Session Information

SESSION TITLE: Tutorial EL10—Materials, Metrology and Reliability for Advanced Packaging
SESSION TYPE: Tutorial
SESSION DAY & DATE: Sun 11/30/2025 8:30 AM
SESSION DURATION: 510
SESSION LOCATION: Hynes, Level 2, Room 206
SESSION HOST: Tutorial Organizer: Shubhra Bansal
Session Chair: Lavanya Arya
Tutorial Organizer: Nilesh Badwe
Session Chair: Masahiko Nishijima
SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging
SESSION ABBREVIATION: EL10.00

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4342488		Advanced Glass Panel Packaging	Kathaperumal, Mohanalingam	Tutorial Instructor	8:30 AM 10:00 AM	United States	90
		BREAK			10:00 AM 10:30 AM		30
4342489		Probing Next-Generation Packaging—Synchrotron Tools for Microstructural Analysis of Advanced Packages	Luktuke, Amey	Tutorial Instructor	10:30 AM 12:00 PM	United States	90
		BREAK			12:00 PM 1:30 PM		90
4342490		Engineering Materials and Metrology Tools for Thermal Management	Marconnet, Amy	Tutorial Instructor	1:30 PM 3:00 PM	United States	90
		BREAK			3:00 PM 3:30 PM		30
4342492		Advanced Packaging—Photonics and Reliability	Singh, Abhishek	Tutorial Instructor	3:30 PM 5:00 PM	United States	90

Session Information
SESSION TITLE: EL10.01: Materials in Heterogeneous Integration and Advanced Packaging I SESSION TYPE: Oral SESSION DAY & DATE: Mon 12/01/2025 10:30 AM SESSION DURATION: 90 SESSION LOCATION: Hynes, Level 2, Room 206 SESSION HOST: SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging SESSION ABBREVIATION: EL10.01

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4384283		The Future of Heterogeneous Integration—Material Needs and Challenges	Swaminathan, Madhavan	Invited Speaker	10:30 AM 11:00 AM	United States	30
4384212		Role of Materials in Advanced Packaging	Mahajan, Ravi	Invited Speaker	11:00 AM 11:30 AM	United States	30
4363048		Advanced Packaging Materials Innovation Through Co-Creative Evaluation Platform	Minami, Hisataka	Invited Speaker	11:30 AM 12:00 PM	United States	30

Session Information	
SESSION TITLE:	EL10.02: Substrates and Interposers
SESSION TYPE:	Oral
SESSION DAY & DATE:	Mon 12/01/2025 1:30 PM
SESSION DURATION:	120
SESSION LOCATION:	Hynes, Level 2, Room 206
SESSION HOST:	
SESSION TOPIC:	EL10: Materials for Heterogeneous Integration and Advanced Packaging
SESSION ABBREVIATION:	EL10.02

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4381689		Glass as an Advanced Microelectronics Packaging Substrate—Challenges and Solutions	Okoro, Chukwudi	Invited Speaker	1:30 PM 2:00 PM	United States	30
4375646		Semiconductor Packaging Process and Materials in the 2nm Era	Nonaka, Toshihisa	Invited Speaker	2:00 PM 2:30 PM	Japan	30
4385372		Material Challenges and Opportunities in Advanced Package Substrates	Seneviratne, Dilan	Invited Speaker	2:30 PM 3:00 PM	United States	30
		BREAK			3:00 PM 3:30 PM		30

Session Information
SESSION TITLE: EL10.03: WGB and UWBG Heterogeneous Integration I SESSION TYPE: Oral SESSION DAY & DATE: Mon 12/01/2025 3:30 PM SESSION DURATION: 90 SESSION LOCATION: Hynes, Level 2, Room 206 SESSION HOST: SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging SESSION ABBREVIATION: EL10.03

