Rice University

EM-MoP-18 Tunable Phase Change Behavior of VO_2 Thin Films Grown by Atomic Layer Deposition*,* ***Jeremy Bairan Espano****, Joe Klesko,* Sandia National Laboratories

EM-MoP-19 Scalable and Controllable Deposition of Extrinsically Doped P-Type MoS_2 via Thermal Atomic Layer Deposition*,* ***Sungjoon Kim****, Jeffrey Elam,* Argonne National Laboratory

EM-MoP-20 Mechanistic Transformation Pathway to Continuous and Impurity-Free Tellurium Films*,* ***Seung Ho Ryu (Graduate Student)****, Seungsu Kim, Jihoon Jeon, Gwang Min Park, Seong Keun Kim,* Korea University, Republic of Korea

Tuesday Morning, June 30, 2026

	Room HB Plant Ballroom	
8:00am	**AF1-TuM-1** Development in Thermal ALD Chemistry since 2010, ***Markku Leskelä***, University of Helsinki, Finland; *Georgi Popov,* ASM Microchemistry Ltd., Finland; *Miika Mattinen, Mikko Ritala,* University of Helsinki, Finland	**ALD Fundamentals: Growth and Characterization** **Session AF1-TuM** **ALD Precursor Design II** **Moderators:** **Seán Barry**, Carleton University, Canada, **Charles H. Winter**, Wayne State University
8:15am	**AF1-TuM-2** Designing Stable Organosilane Precursors for High Quality Silicon Oxide, ***Taylor Hayes***, *Anjli Patel, Matthew MacDonald, Manchao Xiao, Haripin Chandra,* EMD Electronics, The Electronics business of Merck KGaA, Darmstadt, Germany	
8:30am	**AF1-TuM-3** Development of Novel Liquid Zr Precursors with Excellent Thermal Stability for High-Temperature ALD Processes in Next-Generation DRAM Capacitors, ***Taeyoung Lee***, *Sunyoung Baik, Sungjun Ji, Shinbeom Kim, Woongjin Choi, Kunhee Kim, Yiun Park, Sangbum Han,* EGTM Co., Ltd. R&D Center, Republic of Korea	
8:45am	**AF1-TuM-4** A New Zinc Amidinate Precursor for Thermal and Plasma-Enhanced ALD of ZnO, ***Pierre-Alexandre Escarcega (Graduate Student)***, *Jean-Pierre Glauber, Lars Giebeler, Harish Parala, Anjana Devi,* IFW Dresden, Germany	
9:00am	**AF1-TuM-5** Amidates and Dimethylaminopropyl Groups as Innovative Ligands: New Opportunities for Ru Precursors, ***Jorit Obenlüneschloß***, Leibniz Institute, IFW Dresden, Germany; *Niklas Huster,* Ruhr University Bochum, Germany; *Harish Parala,* Leibniz Institute, IFW Dresden, Germany; *Michael Gock, Michael Unkrig-Bau, Detlef Gaiser,* Heraeus Precious Metals GmbH & Co. KG, Germany; *Anjana Devi,* Leibniz Institute, IFW Dresden, Germany	
9:15am	**AF1-TuM-6** Functional Precursor-Driven High-k Atomic Layer Deposition with Improved Throughput and Dielectric Performance, ***Min Chan Kim (Graduate Student)***, *Seong A Shin, Hae Lin Yang, Jin-Seong Park,* Hanyang University, Korea	
9:30am	**INVITED: AF1-TuM-7** From Facile Routes for Mid-Valent Molecular Synthons to Vapor Phase Growth of Molybdenum-Based Thin Films, ***Titel Jurca***, University of Central Florida	
10:00am	**BREAK & EXHIBITS**	
10:45am	**INVITED: AF2-TuM-12** ALD on Particulate Materials: Applications & Scale-Up, ***J. Ruud van Ommen***, Delft University of Technology, Netherlands	**ALD Fundamentals: Growth and Characterization** **Session AF2-TuM** **Powder ALD** **Moderators:** **Arrelaine Dameron**, Forge Nano, **Benjamin Greenberg**, Naval Research Laboratory
11:15am	**AF2-TuM-14** Temperature-Variation Atomic Layer Deposition: A Strategy for Tuning Particle Size and Dispersion toward High-Performance Catalysts, *Manh Duc Dang, Dieu Minh Nguyen,* Phenikaa University, Viet Nam; *Sri Sharath Kulkarni, J. Ruud van Ommen,* Delft University of Technology, Netherlands; ***Hao Van Bui***, Phenikaa University, Viet Nam	
11:30am	**AF2-TuM-15** Achieving Conformality in Fluidized Bed Atomic Layer Deposition on Ultrafine Cohesive Nanopowders, ***Austin Cendejas***, *Benjamin Greenberg, Kevin Anderson, James Wollmershauser, Boris Feygelson,* Naval Research Laboratory	
11:45am	**AF2-TuM-16** Atomic Layer DepositionEnabled Control of Densification and Grain Size in ZnO Ceramics, ***Eric Bissell (Graduate Student)***, *Anna Zachariou, Jacob Furst, Steve Lass,* University of Central Florida; *Nicholas G. Rudawski,* University of Florida, Gainesville; *Fernando Uribe-Romo, Titel Jurca, Kathleen Richardson, Romain Gaume, Parag Banerjee,* University of Central Florida	

Tuesday Morning, June 30, 2026

	Room Tampa Bay Salons 1-2	
8:00am	**EM1-TuM-1 ALD Outstanding Presentation Award Finalist**: The Impacts of Organic Structures on the Sensitivity of Molecular Atomic Layer Deposited EUV Resist Thin Films, *Thi Thu Huong Chu, Dan Le,* University of Texas at Dallas*; Markus Langer, Gregrey Swieca,* University of Mississippi*; Doo San Kim, Minjong Lee, Dushyant Narayan,* University of Texas at Dallas*; Nikhil Tiwale,* Brookhaven National Laboratory*; Jean-Francois Veyan,* University of Texas at Dallas*; Michael Eller,* University of Mississippi*; Chang-Yong Nam,* Brookhaven National Laboratory*;* ***Jiyoung Kim,*** University of Texas at Dallas	**Emerging Materials and Processes** **Session EM1-TuM** **Molecular Layer Deposition/Hybrid ALD** **Moderators:** **Haripin Chandra**, The Electronics business of Merck KGaA Darmstadt, Germany, **Keith Wong**, Applied Materials
8:30am	**EM1-TuM-3** *All-Dry-Processed* Zn-Based Inorganic–Organic Hybrid Photoresists for EUV Lithography, ***Thi Thu Huong Chu****, Dan N. Le, Dushyant M. Narayan, Minjong Lee, Doo San Kim,* University of Texas at Dallas*; Nikhil Tiwale, Chang-Yong Nam,* Brookhaven National Laboratory*; Jiyoung Kim,* University of Texas at Dallas	
8:45am	**EM1-TuM-4** Polyurea Molecular Layer Deposition using Low Melting Point Precursors for Use in Biosensor Design, *Jay Werner, Seancarlos Gonzalez,* ***David Bergsman****,* University of Washington	
9:00am	**EM1-TuM-5** Conformality of Molecular Layer Deposited Polyurea for Sidewall Passivation, ***Wallis Scholl (Graduate Student)****,* Colorado School of Mines*; Thorsten Lill, Mingmei Wang, Wenyu Zhang, Louis Kim, Harmeet Singh,* Lam Research Corporation*; Sumit Agarwal,* Colorado School of Mines	
9:15am	**EM1-TuM-6** Molecular Layer Deposition of Polyamide Membranes for Selective Water and Ion Transport, ***Ruoke Cai (Graduate Student)****,* 21 Kiryat Technion, Israel*; Brian Welch, Aleksandr Ershov, Jay P. Singh,* Technion Israel Institute of Technology, Israel*; Jeremiah W. Woodcock, Christopher Stafford,* NIST*; Kirti Sankhala,* Indian Institute of Technology Jodhpur, India*; Guy Ramon, Razi Epsztein, Viatcheslav Freger, Tamar Segal-Peretz,* Technion Israel Institute of Technology, Israel	
9:30am	**EM1-TuM-7** Cyclic Siloxane Precursor for Molecular Layer Deposition of Polymer Networks, ***Sanne Deijkers****, Peter Gordon, Seán Barry,* Carleton University, Canada	
9:45am	**EM1-TuM-8** Extreme Ultraviolet and Electron Beam-Induced Decarboxylation of Hybrid MLD Aluminum Oxalate Photoresists, ***Long Viet Than (Graduate Student)****,* Stanford University*; Miso Kim,* Hongik University, Republic of Korea*; Oleg Kostko,* Lawrence Berkeley National Laboratory (LBNL)*; Bonggeun Shong,* Hongik University, Republic of Korea*; Stacey F Bent,* Stanford University	
10:00am	**BREAK & EXHIBITS**	
10:45am		
11:00am	**EM2-TuM-13** Vapor Phase Infiltration as a Route to Precise Atom Number Cluster Synthesis and Cation Substitution, *Kihoon Kim, Nuwanthaka Jayaweera, Taylor Harville, Cong Liu,* ***Alex Martinson****,* Argonne National Laboratory	**Emerging Materials and Processes** **Session EM2-TuM** **Vapor Phase Infiltration** **Moderators:** **Jiyoung Kim**, University of Texas at Dallas, **Il-Kwon Oh**, Ajou University, Republic of Korea
11:15am	**EM2-TuM-14** Activated Direct Reaction between Carbonyl Groups in Poly(Methyl Methacrylate) (PMMA) and Diethylzinc (DEZ) During Vapor-Phase Infiltration, *Nikhil Tiwale,* Brookhaven National Laboratory*; Ashwanth Subramanian, Sayantani Sikder,* Stony Brook University*; Xiaohui Qu, Guillaume Freychet,* Brookhaven National Laboratory*; Eliot Gann, Cherno Jaye,* National Institute of Standard and Technology*; Kim Kisslinger, Jorge Anibal Boscoboinik,* ***Chang-Yong Nam****,* Brookhaven National Laboratory	
11:30am	**EM2-TuM-15** Atomic Layer Processes for UV-Stable Polymers: Synergistic Effects of Infiltration and Deposition of ZnO*,* ***Gil Menasherov****, Nidaa S. Herzallh, Tamar Segal-Peretz,* Technion Israel Institute of Technology, Israel	
11:45am	**EM2-TuM-16** Vapor Phase Infiltration of ZnO Nanocrystals into Biodegradable Fibers for Dermatologic Applications, ***Martina Rihova****,* CEITEC Brno University of Technology, Czechia*; Susan Azpeitia,* CIC nanoGUNE, Spain*; Denisa Fenclova, Zbynek Heger,* Mendel University in Brno, Czechia*; Mato Knez,* CIC nanoGUNE; IKERBASQUE, Basque Foundation for Science, Spain*; Jan Macak,* CEMNAT, University of Pardubice; CEITEC Brno University of Technology, Czechia	