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4384609		Challenges and Solutions in High Voltage Wide Bandgap Electronics Packaging	Mantooth, Alan	Invited Speaker	3:30 PM 4:00 PM	United States	30
4375765		Band Alignment and Interfacial Properties of AlN/Diamond Heterostructures	Taqy, Saif Al Arafin	Oral Presentation Preferred	4:00 PM 4:15 PM	United States	15
4379683		Non-Thermal Alloyed Ohmic Contact Process on Si Doped β-Ga_2O_3 Grown by Pulsed Laser Deposition Technique	Taqy, Saif Al Arafin	Oral Presentation Preferred	4:15 PM 4:30 PM	United States	15
4378672		Selective Atomic Layer Etching of Epitaxial Graphene on Graphene Buffer Layer/SiC for Wafer-Scale Remote Epitaxy	Kim, Jaehyeon	Oral Presentation Preferred	4:30 PM 4:45 PM	United States	15
4378949		Heterointegration Strategies for Gallium Nitride Using 2D Interlayers	Lee, Seung Hoon	Oral Presentation Preferred	4:45 PM 5:00 PM	United States	15

Session Information
SESSION TITLE: EL10.04: Metrology and Reliability SESSION TYPE: Oral SESSION DAY & DATE: Tue 12/02/2025 8:00 AM SESSION DURATION: 240 SESSION LOCATION: Hynes, Level 2, Room 206 SESSION HOST: SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging SESSION ABBREVIATION: EL10.04

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4391203		Accelerating Packaging Innovation with Digital Twins	Stoffel, Nancy	Invited Speaker	8:00 AM 8:30 AM	United States	30
4378625		Ru+Airgap Interconnect Reliability: Mechanisms and Challenges	Varela Pedreira, Olalla	Invited Speaker	8:30 AM 9:00 AM	Belgium	30
4363386		High Resolution Imaging of Defects in Semiconductor Packaging—Detection, Reliability and Mitigation	Chawla, Nik	Invited Speaker	9:00 AM 9:30 AM	United States	30
4363810		Nanocharacterization for the Bonding Interface of Ag-Si Composite Joining by Scanning Transmission Electron Microscopy	Nishijima, Masahiko	Oral Presentation Preferred	9:30 AM 9:45 AM	Japan	15
4378754		Electromigration and Thermomigration Driven Failures in Cu Micro-Bumps with Sn-Ag Solder in Stacked Die Assembly	Bhuiyan, Faharia Hasan	Oral Presentation Preferred	9:45 AM 10:00 AM	United States	15
		BREAK			10:00 AM 10:30 AM		30
4372538		Metrology Matters—Shrinking Dimensions and the Expanding Role of Measurements in Electronic Packaging	Choksi, Gaurang	Invited Speaker	10:30 AM 11:00 AM	United States	30
4379754		Advancing Semiconductor Manufacturing with Photothermal AFM-IR	Kim, Jinhee	Invited Speaker	11:00 AM 11:30 AM	United States	30
4372253		Evaluation of Microstructural Evolution in Rapidly Solidified Ag-Si Alloys	Zhang, Yicheng	Oral Presentation Preferred	11:30 AM 11:45 AM	Japan	15
4376132		2D-Assisted Nanopatterned Epitaxy of Strain-Relaxed GaAs on Silicon—Insights from Electron Microscopy	Chang, Chen	Oral Presentation Preferred	11:45 AM 12:00 PM	United States	15

Session Information

SESSION TITLE: EL10.05: Planarization and Hybrid Bonding
SESSION TYPE: Oral
SESSION DAY & DATE: Tue 12/02/2025 1:30 PM
SESSION DURATION: 210
SESSION LOCATION: Hynes, Level 2, Room 206
SESSION HOST:
SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging
SESSION ABBREVIATION: EL10.05

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4375024		Hybrid Bonding Based on Polyimide	Araki, Hitoshi	Invited Speaker	1:30 PM 2:00 PM	Japan	30
4384607		Electrochemical Plating of Metastable Fine-Grained Cu for Cu-Cu Hybrid Bonding Applications	Richardson, Thomas	Invited Speaker	2:00 PM 2:30 PM	United States	30
4357100		Low-Temperature Direct Bonding Using Nanocrystalline Cu—Grain Size Engineering Through Electroplating	Kumar, Ankush	Oral Presentation Preferred	2:30 PM 2:45 PM	Taiwan	15
		BREAK			2:45 PM 3:15 PM		30
4381537		Materials and Processing for Chip-to-Wafer Hybrid Bonding	Mariappan, Murugesan	Invited Speaker	3:15 PM 3:45 PM	Japan	30
4377667		Investigating Ceria-Related Defects on SiO_2 Films from Nanoparticle Remnants and Tribofilms	Nguyen, Van Tuan	Oral Presentation Preferred	3:45 PM 4:00 PM	United States	15
4379020 (W)		WITHDRAWN 9/03/2025 EL10.05 Effect of Low Temperature Annealing on Directly Bonded LiTaO3/Si Substrates	Nazari, Pariya	Oral Presentation Preferred	4:00 PM 4:15 PM	Germany	15
4377431		A Comprehensive Study of Amino Acid Additives for Improved Selectivity in Shallow Trench Isolation CMP Processes	Nguyen, Van Tuan	Oral Presentation Preferred	4:15 PM 4:30 PM	United States	15
4405515		Wafer Level Substrates with Si-Core and Hybrid Organic/Inorganic Interconnect	Verhaverbeke, Steven	Invited Speaker	4:30 PM 5:00 PM	United States	30

Session Information
SESSION TITLE: EL10.06: Poster Spotlights: Materials for Heterogeneous Integration and Advanced Packaging SESSION TYPE: Oral SESSION DAY & DATE: Tue 12/02/2025 4:30 PM SESSION DURATION: 30 SESSION LOCATION: Hynes, Level 2, Room 206 SESSION HOST: SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging SESSION ABBREVIATION: EL10.06

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4395312		Poster Spotlight: Sn-Ag-Cu Based High Temperature Solder Alloys—Effect of Microalloying on Microstructure Evolution	Xie, Lijia	Poster Spotlight	4:30 PM 4:35 PM	United States	5
4395319		Poster Spotlight: TGV via Profile Control by Chemical Etching for Advanced Packaging of Microelectronic Devices	Lin, Chi-Feng	Poster Spotlight	4:35 PM 4:40 PM	Taiwan	5
4395322 (W)		WITHDRAWN 8/15/2025 EL10.06 Poster Spotlight: Nanoimprint-Patterned Polymeric Dielectrics for Fine-Pitch Hybrid Bonding	Lee, Sohwi	Poster Spotlight	4:40 PM 4:45 PM	Korea (the Republic of)	5
4395325		Poster Spotlight: Selective Copper Electroplating for Next-Generation Nanoelectronics and Heterogenous Integration	Ismail, Abdelrahman	Poster Spotlight	4:45 PM 4:50 PM	United States	5
4395331 (W)		WITHDRAWN 8/15/2025 EL10.06 Poster Spotlight: Mitigation of Chlorine-Induced Degradation Through Process Optimization of Residual Oxide Layers in DRAM	Huh, Juyoung	Poster Spotlight	4:50 PM 4:55 PM	Korea (the Republic of)	5
4395333		Poster Spotlight: Thermal Conductivity Enhancement in Polydimethylsiloxane/Hexagonal Boron Nitride Composites via Shear-Driven Alignment Control	Miri, An	Poster Spotlight	4:55 PM 5:00 PM	Korea (the Republic of)	5

Session Information
SESSION TITLE: EL10.07: Poster Session: Materials for Heterogeneous Integration and Advanced Packaging SESSION TYPE: Poster SESSION DAY & DATE: Tue 12/02/2025 7:00 PM SESSION DURATION: 120 SESSION LOCATION: Hynes, Level 1, Hall A SESSION HOST: SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging SESSION ABBREVIATION: EL10.07