Tuesday Morning, June 30, 2026

	Room Tampa Bay Salons 3-4	
8:00am	**INVITED: ALE1-TuM-1** A Dry-Wet Quasi-ALE Approach for Transition Metals: Tungsten as a Model System, ***Cinzia Chan (Graduate Student)***, KU Leuven and Imec, Italy; *Jean-Francois de Marneffe,* IMEC Belgium; *Christopher Gort,* TU Darmstadt, Germany; *Jill Serron,* IMEC Belgium; *Marta Agati,* IMEC Belgium, Italy; *Felix Seidel,* IMEC Belgium; *Jan P. Hofmann,* TU Darmstadt, Germany; *Stefan De Gendt,* KU Leuven and Imec, Belgium; *Dennis H. van Dorp,* IMEC Belgium, Netherlands	**Atomic Layer Etching** **Session ALE1-TuM** **Wet ALE and ALE Modeling** **Moderators:** **Jeffrey W. Elam**, Argonne National Laboratory, **Geun Young Yeom**, Sungkyunkwan University, Republic of Korea
8:30am	**ALE1-TuM-3** Smooth Post-etch Morphology in Ligand Assisted Molybdenum Wet Atomic Layer Etch, ***Tulashi Dahal***, *Trace Hurd, Antonio Rotondaro,* Tokyo Electron America Inc.,	
8:45am	**ALE1-TuM-4** The Effect of the Angle of Incidence of Ions on Atomic Layer Etching, ***Joseph Vella***, TEL Technology Center America; *David Graves,* Princeton University	
9:00am	**ALE1-TuM-5** Ab Initio Modeling of Atomistic Diffusion of Halogen Species at the Etching Front, ***Sangheon Lee***, Ewha Womans University, Republic of Korea	
9:15am	**ALE1-TuM-6** Quantum Chemistry Calculation for Predicting Salt By-Products in ALE Processes, ***Yuri Barsukov***, Lam Research Corp.; *Mingmei Wang, Thorsten Lill,* Lam Research Corporation	
9:30am	**ALE1-TuM-7** Influence of Oxide Phase and Surface Facet on Atomic Layer Etching of High-k Metal Oxides, ***Michael Nolan***, Tyndall Institute, Ireland; *Rita Mullins,* Tyndall National Institute, University College Cork, Ireland	
9:45am	**ALE1-TuM-8** Modeling SiO_2 Atomic Layer Etching Using HF/NH_3 Co-Dosing, ***Philipp Haslhofer (Graduate Student)***, *Tobias Reiter,* TU Wien, Austria; *Alexander Toifl, Andreas Hössinger,* Silvaco Europe Ltd., UK; *Lado Filipovic,* TU Wien, Austria	
10:00am	**BREAK & EXHIBITS**	
10:45am	**INVITED: ALE2-TuM-12** In Situ ALE/ALD Surface Engineering for Reduced Dielectric Loss in Superconducting Quantum Circuits, ***Neha Mahuli***, Amazon	**Atomic Layer Etching** **Session ALE2-TuM** **Thermal and Gas-Phase ALE** **Moderators:** **Anil Mane**, Argonne National Laboratory, **Fred Roozeboom**, University of Twente, Netherlands
11:15am	**ALE2-TuM-14** Fluorine-Free Thermal Atomic Layer Etching of ZrO_2 Using $H_2O/SOCl_2$ Chemistry for Damage-Free Etch-Back of High-k Dielectrics, ***Gyeong Min Jeong (Graduate Student)***, *Jihoon Shin, Jin-Seong Park,* Hanyang University, Republic of Korea	
11:30am	**ALE2-TuM-15** Thermal Atomic Layer Etching by Halogenation and Ligand-Addition Using N-Heterocyclic Carbenes, ***Aziz Abdulagatov***, University of Colorado Boulder; *Charles Dezelah, Matthew Surman,* ASM Microchemistry Ltd., Finland; *Steven George,* University of Colorado Boulder	
11:45am	**ALE2-TuM-16** Influence of Fluorination and Oxygenation Sources on the Thermal Atomic Layer Etching of MoS_2, ***Spencer P. Smith (Graduate Student)***, *Jacob A. Tenorio, Icelene Leong, John D. Hues, Steven M. Hues, Elton Graugnard,* Boise State University	

Tuesday Morning, June 30, 2026

	Room Ybor Salons I-IV	
8:00am	**INVITED: AA1-TuM-1** Molybdenum Deposition Chemistry for Advanced Interconnects, ***Kyle Blakeney***, Lam Research Corporation	**ALD Applications** **Session AA1-TuM** **ALD Interconnect Applications** **Moderators:** **Scott Clendenning**, Intel Corporation, **Jin-Seong Park**, Hanyang University, Republic of Korea
8:30am	**AA1-TuM-3** Thermal Atomic Layer Deposition of Transition Metal Phosphide Thin Films for Interconnects, *John D. Hues,* ***Nolan Olaso (Graduate Student)****, Wesley Jen,* Micron School of Materials Science and Engineering, Boise State University*; Mehedi Hasan Prince, Sadiq Shahriyar Nishat,* Department of Materials Science and Engineering, Rensselaer Polytechnic Institute*; Steven M. Hues,* Micron School of Materials Science and Engineering, Boise State University, Boise*; Daniel Gall,* Department of Materials Science and Engineering, Rensselaer Polytechnic Institute*; Elton Graugnard,* Micron School of Materials Science and Engineering, Boise State University, Boise	
8:45am	**AA1-TuM-4** Low Resistivity Metallic Films by Thermal Atomic Layer Deposition Enabling Next Generation Interconnects, ***Sara Harris***, Forge Nano*; Thomas P. Moffat,* NIST*; Matthew S. Weimer, Dane Lindblad,* Forge Nano*; Daniel Josell,* NIST*; Arreliane Dameron,* Forge Nano	
9:00am	**AA1-TuM-5** Investigating TaN-Doped Ru Film Using ALD and Pulsed CVD Process for Enhanced BEOL Interconnects Performance in Logic Device, ***Juhyeon Lee****, Hyun Cho, Jungmin Lee, Wonhyuk Hong, Hyeonseok Do, Jongkwan Lee, Jihwan Lee, Yoonsuk Kim, Eunji Jung,* Samsung Electronics Co., Republic of Korea	
9:15am	**AA1-TuM-6** Low-Resistivity Ruthenium Thin Films with Enhanced Surface Morphology via High-Temperature 6-Step Atomic Layer Deposition for Advanced Interconnect Applications, ***Dahyeon Park (Graduate Student)****, Jeongha Kim, Soohyun Kim,* Ulsan National Institute of Science and Technology (UNIST), Republic of Korea	
9:30am	**AA1-TuM-7** Atomic Layer Modulation for Compositionally Controlled Ruzno Films as Diffusion Barriers for Cu Interconnects, ***Yeseul Son (Graduate Student)***, Ulsan National Institute of Science and Technology, UNIST, Republic of Korea*; Soo-Hyun Kim,* Ulsan National Instititute of Science and Technology, UNIST, Republic of Korea*; Jeongha Kim, Minwoo Kim, Sang Bok Kim,* Ulsan National Institute of Science and Technology, UNIST, Republic of Korea	
9:45am	**AA1-TuM-8** A 2-step Platinum Atomic Layer Deposition Process for Suppressing Interfacial Oxidation in Advanced Interconnect Applications, ***Jeongha Kim (Graduate Student)****, Yeseul Son, Soo-Hyun Kim,* Ulsan National Institute of Science and Technology, Republic of Korea	
10:00am	**BREAK & EXHIBITS**	
10:45am	**AA2-TuM-12** Sub-5 nm Indium Oxynitride Channel in Top-gated FETs Fabricated by PEALD for High-Performance 3D Transistor, ***Doo San Kim****, Minjong Lee, Soham Shirodkar,* The University of Texas at Dallas*; Min Gyeong Jo,* Hanyang University, Republic of Korea*; Thi Thu Huong Chu, Dushyant Narayan, Dan Le,* The University of Texas at Dallas*; Youngbae Ahn, Ja-Yong Kim, Seung Wook Ryu,* SK hynix, Republic of Korea*; Jiyoung Kim,* The University of Texas at Dallas	**ALD Applications** **Session AA2-TuM** **ALD Dielectric Applications** **Moderators:** **Olasehinde Owoseni**, Intel, **Seung-Yeul Yang**, Samsung, Republic of Korea
11:00am	**AA2-TuM-13** V_{Fb} Control Technique of SiO_2/Dipole/$HfZrO_2$ Stack Structure Using New LaTiO and AlTiO Dipoles, ***Tomomi Sawada****, Toshihide Nabatame, Hiromi Miura, Manami Miyamoto, Takashi Onaya, Kazuhito Tsukagoshi, Naoki Fukata, Wipakorn Jevasuwan,* National Institute for Materials Science (NIMS), Japan*; Shinji Migita,* National Institute of Advanced Industrial Science and Technology (AIST), Japan	
11:15am	**AA2-TuM-14** Low-Temperature High-Pressure Deuterium Annealing for Defect Passivation in ALD-Deposited HfO_2 High-k Film, ***Ji-Yeon Park (Graduate Student)****, Seok-Won Lim, Gi-Beom Park, Chang-Kyun Park, Jin-Seong Park,* Hanyang University, Korea	
11:30am	**AA2-TuM-15** Infiltration of Porous SiOCH Thin Films by High-k Materials: Toward Nanocomposites with Enhanced Dielectric Properties, ***Julie Chaussard (Graduate Student)****, Stéphane Cadot, Marc Veillerot, Hélène Coudert-Alteirac, Nicolas Gauthier, Nicolas Bernier, Chloé Guérin, Aude Lefèvre,* CEA/LETI-University Grenoble Alpes, France*; Patrice Gonon,* Université Grenoble Alpes, CNRS, France*; Vincent Jousseaume,* CEA/LETI-University Grenoble Alpes, France	
11:45am	**AA2-TuM-16** Electrical Characterization of High-k ALD TiO_2 on AlGaN/GaN HEMT Structures, ***Neeraj Nepal****, James G. Champlain, Vikrant J. Gokhale, Peter M Litwin, Brian P Downey, Virginia D Wheeler,* U.S. Naval Research Laboratory	

Tuesday Afternoon, June 30, 2026

	Room HB Plant Ballroom	
1:30pm	**INVITED: AF1-TuA-1** Low Energy Ion Scattering Surface Analysis of ALD Coated Ti-Based Porous Transport Layers, ***Philipp Brüner***, *Thomas Grehl,* IONTOF GmbH, Germany; *Athina Tzavara-Roussi, Rens Kamphorst, Ruud van Ommen,* TU Delft, Netherlands	**ALD Fundamentals: Growth and Characterization Session AF1-TuA** **ALD Metrology/Characterization I** **Moderators:** **Dennis Hausmann**, Lam Research, **Ruud van Ommen**, Delft University of Technology, Netherlands
2:00pm	**AF1-TuA-3** In vacuo LEIS studies on cleaning and functionalizing substrate surfaces for ALD, *Heta-Elisa Nieminen, Johanna Majlund, Marko Vehkamäki, Mykhailo Chundak, Sakari Kettunen, Matti Putkonen,* ***Mikko Ritala***, University of Helsinki, Finland	
2:15pm	**AF1-TuA-4 ALD Outstanding Presentation Award Finalist:** Operando Studies of Nitride ALD Using Ambient Pressure XPS, ***Henrik Pedersen***, Linköpings Universitet, Sweden; *Pamburayi Mpofu, Alaa Malekshahineia, Peggy Bagherzadeh Tabrizi,* Linköping University, Sweden; *Esko Kokkonen,* Max IV Laboratory, Sweden; *Joachim Schnadt,* Lund University, Sweden	
2:45pm	**AF1-TuA-6** In-situ XPS Study of Ozone Oxidation of Aminosilane Adsorption Layers on Alumina, ***Yuki Tsuchiizu (Graduate Student)***, Institute of Fluid Science, Tohoku university, Japan; *Daisuke Ohori,* Institute of Fluid Science, Tohoku University, Japan; *Teruhisa Ohtsuka, Masashi Yamazaki, Hiroshi Arimoto,* National Institute of Advanced Industrial Science and Technology (AIST), Japan; *Kazuhiko Endo,* Institute of Fluid Science, Tohoku university, Japan	
3:00pm	**AF1-TuA-7** In situ and Operando investigation of MLD of Hafnicone Using Ambient Pressure-XPS, ***Hariprasad Parayil Kalappurackal***, Lund University, Sweden	
3:15pm	**AF1-TuA-8** Pyroelectric Calorimetry of MgO and ZrO_2: Untangling Thermodynamics, Kinetics, and Precursor Transport, ***Ashley Bielinski***, *Cong Liu, Alex Martinson,* Argonne National Laboratory	
3:30pm	**BREAK & EXHIBITS**	
4:00pm	**AF2-TuA-11 ALD Outstanding Presentation Award Finalist:** Where Does the Reaction Happen? Concurrently Monitoring Ultrafast Surface and Gas-Phase Dynamics in Solid–Gas Interfacial Reactions, *Keith Blackman, Eric Segrest, Aakash Gupta, S. Novia Berriel, Parag Banerjee,* ***Mihai E. Vaida***, University of Central Florida	**ALD Fundamentals: Growth and Characterization Session AF2-TuA** **ALD Metrology/Characterization II** **Moderators:** **Henrik Pedersen**, Linköping University, Sweden, **Angel Yanguas-Gil**, Argonne National Lab
4:30pm	**AF2-TuA-13** Dual-Box Model for In-Situ Spectroscopic Ellipsometry Data Analysis in Plasma Enhanced ALD Growth Processes, *Ufuk Kilic, Yousra Traouli, Mathias Schubert,* ***Eva Schubert***, University of Nebraska - Lincoln	
4:45pm	**AF2-TuA-14** Imaging Ellipsometry with LHAR Test Structure for Characterizing ALD Conformality, ***Hiroshi Nishizato (Graduate Student)***, Kumamoto University, Japan; *Yugo Nakaya,* HORIBA STEC, Co., Ltd., Japan; *Lianhua Jin,* University of Yamanashi, Japan; *Takeshi Momose,* Kumamoto University, Japan	
5:00pm	**AF2-TuA-15** Surface Chemistry Investigation for ALD of SiOCH Using in-Situ Reflection Absorption Infrared Spectroscopy (RAIRS), ***Sjoerd van der Werf (Graduate Student)***, Eindhoven University of Technology, Netherlands	

Tuesday Afternoon, June 30, 2026

	Room Tampa Bay Salons 1-2	
1:30pm	**EM1-TuA-1** Real-time Optimization of Gallium Oxide and Aluminum Gallium Oxide Thin Film Growth via Plasma-Enhanced Atomic Layer Deposition Using In-situ Spectroscopic Ellipsometry, ***Yousra Traouli (Graduate Student)***, *Ufuk Kilic, Mathias Schubert, Eva Schubert,* University of Nebraska - Lincoln	**Emerging Materials and Processes** **Session EM1-TuA** **Next Generation ALD Semiconductors** **Moderators:** **Neeraj Nepal**, U.S. Naval Research Laboratory, **Junjie Zhao**, Zhejiang University, China
1:45pm	**EM1-TuA-2** Conductive Si-Doped Ga$_2$O$_3$ via Thermal ALD Followed by Thermal Annealing, ***Benjamin Greenberg***, U.S. Naval Research Laboratory; *Katie Gann,* National Research Council Fellow Residing at U.S. Naval Research Laboratory; *Boris Feigelson, Alan Jacobs, Jeffrey Woodward, Daniel Pennachio, Emma Rocco,* U.S. Naval Research Laboratory	
2:00pm	**INVITED: EM1-TuA-3** Low-Temperature Self-Limiting Growth of Crystalline III-Nitride Films: How Far Can We Go?, ***Necmi Biyikli***, University of Connecticut	
2:30pm	**EM1-TuA-5** Piezoelectric and ferroelectric Al$_{1-x}$Sc$_x$N by plasma-enhanced ALD, ***Gilbert B. Rayner Jr.***, *Noel O'Toole, Nathaniel Nelson,* Kurt J. Lesker Company; *Bangzhi Liu,* The Pennsylvania State University; *Jeffrey Shallenberger,* The pennsylvania State University; *Gregory Muha, Piush Behera, Suraj Cheema,* Massachusetts Institute of Technology; *Blaine Johs,* Film Sense; *Nastazia Moshirfatemi,* General Technical Services, LLC; *Daniel Drury, Brendan M. Hanrahan,* Army Research Directorate, DEVCOM Army Research Laboratory; *Glen R. Fox,* Fox Materials Consulting, LLC; *Nicholas A. Strnad,* Army Research Directorate, DEVCOM Army Research Laboratory	
2:45pm	**EM1-TuA-6** Low Temperature PEALD of Epitaxial AlN Without Atomic Layer Annealing, ***Jeffrey Woodward***, *David Boris, Michael Johnson, Daniel Pennachio,* U.S. Naval Research Laboratory; *Michael Mathews,* NRC postdoctoral fellow residing at U.S. Naval Research Laboratory; *Emma Rocco,* U.S. Naval Research Laboratory; *Katie Gann,* NRC postdoctoral fellow residing at U.S. Naval Research Laboratory; *Ben Sekely,* NRC postdoctoral fellow stationed at U.S. Naval Research Laboratory; *Tatyana Feygelson, Jonathan Levine-Miles,* U.S. Naval Research Laboratory; *Jennifer Hite,* University of Florida; *Michael Mastro,* U.S. Naval Research Laboratory; *Henry Chuang,* Boston University; *Virginia Wheeler, Scott Walton,* U.S. Naval Research Laboratory	
3:00pm	**EM1-TuA-7** Enabling Blister-Free, Crystalline AlN Thin Films on 200 mm Si Wafers by PE-ALD Using a Microwave Electron Cyclotron Resonance Plasma Source, ***Shiv Bhudia (Graduate Student)***, TUM School of Natural Sciences, Technische Universität München; Silicon Austria Labs GmbH, Austria; *Tai Nguyen,* Silicon Austria Labs GmbH, Austria; *Dominik Hartmann,* Evatec AG, Switzerland; *Marco Deluca, Julian Pilz,* Silicon Austria Labs GmbH, Austria	
3:15pm		
3:30pm	**BREAK & EXHIBITS**	
4:00pm	**EM2-TuA-11** ALD Synthesis of Transition Metal Phosphides, ***Raul Zazpe***, *Jhonatan Rodriguez-Pereira, Jaroslav Charvot, Milan Klikar, Filip Bures, Jan Macak,* University of Pardubice, Czechia	**Emerging Materials and Processes** **Session EM2-TuA** **ALD for 2D Materials** **Moderators:** **Hanmei Choi**, Samsung Electronics, Republic of Korea, **Christophe Detavernier**, Ghent University, Belgium
4:15pm	**EM2-TuA-12** A Novel Chemistry toward the Atomic Layer Deposition of MoS$_2$ thin films for Heterojunction Photocatalysis, ***Annmary Anto (Graduate Student)***, *Alexey Ganzhinov, Anjan Deb, Kenichiro Mizohata, Mykhailo Chundak, Mikko Ritala, Matti Putkonen,* University of Helsinki, Finland	
4:30pm	**EM2-TuA-13** The Role of Plasma Conditions on the Properties of MoS$_2$ Films Grown by PEALD Using H$_2$ plasma and Di-tert-butyl Disulfide, ***Paula Arellano (Graduate Student)***, University of Michigan, Ann Arbor; *Ian E. Campbell,* IMEC; *Aashi Gupta, Pavlina Metaxa, Vasiliki Nousia, Ray Duffy,* Tyndall National Institute, University College Cork, Ireland; *Ageeth A. Bol,* University of Michigan, Ann Arbor	
4:45pm	**EM2-TuA-14** ALD-Induced Doping Effect in 2D MoS$_2$ FETs: Roles of Oxidant Chemistry and MoS$_2$ Quality, ***Minjong Lee (Graduate Student)***, *Thi Thu Huong Chu, Inhong Hwang, Doo San Kim, Dushyant Narayan, Dan Le, Soham Shirodkar, Jiyoung Kim,* University of Texas at Dallas	
5:00pm	**EM2-TuA-15** Processing MoS$_2$ and WS$_2$ using ALD and Patterning on 8-Inch Wafers, ***Nils Boysen***, *Leon Doman, Rahel-Manuela Maas, Anjana Devi,* Fraunhofer IMS, Germany	
5:15pm	**EM2-TuA-16** Exploiting Atomic Layer Deposition for Contacts to Semiconductors, ***Suzanne Mohney***, *Chan-Wen Chiu, M. Saifur Rahman, Ryan Wang, Sree Palaniappan,* Pennsylvania State University	

Tuesday Afternoon, June 30, 2026

	Room Tampa Bay Salons 3-4	
1:30pm	**INVITED: ALE1-TuA-1** Etch Characteristics of Iridium with Atomic Layer Etching Technique*, **Wendy Yan**,* IBM Research	**Atomic Layer Etching** **Session ALE1-TuA** **Plasma and Energy-enhanced ALE II** **Moderators:** **Harm C.M. Knoops**, Oxford Instruments Plasma Technology, Netherlands, **Nicolas Posséme**, CEA-Leti, France
2:00pm	**ALE1-TuA-3** Selectivity, Surface Roughness and Residue of Plasma-Based Atomic Layer Etching of Metals and Dielectric Materials for Semiconductor Devices*, **Heeyeop CHAE**,* Sungkyunkwan University (SKKU), Republic of Korea	
2:15pm	**ALE1-TuA-4** Directional Atomic Layer Etching of MgO-Doped Lithium Niobate Using Br-Based Plasma*, **Ivy Chen (Graduate Student)**,* California Institute of Technology*; Frank Greer,* Jet Propulsion Laboratory (NASA/JPL)*; Austin Minnich,* California Institute of Technology	
2:30pm	**ALE1-TuA-5** Examining AlGaN Atomic Layer Etch per Cycle Uniformity and Repeatability by Cross-Referencing In-Situ Etch Depth Monitoring with Electrical Characterisation*, **Ben Jones**, Matthew Loveday, Sung-Jin Cho, Andrew Newton,* Oxford Instruments Plasma Technology, UK	
2:45pm	**INVITED: ALE1-TuA-6** Atomic Layer Etching Techniques for Sidewall Surface Damage Removal in GaN-Based LEDs*, Chan Ho Kim, Sung Hyun Kim, Young Woo Jeon, Jong Woo Hong, Jong Soon Park, **Geun Young Yeom**,* Sungkyunkwan University, Republic of Korea	
3:15pm		
3:30pm	**BREAK & EXHIBITS**	
4:00pm	**INVITED: ALE2-TuA-11** Self-Limiting Oxidation State Control of MoO_x Thin Films Using Integrated ALD and ALE*, **Woojin Jeon**, Chaeyeong Hwang,* Kyung Hee University, Republic of Korea*; Christophe Vallée,* University at Albany-SUNY	**Atomic Layer Etching** **Session ALE2-TuA** **ALD+ALE and Selective ALE** **Moderators:** **Jean-François de Marneffe**, IMEC, Belgium, **Austin Minnich**, Caltech
4:30pm	**ALE2-TuA-13** Selective Etching of Molybdenum and Tungsten Oxides Based on Their Oxidation States Using $SOCl_2$ and SO_2Cl_2*, **Troy Colleran (Graduate Student)**,* University of Colorado at Boulder	
4:45pm	**ALE2-TuA-14** High-Density Silicon Lines Patterning with Atomic Layer Etch Pitch Splitting (APS™) Technology*, **Amin Karimi**, Robin Athle, Reza Jafari Jam, Alfred Ahlström Andersson, Svetlana Ivanova, Kishwar Sultana, Asif Muhammad, Mostafa Torbati, Hesamedin Safavi,* AlixLabs A.B., Sweden*; Fred Roozeboom,* University of Twente, Netherlands*; Dmitry Suyatin, Jonas Sundqvist,* AlixLabs A.B., Sweden	
5:00pm	**ALE2-TuA-15** Direct Atomic Layer Processing (DALP®): Extending ALD and ALE to Spatially Localized Multi-Material Integration*, **Mira Baraket**,* ATLANT 3D Nanosystems, Denmark	
5:15pm	**ALE2-TuA-16** Atomic Layer Etching of Titanium Nitride with O_3 and $NbCl_5$*, **Juha Ojala (Graduate Student)**, Mykhailo Chundak, Anton Vihervaara, Mikko Ritala,* University of Helsinki, Finland	