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4357068		Mitigation of Chlorine-Induced Degradation Through Process Optimization of Residual Oxide Layers in DRAM	Huh, Juyoung	Poster Presentation Preferred	7:00 PM 9:00 PM	Korea (the Republic of)	0
4377341		Carbonized Polydopamine-Reinforced Copper-Based Composite Materials Manufactured by Powder Metallurgy	Debiemme-Chouvy, Catherine	Oral Presentation Preferred	7:00 PM 9:00 PM	France	0
4377356		Toward Monolithic GaN Power Electronics—GaN/AlGaN HEMTs on Si through Remote Epitaxy	Cho, Seong Ho	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4377564		Epitaxial Growth of Crystalline Ferroelectric Dielectric on 2D Semiconductors	Shin, June-Chul	Oral Presentation Preferred	7:00 PM 9:00 PM	United States	0
4378498		Band-Gap Engineered $CuFe_2O_4$/ZnSr-LDH Heterostructure for Visible-Light-Assisted Photoelectrochemical Sensing and Degradation of Sulfamethazine Antibiotic	Balu, Surendar	Oral Presentation Preferred	7:00 PM 9:00 PM	India	0
4379762		Unravelling Nanoplastics Mass Transport in Food Matrix—Molecular Insights into Diffusion, Adsorption and Interaction Mechanisms	Dosi, Raghav	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4379374		Investigating MgO as a Gate Dielectric for β-Ga_2O_3 MOS Devices—Insights from Structural, Optical and XPS Characterization	Tasnim, Ayesha	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4379352		Selective Copper Electroplating for Next-Generation Nanoelectronics and Heterogenous Integration	Ismail, Abdelrahman	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4357811		Atomic Layer Deposition of HfO2 Depending on Ozone Concentration with Seed Layer	Yoon, Hee Jun	Oral Presentation Preferred	7:00 PM 9:00 PM	Korea (the Republic of)	0
4379326		Growth and Characterization of High-Quality Epitaxial Functional Oxides on Silicon	Biswas, Dhiman	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4379314		Sustainable Synthesis of Silver-Coated Carbon Nanotubes for Printed Electronics	Nott, Evelyn	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4379053		Phase-Field Modeling of Electromigration-Induced IMC Growth and Void Nucleation in Cu Micro-Bump Interconnects	Guo, Haohan	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4378749		Thermal Conductivity Enhancement in Polydimethylsiloxane/Hexagonal Boron Nitride Composites via Shear-Driven Alignment Control	Miri, An	Poster Presentation Preferred	7:00 PM 9:00 PM	Korea (the Republic of)	0

4378518		Design Procedure to Decrease Radio Frequency (RF) Passive Component Footprints by Folding Using Additive Fabrication Techniques	D'Agati, Nathaniel	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4378388		Hybrid Additive Manufacturing of Metal Oxide TFTs with Precision Patterning and Multi-Material Integration	Agour, Ahmed	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4377994		Forceful Coordination of Organic Block Copolymers with Hydrophilic Silver Nanowires by Spray Drying—Top-Down Self-Assembly and Effects on Electron Transport	Paul, Tasmai	Poster Presentation Preferred	7:00 PM 9:00 PM	Germany	0
4377801		TGV via Profile Control by Chemical Etching for Advanced Packaging of Microelectronic Devices	Lin, Chi-Feng	Poster Presentation Preferred	7:00 PM 9:00 PM	Taiwan	0
4377643		Nanoimprint-Patterned Polymeric Dielectrics for Fine-Pitch Hybrid Bonding	Lee, Sohwi	Poster Presentation Preferred	7:00 PM 9:00 PM	Korea (the Republic of)	0
4377583		Atomic Layer Modification for Interface Engineering Between 2D Materials and Oxide Layers	Gong, Oh Yeong	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4377264		Additive System Packaging for Conformal RF Circuits	Unger, Lucas	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4376478		Enhancing Substrate-Specific Selectivity in Area-Selective Atomic Layer Deposition Using Amino Silane Inhibitors	Kim, Youngkwon	Poster Presentation Preferred	7:00 PM 9:00 PM	Korea (the Republic of)	0
4375362		Heterogeneous integration of III-Nitride and -Phosphide for Hybrid Vertically-Stacked RGB Full-Color Micro-LED Display	Min, Jung-Hong	Poster Presentation Preferred	7:00 PM 9:00 PM	Korea (the Republic of)	0
4377440		Sn-Ag-Cu Based High Temperature Solder Alloys—Effect of Microalloying on Microstructure Evolution	Xie, Lijia	Poster Presentation Preferred	7:00 PM 9:00 PM	United States	0
4378590		Chemical Vapor Deposited Copper Oxide Thin Films for Back End of Line Compatible p-Type Thin-Film Transistors	Nayak, Swagatika	Poster Presentation Preferred	7:00 PM 9:00 PM	India	0

Session Information

SESSION TITLE: EL10.08: Interconnect Materials and Methods
SESSION TYPE: Oral
SESSION DAY & DATE: Wed 12/03/2025 8:00 AM
SESSION DURATION: 150
SESSION LOCATION: Hynes, Level 2, Room 206
SESSION HOST:
SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging
SESSION ABBREVIATION: EL10.08

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4377409		Attempt to Reduce Board-Level Processing Defects and Improve Reliability for Large BGA Assembly in High Performance Computing Applications	Zhang, Hongwen	Invited Speaker	8:00 AM 8:30 AM	United States	30
4379741		Design of Low Melting Temperature Sn-Bi Solders for Heterogeneous Integration	Handwerker, Carol	Invited Speaker	8:30 AM 9:00 AM	United States	30
4378373		Effect of Alloying Elements on the Interfacial IMC Growth Between Sn-Bi Based Solders and Nanotwinned Copper	Badwe, Nilesh	Oral Presentation Preferred	9:00 AM 9:15 AM	India	15
4378938		Liquid-Based Additive Manufacturing of Interconnects and EMIB-Like Structures for 3D Heterogeneous Integration	Ozseker, G. Cagatay	Oral Presentation Preferred	9:15 AM 9:30 AM	United States	15
4375653 (W)		WITHDRAWN 9/02/2025 EL10.08 Liquid Quenched Ag-Si Alloy Developed for a New Bonding Material	Nakayama, Koji	Oral Presentation Preferred	9:30 AM 9:45 AM	Japan	15
4374954		Systematic Study of Alloying Additions on Temperature-Dependent Electrical Resistivity of Sn-Bi Based Solders	Badwe, Nilesh	Oral Presentation Preferred	9:45 AM 10:00 AM	India	15
		BREAK			10:00 AM 10:30 AM		30

Session Information
SESSION TITLE: EL10.09: Materials Design for Advanced Packaging SESSION TYPE: Oral SESSION DAY & DATE: Wed 12/03/2025 10:30 AM SESSION DURATION: 90 SESSION LOCATION: Hynes, Level 2, Room 206 SESSION HOST: SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging SESSION ABBREVIATION: EL10.09

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4379353		AI for Advanced Materials in Integration and Packaging	Pitera, Jed	Invited Speaker	10:30 AM 11:00 AM	United States	30
4363162		Accelerating the Design of New Materials for Semiconductor Manufacturing	Warren, James	Invited Speaker	11:00 AM 11:30 AM	United States	30
4373885		A Computational Strategy for Screening High-Selectivity Inhibitors in Area-Selective Atomic Layer Deposition on Amorphous Surfaces	Kim, Gijin	Oral Presentation Preferred	11:30 AM 11:45 AM	Korea (the Republic of)	15
4376223		Designing Liquid Metal Microstructure Through Direct Ink Writing for Multifunctional Soft Electronics	Hur, Ohnyoung	Oral Presentation Preferred	11:45 AM 12:00 PM	United States	15