Tuesday Afternoon, June 30, 2026

	Room Ybor Salons I-IV	
1:30pm	**AA1-TuA-1** Copper's Cosy Blanket: A Comparison of Non-Selective and Area-Selective ZnO deposition on Catalyst Stability, ***Kalani Ostermeijer***, *Ruud van Ommen, Evgeny Pidko,* Delft University of Technology, Netherlands	**ALD Applications** **Session AA1-TuA** **ALD for Catalysts and Fuel Cells** **Moderators:** **Hao Van Bui**, Phenikaa University, Viet Nam, **Nathanaelle Schneider**, CNRS-IPVF, France
1:45pm	**AA1-TuA-2** Effect of Buffer Layers on Cobalt-Based Thin-Film Catalysts for Fischer–Tropsch Synthesis, ***Muhammad Hamid Raza***, *Avela Kunene,* Helmholtz-Zentrum Berlin (HZB), Germany; *Lucia M. Toscani,* Department of Interface Design, HZB, Germany; *Alexander Steigert,* Helmholtz-Zentrum Berlin (HZB), Germany; *Athanasios Skaltsogiannis,* Department of Interface Design, HZB, Germany; *Ali Shan Malik,* Helmholtz-Zentrum Berlin (HZB), Germany; *Catalina E. Jiménez,* Department Interface Design, HZB, Germany; *Marcus Bär,* Department of Interface Design and Energy Materials In-Situ Laboratory Berlin (EMIL), HZB, Berlin. Helmholtz-Institute Erlangen-Nürnberg for Renewable Energy (HI ERN), Berlin. Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen., Germany; *Rutger Schlatmann, Daniel Amkreutz,* Helmholtz-Zentrum Berlin (HZB), Germany	
2:00pm	**AA1-TuA-3** Preparing Well-defined CO_2-Conversion Catalysts using Atomic Layer Deposition, ***Doga Özerk (Graduate Student)***, *Evgeny Pidko, J. Ruud van Ommen,* TU Delft, Netherlands	
2:15pm	**AA1-TuA-4** Palladium Nanostructures by ALD for Electrocatalysis: From Single Atoms to Nanoparticles, *Raul Zazpe, Jhonatan Rodriguez-Pereira,* ***Jan Macak***, Uni Pardubice, Czechia	
2:30pm	**AA1-TuA-5** Controlling the Wettability and Durability of PEM Electrolysers with Plasma-Enhanced ALD of Niobium Nitride, ***Athina Tzavara-Roussi (Graduate Student)***, *Volkert van Steijn, Ruud van Ommen,* Delft University of Technology, Netherlands	
2:45pm	**AA1-TuA-6** ALD Imparts Efficiency Improvements in Proton Exchange Membrane Water Electrolyzers, ***Arrelaine Dameron***, *Sara Harris, Dane Lindblad,* Forge Nano; *Alexandra Oliveira,* Mott Corporation; *JingJing Jin, Lucas Cohen, Zhexi Lin,* Columbia University; *Alexander Papandrew,* Mott Corporation; *Daniel Esposito,* Columbia University; *Matthew Weimer,* Forge Nano	
3:00pm	**AA1-TuA-7** Atomic Layer Deposition of Tantalum Oxide for enhanced stability of CNTs during Photoelectrochemical Water Splitting, ***Muhammad Awais Khan (Graduate Student)***, Luxembourg Institute of Science and Technology (LIST), Luxembourg; *Diego Martinez Martinez,* luxembourg Institute of Science and Technology (LIST), Luxembourg; *Amr Nada, Nicolas Boscher,* Luxembourg Institute of Science and Technology (LIST), Luxembourg	
3:15pm	**AA1-TuA-8** Atomic Layer Deposited AZO on Lithium Niobate: A Scalable Platform for RF Energy Harvesting and Frequency Mixing, ***Hamed Atashbar (Graduate Student)***, University of Central Fllorida; *Hakhamanesh Mansoorzare, Terrick McNealy-James, Parag Banerjee, Reza Abdolvand,* University of Central Florida	
3:30pm	**BREAK & EXHIBITS**	
4:00pm	**INVITED: AA2-TuA-11** Fabricating Artificial Electrode Electrolyte Interfaces for Lithium Batteries, *Sara Pakseresht, Princess Stephanie Llanos, Filipp Obrezkov, Ville Mikkulainen,* ***Tanja Kallio***, Aalto University, Finland	**ALD Applications** **Session AA2-TuA** **ALD for Batteries and Energy Storage** **Moderators:** **Rong Chen**, Huazhong University of Science and Technology, China, **Neil Dasgupta**, University of Michigan
4:30pm	**AA2-TuA-13** Beyond Conventional ALD: Investigating Standalone Chemical Vapor Transformation Precursors for Battery Cathode Functionalization, ***Donghyeon Kang***, *Jeffrey Elam,* Argonne National Laboratory	
4:45pm	**AA2-TuA-14** Tackling Issues of Transition Metal Oxide Cathodes Using Sulfide Coatings, ***Xiangbo Meng***, *Kevin Velasquez Carballo, Taohedul Islam,* University of Arkansas	
5:00pm	**AA2-TuA-15** Atomic Layer Deposition Tuned Surface Chemistry for Advanced Lithium and Manganese Rich Cathodes, ***Jahnavi Manikantan Sudharma (Graduate Student)***, *Kyobin Park, Sungjoon Kim, Subhadip Mallick, Jason Croy, Donghyeon Kang, Jeffrey Elam,* Argonne National Laboratory, USA	
5:15pm	**AA2-TuA-16** Comparing Al-phosphate ALD on $LiMn_2O_4$ and SiO_2, ***Lowie Henderick***, *Christophe Detavernier, Jolien Dendooven,* Ghent University, Belgium	
5:30pm	**AA2-TuA-17** Unravelling the Mechanism of Al_2O_3 Atomic Layer Deposition on Li_6PS_5Cl for All-Solid-State Batteries, *Kyobin Park, Donghyeon Kang, Taewoo Kim, Vepa Rozyyev, Anil Mane, Hacksung Kim, Francisco Vargas, Zachary Hood, Peter Zapol, Justin Connell,* ***Jeffrey Elam***, Argonne National Laboratory	

ALD Applications
Room Tampa Bay Salons 5-9 - Session AA-TuP
ALD Applications Poster Session
5:45 – 7:00pm

AA-TuP-1 Improving the Thermoelectric Properties of ALD Synthesized Thermoelectric Thin Films $Sb_2Te_3$by Cr+ and Ar+Ion Implantation, ***Sadiya Tahsin (Graduate Student)****, Helmut Baumgart,* Old Dominion University

AA-TuP-2 A New Sn-based Precursor as Dry Photoresist for Extreme Ultraviolet Lithography Process , ***Junsok Choi****, Shijin Song, Youngwon Kim, Juhyung Lee, Ahreum Kim, Seonghan Kim, Dae Won Ryu,* Hansol Chemical, Republic of Korea

AA-TuP-3 Development of Air-stable Liquid Niobium Precursor with Organic-inorganic Hybrid Ligand for Conformal Atomic Layer Deposition of Nb_2O_5, ***Sun Young Baik****, Sangbum Han,* EGTM, Republic of Korea

AA-TuP-4 ZnO Thin Film Transistor-Based Hydrogen Sensor Fabricated by Atomic Layer Deposition, *Kaito Otsuka, Kyosuke Nakazawa, Ryo Miyazawa, Masanori Miura, Bashir Ahmmad,* ***Fumihiko Hirose****,* Graduate School of Science and Engineering, Yamagata University, Japan

AA-TuP-5 Titanium Nitride Protective Coatings for High-Performance Proton Exchange Membrane Water Electrolysis, ***Bhavesh Chavan****, Ruud Kortlever, Ruud van Ommen,* Delft University of Technology, Netherlands

AA-TuP-6 Controlled Interface Oxidation of Ru/RuO_2 Thin Films Through High Concentration H_2O_2 Exposure, ***Austen Adams****, Dan Le,* RASIRC

AA-TuP-7 Plasma-Enhanced Atomic Layer Deposition of Niobium Nitride Using a New Nb Precursor and Its Application to Diffusion Barriers for Cu and Ru Interconnects, ***Kyungmin Kim****,* Department of Energy and Chemical Engineering, Ulsan National Institute of Science and Technology (UNIST), Republic of Korea*; Chaehyun Park, Minjeong Kweon,* Graduate School of Semiconductor Materials and Devices Engineering, Ulsan National Institute of Science and Technology (UNIST), Republic of Korea*; Yongjoo Park, Donghyun Kim,* Advanced Reasearch Development Team, SK Trichem Co. Ltd., Sejong, 30068, Korea*; Soo-Hyun Kim,* Graduate School of Semiconductor Materials and Devices Engineering, Ulsan National Institute of Science and Technology (UNIST), Department of Materials Science and Engineering, Ulsan National Institute of Science and Technology (UNIST), Republic of Korea

AA-TuP-8 Ultrathin Sn-Doped In_2O_3 Films for Scalable Semiconductor Transistors, ***Seung Ho Ryu (Graduate Student)****, Seong Keun Kim,* Korea University, Republic of Korea*; Taikyu Kim,* Stanford University, Republic of Korea*; Taeseok Kim,* Korea University, Republic of Korea

AA-TuP-9 A Film-Quality-Aware ALD Integration Framework for Top-Gated MoS_2 FETs, ***Minjong Lee (Graduate Student)****, Thi Thu Huong Chu, Inhong Hwang, Doo San Kim, Dushyant Narayan, Dan Le, Soham Shirodkar, Jiyoung Kim,* University of Texas at Dallas

AA-TuP-10 Atomic Layer Deposition of Pt on Plasma-Activated Tungsten Oxide Support for Durable PEMFC Anodes, ***Hyung Jong Choi****,* Stanford University*; Hae Wook Park, Beum Geun Seo, Jung Woo Shim, Nam Il Kim, Yun Sung Choi,* Korea University, Republic of Korea*; Fritz B. Prinz,* Stanford University*; Joon Hyung Shim,* Korea University, Republic of Korea

AA-TuP-11 Impact of Mid-Interlayer Insertion on the Ferroelectric Performance Enhancement of $Hf_{0.5}Zr_{0.5}O_2$ Thin Films through Remote Plasma ALD, ***MinGyun Kang (Graduate Student)****, HyeonWu Nam, YongWoon Jang, ByungWook Kim, ChangYun Hong, JiWon Kim, ChangBun Yoon,* Department of Advanced Material Engineering. Tech University of Korea., Republic of Korea

AA-TuP-12 High-quality CeO_2 thin films by low temperature atomic layer deposition using a new heteroleptic Ce precursor, ***Juri Kim (Undergraduate)****, Yewon Seo, Soo-Hyun Kim,* Ulsan National Institute of Science and Technology (UNIST), Republic of Korea