Session Information	
SESSION TITLE:	EL10.10: Optoelectronics and Photonics
SESSION TYPE:	Oral
SESSION DAY & DATE:	Wed 12/03/2025 1:30 PM
SESSION DURATION:	120
SESSION LOCATION:	Hynes, Level 2, Room 206
SESSION HOST:	
SESSION TOPIC:	EL10: Materials for Heterogeneous Integration and Advanced Packaging
SESSION ABBREVIATION:	EL10.10

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4375652		Advanced Materials for High Performance Semiconductor Packages	Narahashi, Hirohisa	Invited Speaker	1:30 PM 2:00 PM	Japan	30
4374632		Vertically Stacked Flexible Interposer by Transfer Printing for Manufacturing Heterogeneous 3D Integrated Circuits	Lee, Myungwon	Oral Presentation Preferred	2:00 PM 2:15 PM	Korea (the Republic of)	15
4376436		Hybrid PDMS Stamp for Micro-LED Transfer	Ahn, Seol	Oral Presentation Preferred	2:15 PM 2:30 PM	Korea (the Republic of)	15
		SPECIAL BREAK - EXHIBIT HALL EVENT			2:30 PM 3:30 PM		60

Session Information
SESSION TITLE: EL10.11: Substrates and Interposers—Barriers and Interfaces
SESSION TYPE: Oral
SESSION DAY & DATE: Wed 12/03/2025 3:30 PM
SESSION DURATION: 90
SESSION LOCATION: Hynes, Level 2, Room 206
SESSION HOST:
SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging
SESSION ABBREVIATION: EL10.11

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4381750		Effects of Nanodiamond on Metal Oxidation and Corrosion—Part I Copper and Its Oxidation	Mutsuda, Mitsuteru	Invited Speaker	3:30 PM 4:00 PM	Japan	30
4379089		Robust Corrosion Resistant Packaging for Miniaturized Implantable Electronics via Cold Atmospheric Plasma Assisted SiO_x Nanocoatings	Rahman, Md Mahabubur	Oral Presentation Preferred	4:00 PM 4:15 PM	United States	15
4379134		Bridging Soft and Rigid Bioelectronics Through Conductive Sponge Interfaces	Shim, Hyung Joon	Oral Presentation Preferred	4:15 PM 4:30 PM	United States	15
4377518		Thermal Atomic Layer Deposition of TaS_x Films Using TBTEMT and H_2S for Cu Barrier/Liner Application	Azcatl Zacatzi, Angelica	Oral Presentation Preferred	4:30 PM 4:45 PM	United States	15
4378599		Development of Electrostatic Dissipative Silicone Resin Systems with Low Loading of Lossy Filler for Direct Ink Write Applications	Armas, Jeremy	Oral Presentation Preferred	4:45 PM 5:00 PM	United States	15

Session Information

SESSION TITLE: EL10.12: Thermal Management Materials
SESSION TYPE: Oral
SESSION DAY & DATE: Thu 12/04/2025 8:00 AM
SESSION DURATION: 150
SESSION LOCATION: Hynes, Level 2, Room 206
SESSION HOST:
SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging
SESSION ABBREVIATION: EL10.12

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4376168		Multifunctional Porous Architectures for Two-Phase Cooling and Heterogeneous Thermal Management in Next-Generation Power Electronics	Joshi, Shailesh	Invited Speaker	8:00 AM 8:30 AM	United States	30
4379940		Processing Technology of Insulation Layer for 2.xD Advanced Organic Packages	Nishiyama, Takashi	Invited Speaker	8:30 AM 9:00 AM	Japan	30
4375784		Direct Visualization of Local Thermal Conductivity and Thermal Boundary Conductance in Cu/Diamond Composites System	Min, Luke	Oral Presentation Preferred	9:00 AM 9:15 AM	United States	15
4377648		High-Thermal Conductivity BeO Grown by Discrete Feeding Atomic Layer Deposition for Heterogeneous Integration and Packaging	Jonghyun, Bae	Oral Presentation Preferred	9:15 AM 9:30 AM	Korea (the Republic of)	15
4378350		Fabrication, Architecture Design and Characterization of a New Al/Graphite Flakes-Carbon Fibre Composite Used for Thermal Management	Silvain, Jean-Francois	Oral Presentation Preferred	9:30 AM 9:45 AM	France	15
4379106		Degradation Kinetics of Thermal Interface Materials in Single-Phase Liquid Immersion Cooling Systems	Bhamidimarri, Manaswini	Oral Presentation Preferred	9:45 AM 10:00 AM	United States	15
		BREAK			10:00 AM 10:30 AM		30

Session Information

SESSION TITLE: EL10.13: Materials in Heterogeneous Integration and Advanced Packaging
SESSION TYPE: Oral
SESSION DAY & DATE: Thu 12/04/2025 10:30 AM
SESSION DURATION: 90
SESSION LOCATION: Hynes, Level 2, Room 206
SESSION HOST:
SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging
SESSION ABBREVIATION: EL10.13

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4375120		Heterogeneous Integration Requires Heterogeneous Materials—Key Challenges for Enabling Advanced Packaging	Gilmore, Chris	Invited Speaker	10:30 AM 11:00 AM	United States	30
4384606		Semiconductor Packaging Materials for Advanced Flip Chip and Heterogeneous Integration Devices	Champagne, Tim	Invited Speaker	11:00 AM 11:30 AM	United States	30
4381620		Enhancing System-Level Performance in Advanced Packaging—Innovations in Material Capabilities for High-Performance Computing and Sub-THz Communications	Pollard, Kimberly	Invited Speaker	11:30 AM 12:00 PM	United States	30

Session Information

SESSION TITLE: EL10.14: WBG and UWBG Heterogeneous Integration II
SESSION TYPE: Oral
SESSION DAY & DATE: Thu 12/04/2025 1:30 PM
SESSION DURATION: 165
SESSION LOCATION: Hynes, Level 2, Room 206
SESSION HOST:
SESSION TOPIC: EL10: Materials for Heterogeneous Integration and Advanced Packaging
SESSION ABBREVIATION: EL10.14

Control ID	Final ID	Title	Presenting Author	Presentation Type	Start/end time	PRESENTER (COUNTRY / REGION ONLY)	SESSION ABSTRACT DURATION
4377693		Materials Reliability for Heterogeneously Integrated Circuits in Harsh Environments	McCluskey, Francis	Invited Speaker	1:30 PM 2:00 PM	United States	30
4384439		Interface Integrity of Advanced Semiconductors for Automobile Applications	Suganuma, Katsuaki	Invited Speaker	2:00 PM 2:30 PM	Japan	30
4374467		Directed Self-Assembly Exploiting Combustion Synthesis for Next-Generation Nanomanufacturing	Dauskardt, Reinhold	Invited Speaker	2:30 PM 3:00 PM	United States	30
		BREAK			3:00 PM 3:30 PM		30
4375621		Single-Crystal TMDs-Based Monolithic 3D Integration and Opportunities for III-Vs	Kim, Kiseok	Oral Presentation Preferred	3:30 PM 3:45 PM	United States	15
4377611		Vertically Stacked RGB Micro-LEDs via Transfer Printed Semiconductor Sheets	Hong, Seong Woo	Oral Presentation Preferred	3:45 PM 4:00 PM	Korea (the Republic of)	15
4364964		Micro-Vacuum Suction Force-assisted Transfer Printing for Flexible and Soft Optoelectronics	Nam, Ki Yun	Oral Presentation Preferred	4:00 PM 4:15 PM	Korea (the Republic of)	15