AA-TuP-13 Drain-Current-Enhanced TiO_2-Thin-Film Transistors Fabricated by Atomic Layer Deposition, ***Ryo Miyazawa (Graduate Student)****, Tsubasa Takami, Masanori Miura, Bashir Ahmmad, Fumihiko Hirose,* Graduate School of Science and Engineering, Yamagata University, Japan

AA-TuP-14 Exploring Dopant Candidates to Improve the Electrical Properties of TiO_2 Dielectric Thin Film, ***Seungwoo Lee (Graduate Student)****, Gaeul Kim,* Kyung Hee University, Republic of Korea*; Hansol Oh, Hanbyul Kim, Donghun Shin, Yongjoo Park,* SK trichem, Republic of Korea*; Woojin Jeon,* Kyung Hee University, Republic of Korea

AA-TuP-15 Leakage suppression and memory window optimization via Gd-doped HfO_2 charge-trap layers in 3D NAND, ***Lee Jonghyeok (Graduate Student)****, Jeon Woojin,* Kyung Hee University, Republic of Korea*; Nam Jihun,* Kyung Hee university, Republic of Korea*; Oh Hansol, Kim Hanbyul, Park Yongjoo,* SK trichem, Republic of Korea

AA-TuP-16 Leakage Current Suppression at Grain Boundary in Rutile TiO_2 via La Doping, ***Gaeul Kim (Graduate Student)****, Seungwoo Lee,* Kyung Hee University, Korea (Democratic People's Republic of)*; Hansol Oh, Hanbyul Kim, Donghun Shin, Yongjoo Park,* SK Trichem Co., Ltd., Korea (Democratic People's Republic of)*; Woojin Jeon,* Kyung Hee University, Korea (Democratic People's Republic of)

AA-TuP-17 Development of Si-C-Si Bond-Containing Precursors for SiOC Thin Films, ***Kazutaka Takahashi****, Akihiko Ohtsu, Tomonori Takahashi, Aina Ushiyama, Motomasa Takahashi, Shuhei Yamaguchi, Masaki Morita, Takeshi Yoshioka, Nobuhiko Takano, Hiroshi Komatsu,* FUJIFILM Corporation, Japan

AA-TuP-18 Modeling of Negative Capacitance FETs for Sub-60 mV/dec Switching through PEALD-HZO Ferroelectric Thin Films, ***Bo Hyeon Kim (Graduate Student)****, So Won Kim, Jae Hyuk Choi, Hee Chul Lee,* Department of Advanced Materials Engineering, Tech University of Korea

AA-TuP-19 Enhancing Tetragonal Phase Stability of HfO_2 Dielectrics via Oxidation-State Engineering of VOx Interlayer, ***Yejin Han (Graduate Student)****, Woojin Jeon, Iksun Kwon,* Kyung Hee University, Republic of Korea*; Jaemin Kim, Duckhyeon Seo, Juhwan Jeong, Sunyoung Baik, Woongjin Choi, Kyuho Cho,* EGTM Co., Ltd., Republic of Korea

AA-TuP-20 Minimisation of Platinum Loading on the Porous Transport Layer in Pem Water Electrolysers, ***Athina Tzavara-Roussi (Graduate Student)****, Volkert van Steijn, Ruud van Ommen,* Delft University of Technology, Netherlands

AA-TuP-21 Characterization of ALD-like SiCO Layers for MOL and BEOL Applications: Influence of Etching Plasma and Wet Clean, ***Alexandre Ponchon****, Emmanuel Petitprez, Pierre Brianceau, Benoit Martin, Melanie Dartois, Antoine Raison, Nicolas Gauthier,* CEA/LETI-University Grenoble Alpes, France

AA-TuP-22 In Situ, Simultaneous Spectroscopic Ellipsometry and Quadrupole Mass Spectrometry Studies of Aluminum Doped ZnO Etching Using β-Diketones, ***Maahir Rahi (Undergraduate)****, Terrick Mcnealy-James, Justin Moore, Titel Jurca, Parag Banerjee,* University of Central Florida

AA-TuP-23 Terpineol Doped ALD Al_2O_3 Films for Low-K Materials: Effect of Terpineol Ratio and Metal Precursor Size on Structural and Dielectric Properties, ***Sovendo Talapatra (Graduate Student)****, Noah Zahn, Nicholas Strandwitz,* Lehigh University

AA-TuP-24 High Rate, Tuneable Dielectric Nitrides by Plasma Atomic Layer Deposition Enabling Volume Manufacturing for Gan Device Integration, ***Arpita Saha****, Elliot Gay, Dmytro Besprozvannyy, Aileen O'Mahony, Michael Powell, Andrew Newton,* Oxford Instruments Plasma Technology, UK

AA-TuP-25 Enhanced Electrical Characteristics in CAAC-IGZO Memory Devices Using 2600W Remote-Plasma-Processed HfO_2 and H_2 Passivation at the CAAC-IGZO/Al_2O_3 Tunneling Interface, ***Hyeon Wu Nam (Graduate Student)****, Chang Bun Yoon, Byung Wook Kim, Yong Woon Jang, Min Kyun Kang, Chang Yun Hong,* Department of Advanced Material Engineering, Tech University of Korea

AA-TuP-26 Impact of Oxidant on Conformal HZO ALD in High Aspect Ratio Structures, ***Soham Shirodkar (Graduate Student)****, Dushyant Narayan,* The University of Texas at Dallas*; Dan N. Le,* RASIRC, University of Texas at Dallas*; Thi Thu Huong Chu, Soubhik De, Minjong Lee,* The University of Texas at Dallas*; Adrian Alvarez, Lorenzo Diaz,* RASIRC*; Jiyoung Kim,* The University of Texas at Dallas

AA-TuP-27 Stable High-k Morphotropic Phase of $HfZrO_4$ Using Uniformly Distributed Dopants, ***Nguyen Vu****, Charlene Chen, Sunil Ghimire, Ray Meck, Jared McWilliams,* EMD Electronics, USA

AA-TuP-28 ALD Oxide Coatings for Anti-Stiction MEMS Applications Compatible with 500 and 1000 °C Wafer Bonding, ***Eric Reed (Undergraduate)****, Matthew Weimer, Arrelaine Dameron,* Forge Nano*; Robert MacDonald, David Lin,* GE Aviation, USA*; Mohammad Megdadi,* University of Nebraska - Lincoln*; Mary Ann Maher,* Soft MEMS

AA-TuP-29 Enhancing ZrO_2–based DRAM capacitor performance by employing atomic layer deposited In_2O_3 electrode via Mo doping, ***Hunseok Son (Undergraduate)****, Woojin Jeon,* Kyung Hee University, Republic of Korea

AA-TuP-30 Advanced Seamless Lateral Gap-fill Process for 3D Structures via a New Approach, ***Yudeuk Kim****, Seunghee Cho, Kwangseon Jin,* Wonik IPS, Republic of Korea*; Hoon Kim,* Wonik IPS*; Wontae Noh, Taewan Lee, KYUNGPIL NA, Jaehun Lee, Jiwon Moon, Hyung mook Lim,* Wonik IPS, Republic of Korea

AA-TuP-31 *Modeling the Dynamics of Surface Coverage in Atomic Layer Deposition for Multilayer Lateral Trench Structures,* ***Jin Hak Kim****, Yoon Jae Won, Jun Soo Shin,* WONIK IPS, Republic of Korea

AA-TuP-32 Nucleation Dependence of ALD on Diamond for Surface Processing in Quantum Applications, ***Jessica Jones****, Jeffrey Elam,* Argonne National Laboratory, USA

AA-TuP-33 Atomic Layer Deposition on Reduced Activation Ferritic Martensitic Steel for Nuclear Fusion Applications, ***Soren Bentley***, UK Atomic Energy Authority, UK; *Zachary Robinson, Mark Wittman,* University of Rochester; *Matthew Sharpe,* University of Rochester, UK; *Rashad Ahmadov, Josh Ruby,* University of Rochester; *Jeffrey Woodward,* Naval Research Laboratory; *Alexander Kozen,* University of Vermont

AA-TuP-34 Mitigating Bow CD in Sub–20 nm HARC: SEM3D Modeling of Mask Taper and Cyclical Deposition–Etch Dynamics, ***Prabhat Kumar***, *Lin Yu, Lin Zhao, Harsh Meena, Min Huang, Nandita Ghodki, Sankar Sarma, Sasan Shadpour, Jeff Lucas, Mingmei Wang, Taner Ozel,* Lam Research Corporation

AA-TuP-35 Low-Temperature ALD Rutile TiO_2 Buffer Layers for VO_2-Based Smart Windows: Towards Flexible Substrates, ***Jan Leithäuser (Graduate Student)***, *Waafa Al Nachwati, Philip Klement, Jörg Schörmann, Sangam Chatterjee, Martin Becker,* Justus Liebig University Giessen, Germany

AA-TuP-36 ALD and Surface Chemistry of p-type Tin Oxides, *Asare Dua, Michael Foody,* Illinois Institute of Technology; *Bo Liu,* ***Adam Hock***, illinois Institute of Technology

Area Selective ALD
Room Tampa Bay Salons 5-9 - Session AS-TuP
Area Selective ALD Poster Session
5:45 – 7:00pm

AS-TuP-1 Modifying Polymer Inhibitors for Enhanced Selectivity in Area-Selective ALD of Al_2O_3 on Silicon, ***Amnon Rothman***, *Renana Didi,* Ben Gurion University Be'er Sheva, Israel

AS-TuP-2 Probing the Effects of Reaction Byproducts on Atomic Layer Deposition Selectivity, *Jessica Jones, Cong Liu,* ***Alex Martinson***, Argonne National Laboratory

AS-TuP-3 Inhibitor Selection for Area-Selective SiO Deposition: Limited Growth on SiO Surfaces and Unrestricted Growth on SiN Surfaces through Theoretical and Experimental Studies, ***Tomoya Nagahashi***, *Kimihiko Nakatani, Takayuki Waseda, Shoma Miyata, Keitaro Hamada, Nozomu Takano, Hajime Karasawa, Ryota Horiike, Yoshitomo Hashimoto, Yoshiro Hirose,* KOKUSAI ELECTRIC CORPORATION, Japan

AS-TuP-4 Inverse-Gradient Atomic Layer Deposition in High-Aspect-Ratio Structures Using Physical Interaction of a Removable Small Molecule Inhibitor, ***Jiwoo Oh (Graduate Student)***, *Woohyuk Kim, Woo-Hee Kim,* Hanyang University, Republic of Korea

AS-TuP-5 Perfluoroalkylpolyether Thin Layer–Induced Inhibition of Al_2O_3 Atomic Layer Deposition with a Trimethylaluminum Precursor, *Hiroaki Iwamoto,* ***Yuki Shibutani***, AGC Inc., Japan

AS-TuP-6 Area-Selective Growth of HfO_2 Thin Film through a Cyclic Plasma-Enhanced Atomic Layer Process, ***Jun Seo Hwang (Graduate Student)***, *So Won Kim, Sung Hyun Lim, Hee Chul Lee Lee,* Tech University of Korea

AS-TuP-7 Inhibition of Hafnia and Alumina Using Silanes, ***Chad Brick***, 11 Steel Road East

AS-TuP-8 Impact of Aluminum Precursor on Selective Dielectric on Metal Deposition, ***Jiyeon Kim***, *Dennis Hausmann, Alex Fox,* LAM Research; *Florian Preischel, Harish Parala, Anjana Devi,* Leibniz Institute, IFW Dresden, Germany

AS-TuP-9 Tuning Surface Reactivity by Uniform Chemical Modification with Organic Ligands for Area-Selective Processes, ***Andrew Teplyakov***, University of Delaware

AS-TuP-10 Computational and Experimental Approaches to Hydrofluoric Acid-treated SiO_2 and SiN_x Surfaces for Area-Selective Atomic Layer Deposition, ***Namkyu Yoo***, *Sanghun Lee, Tae Hyun Kim, Chanju Lee, Jisang Yoo,* Yonsei University, Korea; *Seung-min Chung,* Hoseo University, Republic of Korea; *Hyungjun Kim,* Yonsei University, Korea

AS-TuP-11 Influence of Plasma Power and Supercycle Conditions on Selectivity in DIPAS-Based SiO_2 AS-ALD, ***Tae Hwan Lim***, SK hynix Inc. Korea; *Rui Loureiro, José Fernandes,* International Iberian Nanotechnology Laboratory, Portugal; *Yu Sung Jin, Dong Kyun Lee, Deok Sin Kil, Jung Il Hwang, Sung Gon Jin,* SK hynix Inc., Korea; *Jennifer Teixeira, Pedro Salomé,* International Iberian Nanotechnology Laboratory, Portugal

AS-TuP-12 Alcohol-Mediated Modulation of Surface Chemical States for Inherent Area-Selective Atomic Layer Deposition, ***Kun Cao***, *Weizhen Wang, Boxuan Li, Rong Chen,* Huazhong University of Science and Technology, China

AS-TuP-13 Site-Specific and Temperature Dependent Hydration of Faceted Alpha Hematite, ***Asare Dua (Graduate Student)***, Illinois Institute of Technology; *Luke Nunzio,* Purdue University, USA; *Ashley Bielinski,* Argonne National Laboratory, USA; *Yue Li,* Argonne National Lab; *Cong Liu, Alex Martinson,* Argonne National Laboratory, USA; *Adam Hock,* Illinois Institute of Technology

AS-TuP-14 Inherently Selective Atomic Layer Deposition of Niobium Oxide Thin Films Using a Novel Precursor, ***Hyun-Kyu Ryu***, *Sung-Woo Ahn, Myeong-Ho Kim, In-Jae Lee, Chae-Young Song, Jin-Sik Kim, Won Yong Koh,* R&D Center UPChem, Republic of Korea

AS-TuP-15 Influence of Precursor Molecular Size on Aluminum Oxide Area-Selective Deposition, ***Sharmistha Bhattacharjee (Graduate Student)***, Lehigh University; *Michelle Paquette,* University of Missouri-Kansas City; *Nicholas C. Strandwitz,* Lehigh University; *Sean King,* Intel Corporation

Wednesday Morning, July 1, 2026

	Room HB Plant Ballroom	
8:00am	**AF1-WeM-1** Understanding Temporal Behavior of Adsorption and Desorption in ALD via Multiple Injections of Precursor, ***Yu-Sen Jiang***, Stanford University; *Miso Kim,* Standford University; *Yukio Cho,* Stanford University; *Stacey Bent,* Standford University	**ALD Fundamentals: Growth and Characterization** **Session AF1-WeM** **Plasma Enhanced and Low Temperature ALD** **Moderators:** **Jolien Dendooven**, Ghent University, Belgium, **Mikko Ritala**, University of Helsinki, Finland
8:15am	**AF1-WeM-2** Improved Atomic Layer Deposition of Ultra-Thin HfO_2 Dielectrics on Transition Metal Dichalcogenide Surfaces via Low Impact Plasma Pretreatments, ***Rebecca Dawley (Graduate Student)***, University of Michigan; *Sudarat Lee, Wouter Mortelmans, Scott Clendenning,* Intel Corporation; *Ageeth Bol,* University of Michigan	
8:30am	**AF1-WeM-3** Comparing HfO_2 Thin Films Grown by Low-temperature Thermal and Plasma ALD for Neuromorphic Functionality, *Alessandro Cataldo,* CNR-IMM, Italy; *Alan Durnez, Himadri N. Mohanty,* CNRS-C2N, France; *Seyed Ariana Mirshokraee, Sabina Spiga,* CNR-IMM, Italy; *Liza Herrera-Diez,* CNRS-C2N, France; ***Alessio Lamperti***, CNR-IMM, Italy	
8:45am	**AF1-WeM-4** Germanium Oxide with Tunable Composition Using Low-Temperature PEALD, ***Florian Preischel***, Leibniz Institute for Solid State and Materials Research, Germany; *Karl Rönnby, Michael Nolan,* Tyndall National Institute, University College Cork, Ireland; *Harish Parala, Anjana Devi,* Leibniz Institute for Solid State and Materials Research, Germany	
9:00am	**AF1-WeM-5** Low Temperature Thermal Atomic Layer Deposition of Bismuth Oxide Thin Films Using a Novel Precursor, ***Taylor Currie***, *Patrick Price, Ronald Goeke, Joseph Klesko,* Sandia National Laboratories	
9:15am	**AF1-WeM-6** Effect of Initial Surface Silanol Density and Aminosilane Structure on O2 Plasma-Assisted ALD of SiO_2, ***Andrew Kaye (Graduate Student)***, Colorado School of Mines; *Bhushan Zopé,* Intermolecular, Inc.; *Xinjian Lei, Agnes Derecskei, Ronald Pearlstein, Haripin Haripin Chandra,* EMD Electronics; *Sumit Agarwal,* Colorado School of Mines	
9:30am	**AF1-WeM-7** Limits of Plasma Oxidation in Cr_2O_3 Ald: Over-Oxidation, Etching, and Defect Control, ***Soumik Das***, imec USA; *Huiyun Yang,* University of Michigan, Ann Arbor; *Sean McMitchell,* IMEC Belgium; *Becky (R. L.) Peterson,* University of Michigan, Ann Arbor	
9:45am	**AF1-WeM-8** Composition-Tunable Molybdenum Carbonitride Thin Films Prepared by Plasma-Enhanced Atomic Layer Deposition (PEALD) for Diffusion Barriers in Cu and Ru Interconnects, ***Younjae Shin (Graduate Student)***, *Chaehyun Park, Minjeong Kweon, Sang Bok Kim, Soo-Hyun Kim,* Ulsan National Institute of Science and Technology (UNIST), Republic of Korea	
10:00am	**BREAK & EXHIBITS**	
10:45am	**AF2-WeM-12** Low-Temperature Plasma-Enhanced Atomic Layer Deposition of Crystalline Gan Thin Films Using Monovalent Organogallium Precursor, ***Fumikazu Mizutani***, *Nobutaka Takahashi,* Kojundo Chemical Laboratory Co., Ltd., Japan	**ALD Fundamentals: Growth and Characterization** **Session AF2-WeM** **Plasma-enhanced ALD of Nitrides** **Moderators:** **Andrew Cavanagh**, University of Colorado at Boulder, **Craig Huffman**, Oxford Instruments, UK
11:00am	**AF2-WeM-13** Plasma-Enhanced Growth of Low-κ Amorphous Boron Nitride: From 25 °C to 400 °C, ***Daehyun Ko (Graduate Student)***, *Fu-Chun Sheu, Luwen Li, Xun Zhan,* UT Austin; *John Carroll, Sergio Gamez-Puente, Hu Li, Peter Ventzek, Jianping Zhao,* Tokyo Electron America; *John Ekerdt, Jamie Warner,* UT Austin	
11:15am	**AF2-WeM-14** Comparing the Effect of H_2 and N_2 Plasma on Boron Nitride Surface During Plasma Enhanced Atomic Layer Deposition Using Density Functional Theory, ***Tsung-Hsuan Yang***, *Jianping Zhao, Peter Ventzek,* Tokyo Electron America	
11:30am	**AF2-WeM-15** Precise and Narrow Ion-Energy Distributions in Plasma-Enhanced ALD of Nitrides Using Tailored-Waveform Biasing, *Arthur de Jong, Silke Peeters, Harm Knoops, Erwin Kessels,* **Adrie Mackus**, Eindhoven University of Technology, Netherlands	
11:45am	**AF2-WeM-16** Characterizing Inductively Coupled Plasmas in $Ar/N_2/H_2$ Mixtures for Plasma Enhanced Atomic Layer Deposition, ***David Boris***, *Jeffrey Woodward, Virginia Wheeler, Michael Johnson, Mackenzie Meyer, Scott Walton,* U.S. Naval Research Laboratory	

	Room Tampa Bay Salons 1-2	
8:00am	**EM1-WeM-1** Platinum Growth on Li-Based Thin Films Using Thermal ALD, ***Manon LETICHE***, *Sylvain POULET, Nicolas MASSONI, Violaine SALVADOR, Hélène COURDERT-ALTEIRAC, Nicolas GAUTHIER, Messaoud BEDJAOUI,* CEA-LETI, France	**Emerging Materials and Processes** **Session EM1-WeM** **Conductive ALD Films** **Moderators:** **Jean-François de Marneffe**, IMEC, Belgium, **Henrik Sønsteby**, University of Oslo, Norway
8:15am	**EM1-WeM-2** The Stability Study of ITO Film Deposited by Thermal Atomic Layer Deposition, ***Yongqing Shen***, *Zhengying Jiao, Liguo Chai, Fengbin Tian, Kaiqiang Zhao, libin Jia, Jie Shen, Jianqi Chen, Jinjuan Xiang,* Beijing Superstring Academy of Memory Technology, China*; Weihan Fan,* Beijing Superstring Academy of Memory Technology, Taiwan*; Hongbo Sun, Guilei Wang, Chao Zhao,* Beijing Superstring Academy of Memory Technology, China	
8:30am	**EM1-WeM-3** Atomic Layer Deposition of TiN layer in Interposer Chip for Superconducting Quantum Processor Unit, ***Kestutis Grigoras***, *Harshad Mishra, Jukka-Pekka Kaikkonen, Joel Hätinen, Elsa Mannila, Wisa Förbom, Rishabh Upadhyay, Mikael Kervinen, Isabel Gueissaz-Mattelmäki, Marco Marin Suarez, Jorden Senior,* VTT Technical Research Centre of Finland, Ltd, Finland	
8:45am	**EM1-WeM-4** Achieving Ultra-Low Resistivity in TiN Thin Films via Supercycle PEALD: The Critical Role of Ti:N Stoichiometry over Impurity Content, ***Van Long Nguyen***, *Christophe Vallee, Natalya Tokranova, Bryant Colwill,* University at Albany-SUNY	
9:00am	**EM1-WeM-5** Characterization of Superconducting Niobium Nitride Thin Films Grown by Thermal Atomic Layer Deposition, ***Annika Häkkinen (Graduate Student)***, *Oona Turpeinen, Jaakko Julin,* University of Jyväskylä, Finland*; Mikko Laitinen,* University Of Jyväskylä, Finland*; Timo Sajavaara,* University of Jyväskylä, Finland	
9:15am		
9:30am		
9:45am		
10:00am	**BREAK & EXHIBITS**	
10:45am	**EM2-WeM-12** Let There Be Light: Photo-Assisted ALD of Pt Using $Pt(acac)_2$ and O_3, ***Robin Petit***, *Kinanti Aliyah, Matthias Minjauw, Ruben Blomme, Arno Depoorter, Seppe Van Dyck,* Ghent University, Belgium*; Martin Rosenthal,* ESRF, France*; Zeger Hens, Christophe Detavernier, Jolien Dendooven,* Ghent University, Belgium	**Emerging Materials and Processes** **Session EM2-WeM** **Energy-enhanced ALD** **Moderators:** **John Conley**, Oregon State University, **Jean-François de Marneffe**, IMEC, Belgium
11:00am	**EM2-WeM-13** Microwave Enhanced Atomic Layer Deposition (MW-ALD) of Ta2O5, ***Jessica Haglund (Graduate Student)***, Oregon State University*; John Conley, Jr.,* Oregon State Univesity	
11:15am	**EM2-WeM-14** Electron-Enhanced Atomic Layer Deposition of Tunable TiCxNy Ternary Nitride Films Using Tetrakis(dimethylamido)titanium with Ammonia Reactive Background Gas, ***Zachary Sobell***, *Andrew Cavanagh, Steven George,* University of Colorado at Boulder	
11:30am	**EM2-WeM-15** Pulsed Excimer Laser Processing to Promote Room-Temperature Crystallization of ALD HfO_2 Films, ***T. Jude Kessler***, *Hans Cho, John P. Murphy, Sarah Brittman, Saikat Mukhopadhyay,* 1. US Naval Research Laboratory*; Peter Litwin,* 2. NRC Research Associateship Program*; Bradley De Gregorio, Virginia Wheeler, F.K. Perkins, Margo Staruch,* 1. US Naval Research Laboratory	
11:45am	**EM2-WeM-16** Thermally Activated Atomic Layer Annealing (ALA): A Plasma Free Approach to Densification of Hafnia Thin Films, ***Dushyant Narayan***, *Thi Thu Huong Chu, Dan Le, Minjong Lee, Doo San Kim, Soham Shirodkar, Jean-Francois Veyan, Jiyoung Kim,* The University of Texas at Dallas	

Wednesday Morning, July 1, 2026

	Room Tampa Bay Salons 3-4	
8:00am	**AS1-WeM-1 ALD Outstanding Presentation Award Finalist:** Triazolylidene Small Molecule Inhibitor for Area-Selective Atomic Layer Deposition of High *k*-Dielectric Materials*, Giang Hoang Pham,* Western University, Canada*; Jordan Bentely,* Wesleyan University, Canada*; Dana Nanan, Cathleen Crudden,* Queen's University, Canada*; **Paul Ragogna,*** Western University, Canada	**Area Selective ALD** **Session AS1-WeM** **ASD Process I** **Moderators:** **Sumit Agarwal**, Colorado School of Mines, **Stacey Bent**, Stanford University
8:30am	**AS1-WeM-3** Maintaining Healthy Boundaries – Machine Learning Design of SMIs*, **Sean Barry**, Marshall Atherton,* Carleton University, Canada*; Dennis Hausmann, Jiyeon Kim,* Lam Research Corp.	
8:45am	**AS1-WeM-4** Role of Precursor and Aklanethiol Chain Length on Area Selective Deposition of Aluminum and Hafnium-Containing Films*, **Nicholas Strandwitz**,* Lehigh University	
9:00am	**AS1-WeM-5** Surface Blocking Effect of NH_3 in Selective Co-ALD with CCTBA Precursor*, **Naoki Tamaoki**, Jun Yamaguchi, Noboru Sato, Atsuhiro Tsukune, Yukihiro Shimogaki,* The University of Tokyo, Japan	
9:15am	**AS1-WeM-6** Fluorination Passivation for Area-Selective Deposition: Selective Passivation of SiO_2 vs SiN_x for Highly Selective TiO_2 Deposition using Water-Free $TiCl_4/Ti(^iPrO)_4$.*, **Jeremy Thelven (Graduate Student)**, Gregory Parsons,* North Carolina State University	
9:30am	**AS1-WeM-7** Chemical Selectivity in Atomic Layer Selectivity (ALD) via Gas-Phase Silylation using N-(trimethylsilyl)dimethylamine (TMSDMA)*, Mohammed Sadam Alam, **Francisco Zaera**,* University of California at Riverside	
9:45am	**AS1-WeM-8** Mechanistic Criteria for Area Selective Deposition of Multicomponent Al_xSi_yO Oxide Dielectrics *, Eryan Gu, Zilian Qi, Kun Cao, **Rong Chen**,* Huazhong University of Science and Technology, China	
10:00am	**BREAK & EXHIBITS**	
10:45am	**INVITED: AS2-WeM-12** Perfect Selectivity vs Practical Sustainability in ASD*, **Nupur Bihari**,* Lam Research Corporation	**Area Selective ALD** **Session AS2-WeM** **ASD Process II** **Moderators:** **Anjana Devi**, Leibniz Institute, IFW Dresden, Germany, **Nicholas Strandwitz**, Lehigh University
11:15am	**AS2-WeM-14** Photoassisted Chemical Vapor Deposition as a Strategy for Area Selective Deposition of Ru:Implications for Developing an ALD Process*, Christopher Brewer,* University of Texas at Dallas*; Rashmi Singh,* Unversity of Florida*; James Pugh, Anjali Sharma,* University of Florida*; Amy Walker,* University of Texas at Dallas*; **Lisa McElwee-White**,* University of Florida	
11:30am	**AS2-WeM-15** Highly Selective Ru Growth on Metallic Substrates against Dielectric Surface via Inherent Area-selective Atomic Layer Deposition Using a Novel Ru Precursor*, **Hideaki Nakatsubo**, Masato Iseki,* TANAKA PRECIOUS METAL TECHNOLOGIES Co., Ltd., Japan*; Shintaro Chiba,* EEJA Ltd., Japan*; Iaan Cho, Hyungjun Kim,* Yonsei University, Republic of Korea*; Bonggeun Shong,* Hanyang University, Republic of Korea*; Debananda Mohapatra, Jeongha Kim, Soo-Hyun Kim,* UNIST, Republic of Korea	
11:45am	**AS2-WeM-16** Mechanistic Insights into Area-Selective Etching of Ruthenium *, **Iaan Cho (Graduate Student)**,* Yonsei University, Republic of Korea*; Soo-Hyun Kim,* Ulsan National Institute of Science and Technology, Republic of Korea*; Hyungjun Kim,* Yonsei University, Republic of Korea*; Bonggeun Shong,* Hanyang University, Republic of Korea	

Wednesday Morning, July 1, 2026

	Room Ybor Salons I-IV	
8:00am	**INVITED: AA1-WeM-1** Atomic Layer Deposition in Conventional and Emerging DRAM Devices, ***Kyooho Jung****, Jungkyun Kim, Kyung Mee Song, Sunghyun Kim, Donghyun Kim, Sangjun Lee, Jeonggyu Song, Sangwook Kim,* Samsung Advanced Institute of Technology, Republic of Korea	**ALD Applications** **Session AA1-WeM** **ALD for Memory I** **Moderators:** **Han-Bo-Ram Lee**, Incheon National University, Republic of Korea, **Seung Wook Ryu**, SK hynix, Republic of Korea
8:30am	**AA1-WeM-3** Sacrificial Atomic Layer Deposition for Nanostructured Chalcogenide Materials, ***Chanyoung Yoo,*** Hongik University, Republic of Korea	
8:45am	**AA1-WeM-4** Enhancing Dielectric Properties of ALD Al-Doped HfO_2 Films for Memory Applications: The Role of Homogeneous Aluminum Distribution, ***Son Hoang****, Larry Chen, Charlene Chen, Randall Higuchi, Vijay Narasimhan, Liana Alves,* EMD Electronics; *Zeyuan Ni,* STDC, Tokyo Electron Technology Solutions Ltd, Japan; *Atsushi Kubo,* STDC, Tokyo Electron Technology Solutions Ltd., Japan	
9:00am	**AA1-WeM-5** Germanium Doping for Electrical Modulation of Ferroelectric HZO Using Atomic Layer Deposition, ***Jared McWilliams,*** EMD Electronics, USA	
9:15am	**AA1-WeM-6** Design of Interface Formation Process for Superior Ferroelectricity and Enhanced Fatigue Resistance in $Hf_xZr_{1-x}O_2$-Based Ferroelectric Devices, ***Takashi Onaya****, Toshihide Nabatame, Takahiro Nagata, Kazuhito Tsukagoshi,* National Institute for Materials Science, Japan	
9:30am	**AA1-WeM-7** Low-Temperature ALD HfO_2 for Magneto-Ionic Applications, ***Alessandro Cataldo (Graduate Student)***, Politecnico di Milano, Italy; *Sabina Spiga,* Consiglio Nazionale delle Ricerche (CNR-IMM), Italy; *Himadry Nandan Mohanty, Alan Durnez,* Centre de Nanosciences et de Nanotechnologies (C2N), France; *Andrea Li Bassi,* Politecnico di Milano, Italy; *Seyed Ariana Mirshokraee,* Consiglio Nazionale delle Ricerche (CNR-IMM), Iran (Islamic Republic of); *Liza Herrera Diez,* Centre de Nanosciences et de Nanotechnologies (C2N), France; *Alessio Lamperti,* Consiglio Nazionale delle Ricerche (CNR-IMM), Italy	
9:45am	**AA1-WeM-8** High-mobility Atomically Ordered IGZO Transistors Deposited by Thermal Atomic-Layer-Deposition, ***Min-Seo Kim (Graduate Student)****, Seong-Hwan Ryu,* Hanyang University, Korea; *Yoon-Seo Kim,* IMEC, Belgium, Republic of Korea; *Jin-Seong Park,* Hanyang University, Korea	
10:00am	**BREAK & EXHIBITS**	
10:45am	**AA2-WeM-12** Upper-Layer-Induced Crystallization of Metastable Rutile TiO_2, ***Jihoon Jeon (Graduate Student)****, Seung keun Kim,* Korea Institute of Science and Technology (KIST), Republic of Korea	**ALD Applications** **Session AA2-WeM** **ALD for Memory II** **Moderators:** **Ji Hwan Ahn**, POSTECH, Republic of Korea, **Andrea Illiberi**, ASM, Belgium
11:00am	**AA2-WeM-13** Surface-Reaction-Energetics-Driven Stabilization of Rutile TiO_2 at Low Temperatures in Atomic Layer Deposition, ***Seungwan Ye (Graduate Student)****, Jihoon Jeon, Jongseo Kim, Seong Keun Kim,* Korea Institute of Science and Technology (KIST), Republic of Korea	
11:15am	**AA2-WeM-14** Magnetism of Ultrathin TiO_2 Films Prepared by Atomic Layer Deposition, ***Jhonatan Rodriguez Pereira (Graduate Student)****, Jan Macak,* University of Pardubice, Czechia	
11:30am	**AA2-WeM-15** Low-Temperature Peald of Silicon Nitride Using Diiodosilane for High-Conformality Spacers of Three-Dimensional Memory Devices, ***Jiabao Sun****, Tielu Liu, Xin Zhang, Gang Song, Hongbo Sun, Baodong Han, Chao Tian, Chao Zhao,* Beijing Superstring Academy of Memory Technology, China	
11:45am	**AA2-WeM-16** A Nanolaminate Cushion Approach for Stabilizing Ultrathin Al_2O_3 and Sio_2 Dielectrics in Future Logic and Memory Technologies, *Mahesh Nepal, Tanka Bhushal,* ***Tara Dhakal****,* Binghamton University	

Wednesday Afternoon, July 1, 2026

	Room HB Plant Ballroom	
1:30pm	**AF1-WeA-1** A Framework Bridging Generative AI Models and Atomic Layer Deposition for $HfxZr_{1-x}O_2$, ***Han-Bo-Ram Lee***, *Bonwook Gu,* Incheon National University, Republic of Korea	**ALD Fundamentals: Growth and Characterization** **Session AF1-WeA** **Modeling for ALD Processes I** **Moderators:** **Alex Martinson**, Argonne National Laboratory, **Paul Williams**, Pegasus Chemicals
1:45pm	**AF1-WeA-2** Quantitative Kinetic Monte Carlo Modeling of Al_2O_3 Atomic Layer Deposition by Trimethylaluminum Based on Neural-Network-Potential-Derived Kinetics, ***Yichen Zou (Graduate Student)***, *Yuxuan Wu, Jun Yamaguchi, Noboru Sato, Atsuhiro Tsukune, Yukihiro Shimogaki,* The University of Tokyo, Japan	
2:00pm	**AF1-WeA-3** Analysis and Design of Nb PE-ALD using Neural Network Potential Molecular Dynamics Simulation, ***Noboru Sato***, *Akimasa Nakashima, Jun Yamaguchi, Naoki Tamaoki, Atsuhiro Tsukune, Yukihiro Shimogaki,* The University of Tokyo, Japan	
2:15pm	**AF1-WeA-4** Study of Pd Ald as a Growth Enhancer for Ultrathin CoW Liner/Barrier Layer ALD, *Noboru Sato, Wataru Mori, Souga Nagai, Yichen Zou, Yuxuan Wu, Yubing Deng, Jun Yamaguchi, Naoki Tamaoki, Atsuhiro Tsukune,* ***Yukihiro Shimogaki***, The University of Tokyo, Japan	
2:30pm	**AF1-WeA-5** Design and Performance of AI Agents Based on Large Language Models Interfacing with an Autonomous Atomic Layer Deposition Tool, ***Angel Yanguas-Gil***, *Jessica Jones, Sungjoon Kim, Chi Thang Nguyen, Jeffrey Elam,* Argonne National Laboratory	
2:45pm	**AF1-WeA-6** Generalized Reaction Networks for Atomic Layer Deposition, ***Simon Elliott***, Schrödinger, Ireland; *Thomas Ludwig,* Schrödinger; *Thomas Hughes, Chloe Luyet,* Schrödinger; *Jacob Gavartin,* Schrödinger, UK	
3:00pm	**AF1-WeA-7** Active-Learning PES Exploration: Fast Reaction Discovery in ALD Chemistry, *Nicolas Onofrio, Nestor Aguirre,* ***Fedor Goumans***, Software for Chemistry & Materials, Netherlands	
3:15pm	**AF1-WeA-8** in-Silico, High-Throughput Exploration of Ald Reaction Mechanisms, ***Martin Siron***, *Luis Pinto,* Entalpic AI, France; *Tristan Deleu,* Entalpic AI, Canada; *Alexandre Duval,* Entalpic AI, France	
3:30pm	**BREAK**	
4:00pm	**AF2-WeA-11** Validation of the Direct Simulation Monte Carlo Method for the Numerical Modelling of ALD Conformality, ***Paul Nizenkov***, *Asim Mirza, Stephen Copplestone, Julian Beyer,* boltzplatz - numerical plasma dynamics GmbH, Germany; *Simone Lauterbach, Marcel Pfeiffer,* Institute of Space Systems, University of Stuttgart, Germany	**ALD Fundamentals: Growth and Characterization** **Session AF2-WeA** **Modeling for ALD Processes II** **Moderators:** **Simon D. Elliott**, Schrödinger, Ireland, **Michael Nolan**, University College Cork, Ireland
4:15pm	**AF2-WeA-12** Multi-Scale Model for Optimization of HfO_2 ALD in High Aspect Ratio Structures, ***Ivan Petras***, *Andrey Smirnov, Yury Shustrov,* Semiconductor Technology Research d.o.o. Beograd, Serbia	
4:30pm	**AF2-WeA-13** Engineering the Interlayer Materials to Improve Interfacial Thermal Conductance, ***Saikat Mukhopadhyay***, U.S. Naval Research Laboratory; *Neeraj Nepal, Brian Downey, James Champlain, Shawn Mack, James Lund, Peter Litwin, Virginia Wheeler,* US Naval Research Laboratory	
4:45pm	**AF2-WeA-14** Closing Remarks and Award Presentations	

Wednesday Afternoon, July 1, 2026

	Room Tampa Bay Salons 1-2	
1:30pm	**INVITED: AM1-WeA-1** Advanced Batch Atomic Layer Deposition Technology for Future 3D Device, ***Kazuhiro Harada,*** KOKUSAI ELECTRIC CORPORATION, Japan	**ALD for Manufacturing** **Session AM1-WeA** **ALD Manufacturing Equipment and Processes** **Moderators:** **Paul Poodt**, SparkNano, Netherlands, **Sami Sneck**, Beneq, Finland
2:00pm	**AM1-WeA-3** On-Demand Precursor Delivery for Atomic Layer Deposition Using Machine Learning-Based Feedforward Control of Piezoelectric Valves, ***Kanta Ishida (Graduate Student),*** *Hiroshi Nishizato, Shota Oda,* Kumamoto University, Japan; *Yugo Nakaya,* HORIBA STEC, Co., Ltd., Japan; *Kinichi Nasu, Hiroshi Okajima, Takeshi Momose,* Kumamoto University, Japan	
2:15pm	**AM1-WeA-4** Design and Flow Optimization of Additively Manufactured Manifolds for Process/Purge Valves in Atomic Layer Deposition, ***Frank Horvat, Ph. D.,*** *Ben Olechnowicz, Masroor Malik,* Swagelok Company	
2:30pm	**AM1-WeA-5** Stability of MoCl5 in Heated Canisters and During Delivery, ***Berc Kalanyan,*** *James Maslar,* National Institute of Standards and Technology (NIST)	
2:45pm	**AM1-WeA-6** Precursor-Driven Morphology Tuning in ZnO Grown by ALD on 8-Inch Wafers, *Katherine Guzey,* ***Noah Brechmann,*** Fraunhofer IMS, Germany; *Thomas Gemming, Marcel Schmickler, Harish Parala,* Leibniz Institute for Solid State and Materials Research, IFW Dresden, Germany; *Anjana Devi,* Fraunhofer IMS; Leibniz Institute for Solid State and Materials Research, IFW Dresden; Dresden University of Technology, TU Dresden, Germany; *Nils Boysen,* Fraunhofer IMS, Germany	
3:00pm	**AM1-WeA-7** Novel Method to Quantify High Surface Area Microloading Effects on Film Conformality, ***Jussi Kinnunen,*** *Kalle Eskelinen,* Chipmetrics Oy, Finland; *Stefan Polzin,* Chipmetrics GmbH, Germany; *Feng Gao, Mikko Utriainen,* Chipmetrics Oy, Finland	
3:15pm	**AM1-WeA-8** High–Aspect–Ratio Integrations: A Path to Full Conformality from $HfCl_4$ and Select Oxidizers, ***Rong Zhao,*** *Eric Condo, Bryan Hendrix,* Entegris; *Jimmy Huang,* Entegris, Taiwan	
3:30pm	**BREAK**	
4:00pm	**AM2-WeA-11** Development and Validation of $MoCl_5$ Delivery Simulations: From Canister to Deposition Chamber, ***James Maslar,*** *Vladimir Khromchenko, Berc Kalanyan,* National Institute of Standards and Technology (NIST)	**ALD for Manufacturing** **Session AM2-WeA** **Digital Twins for ALD** **Moderators:** **Berc Kalanyan**, National Institute of Standards and Technology (NIST), **Pouyan Navabi**, University of Chicago
4:15pm	**AM2-WeA-12** Achieving Digital Twin in ALD by Combining AI, Computational Chemistry and Experimental Data, ***Luis Pinto,*** *Martin Siron,* Entalpic, France; *Tristan Deleu,* Entalpic, Canada; *Alexandre Duval,* Entalpic, France	
4:30pm	**AM2-WeA-13** Process Window Engineering for Void-Free STI Gap Filling Using Integrated PEALD and Virtual DOE, ***Wan Yu,*** *Xiaoxin Li, Pengfei Lyu, Yicheng Xie, Tong Lei, Jian Huang, Yushan Chi,* Lam Research Corporation, China	
4:45pm	**AM2-WeA-14** Closing Remarks and Award Presentations in HB Plant Ballroom	

Wednesday Afternoon, July 1, 2026

	Room Ybor Salons I-IV	
1:30pm	**AA-WeA-1** Nanolaminate Bragg Reflectors for Acoustic Phonons in the > 100 Ghz Range, ***John Murphy,*** *Jeremy Robinson, Maxim Zalalutdinov, Kyle Munson, Jeffrey Woodward,* U.S. Naval Research Laboratory	**ALD Applications** **Session AA-WeA** **Novel ALD Applications** **Moderators:** **Jessica Jones**, Argonne National Laboratory, **Austin Minnich**, Caltech
1:45pm	**AA-WeA-2** Next Generation ALD Functionalization of Lead-free MCPs for the Photomultiplier Tube: HRPPD, ***Stefan Cwik,*** *Melvin, J. Aviles, Stephen M. Clarke, Matthew Grden, Cole J. Hamel, Alexey V. Lyashenko, Mark A. Popecki,* Incom Inc.*; Jeffrey W. Elam,* Argonne National Laboratory, USA*; Michael J. Minot,* Incom Inc.	
2:00pm	**AA-WeA-3** Growing Grass for the Stars: Conformal Nanostructured Ar Coatings for Astronomical Micro-Optics*,* ***Ishan Rana (Graduate Student)****, Suvrath Mahadevan,* Pennsylvania State University	
2:15pm	**AA-WeA-4** Electrochemical Oxidation of Perfluorobutanoic Acid using ALD Thin Film Electrocatalysts Deposited on Reactive Electrochemical Membranes*,* ***Saurabh N Misal,*** Argonne National Laboratory, USA*; Atefeh Nadeali, Brian P Chaplin,* University of Illinois at Chicago*; Jeffrey W Elam,* Argonne National Laboratory, USA	
2:30pm	**AA-WeA-5** Development of an Atomic Layer Deposition System for Tritium Permeation Barriers on Arbitrary Geometries, ***Zachary Robinson,*** University of Rochester*; Jeffrey Woodward,* NRL*; Alexander Kozen,* University of Vermont*; Tyler Liao,* University of Rochester*; Soren Bentley,* UKAEA, UK*; Luke Herter, Rashad Ahmadov, Josh Ruby, Mark Wittman, Matthew Sharpe,* University of Rochester	
2:45pm	**AA-WeA-6** Argon Ion Implantation in ALD PbTe Thin Films for Phonon Engineering, ***Haifeng Cong (Graduate Student)****, Helmut Baumgart,* Old Dominion University	
3:00pm	**AA-WeA-7** Multifunctional Hierarchically Restructured Antibacterial Neural Interfacing Electrodes via Plasma-Enhanced Atomic Layer Deposition*,* ***Shahram Amini,*** Drexel University*; Feng Gang, Henna Khosla,* Villanova University*; Wesley Seche,* Drexel University*; Kriti Panchal, Steve May, Ekaterina Pomerantseva,* Drexel University*; Jacob Elmer,* Villanova University*; Gregory Caputo, Jeffrey Hettinger,* Rowan University	
3:15pm	**AA-WeA-8** ALD Al_2O_3 on Nanocellulose Substrates – Tailoring Barrier and Wetting Properties for Food Packaging, ***Hugo Patureau,*** SIMAP, Grenoble-INP, CNRS, France*; Chloé Parisi, Julien Bras,* LGP2, France*; Erwan Gicquel,* CILKOA, France*; Frédéric Mercier,* SIMAP, Grenoble-INP, CNRS, France*; Elisabeth Blanquet*, SIMAP, grenoble-INP, CNRS, France*; Arnaud Mantoux,* SIMAP, Grenoble-INP, CNRS, France	
3:30pm	**BREAK**	

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