

WEG & NAMBE 2024 Program Key

NAMBE NAMBE

WEG Workshop on Epitaxial Growth of Infrared Materials

WEG & NAMBE 2024 Program Overview

Room /Time	Cummings Ballroom	Cummings Lobby
SaM	WEG-SaM: Workshop on Epitaxial Growth of Infrared Materials: Industry Perspectives	
SaA	WEG-SaA: Workshop on Epitaxial Growth of Infrared Materials: IR Devices and Applications	
SaP		Poster Sessions
SuM	WEG1-SuM: Workshop on Epitaxial Growth of Infrared Materials: IR Superlattices I WEG-SuM2: Workshop on Epitaxial Growth of Infrared Materials: IR Superlattices II	
MoM	NAMBE1-MoM: Low Dimensional Materials NAMBE2-MoM: III-Vs	
MoA	NAMBE1-MoA: Small Bandgap Materials: Bismuthides and SiGeSn NAMBE2-MoA: Advances in In Situ Characterization NAMBE3-MoA: Late News I	
MoP		Poster Sessions
TuM	NAMBE1-TuM: Magnetism, Superconductivity, and Quantum Computing NAMBE2-TuM: Chalcogenides and Topological Materials	
TuA	NAMBE1-TuA: Oxides I NAMBE2-TuA: Oxides II	
WeM	NAMBE1-WeM: Nitrides NAMBE2-WeM: IR Materials and Devices (and SiGeSn)	
WeA	NAMBE1-WeA: Heterogeneous Integration NAMBE2-WeA: Late News II	

Saturday Morning, July 20, 2024

Workshop on Epitaxial Growth of Infrared Materials Room Cummings Ballroom - Session WEG-SaM Workshop on Epitaxial Growth of Infrared Materials: Industry Perspectives Moderator: Chadwick Canedy, Naval Research Laboratory		
9:45am	WEG-SaM-1 Welcome & Sponsor Thank You,	
10:00am	INVITED: WEG-SaM-2 Antimonide-based Infrared Materials: Needs, Challenges and Recent Progress, <i>Minh Nguyen</i> , HRL Laboratories	
10:15am		
10:30am	INVITED: WEG-SaM-4 MBE Growth of GaSb- and InP-based Infrared Epitaxial Structures at IQE, <i>Amy Liu, J. Fastenau, D. Lubyshev, S. Nelson, M. Feters, S. Cramb, W. Black</i> , IQE Inc.	
10:45am		
11:00am	INVITED: WEG-SaM-6 MBE HgCdTe: The Material Leading to High Performance Infrared Imaging Sensors, <i>Aristo Yulius</i> , Teledyne Imaging Sensors	
11:15am		
11:30am	INVITED: WEG-SaM-8 Status of Production MBE Capabilities for Infrared Applications at IntellIEPI, <i>Paul Pinsukanjana, J. Li, E. Fraser, J. Shao, S. Hill, M. Debnath, J. Middlebrooks, C. Chen, W. Li, K. Vargason, P. Chin, Y. Kao</i> , Intelligent Epitaxy Technology, Inc.	
11:45am		

Saturday Afternoon, July 20, 2024

Workshop on Epitaxial Growth of Infrared Materials Room Cummings Ballroom - Session WEG-SaA Workshop on Epitaxial Growth of Infrared Materials: IR Devices and Applications Moderator: Minh Nguyen, HRL Laboratories		
1:30pm	INVITED: WEG-SaA-1 The Quantum Cascade Laser Pumped Molecular Laser: A Widely Tunable THz Source, <i>Federico Capasso</i> , Harvard University	
1:45pm		
2:00pm	INVITED: WEG-SaA-3 MBE Growth of Midwave and Longwave Infrared Materials, <i>Chadwick Canedy</i> , <i>S. Tomasulo</i> , <i>C. Kim</i> , Naval Research Laboratory, USA; <i>M. Kim</i> , Jacobs Technologies Inc; <i>J. Massengale</i> , <i>A. Grede</i> , NRC Postdoctorate Residing at NRL; <i>W. Bewley</i> , <i>I. Vurgaftman</i> , <i>J. Meyer</i> , Naval Research Laboratory, USA	
2:15pm		
2:30pm	INVITED: WEG-SaA-5 MBE Digital Alloying for IR Avalanche Photodiodes, <i>Seth Bank</i> , University of Texas at Austin	
2:45pm		
3:00pm	INVITED: WEG-SaA-7 Epitaxial Quantum Dots for Infrared Emitters, <i>Sadhvikas Addamane</i> , <i>P. Iyer</i> , Sandia National Laboratories, USA; <i>S. Seth</i> , University of New Mexico; <i>O. Mitrofanov</i> , University College London, UK; <i>D. Shima</i> , University of New Mexico; <i>I. Brener</i> , Sandia National Laboratories; <i>G. Balakrishnan</i> , University of New Mexico	
3:15pm		

Workshop on Epitaxial Growth of Infrared Materials

Room Cummings Lobby - Session WEG-SaP

Workshop on Epitaxial Growth of Infrared Materials Poster

Session

4:00 – 6:00 pm

WEG-SaP-1 Thermoradiative Diodes: A Novel Application of Mid-Infrared Materials, **Stephen Bremner**, *M. Zlatinov, M. Nielsen, M. Sazzad, P. Reece, N. Ekin-Daukes*, UNSW Sydney, Australia

WEG-SaP-2 Low-temperature Epitaxial Growth of ZnTe and CdTe for Passivation of MWIR and LWIR Detectors, **Oleg Maksimov**, *H. Bhandari*, Radiation Monitoring Devices

WEG-SaP-3 CdTe/InSb(211) Virtual Substrates for IR Detector Application, **Tyler McCarthy**, *Z. Ju, A. McMinn*, Arizona State University; *R. Kodama, F. Aqariden, P. Liao, P. Mitra*, Leonardo DRS; *Y. zhang*, Arizona State University

Sunday Morning, July 21, 2024

Room Cummings Ballroom		
8:45am	WEG1-SuM-1 Welcome & Sponsor Thank Yous	Workshop on Epitaxial Growth of Infrared Materials Session WEG1-SuM Workshop on Epitaxial Growth of Infrared Materials: IR Superlattices I Moderator: Stephanie Tomasulo, U.S. Naval Research Laboratory
9:00am	INVITED: WEG1-SuM-2 A Brief Review of InAs/InAsSb Type-II Superlattice: Its Electronic Properties and Applications in IR Photodetectors, <i>Yong-Hang Zhang</i> , Arizona State University	
9:15am		
9:30am	INVITED: WEG1-SuM-4 MBE Based Superlattice Photodetectors, <i>Philip Klipstein</i> , Semiconductor Devices, Israel	
9:45am		
10:00am	BREAK	
10:15am		
10:30am	INVITED: WEG-SuM2-8 Antimonide Superlattices and Avalanche Photodiodes: Paving the Way for the 4th Gen of Infrared Detectors?, <i>Sanjay Krishna</i> , Ohio State University	Workshop on Epitaxial Growth of Infrared Materials Session WEG-SuM2 Workshop on Epitaxial Growth of Infrared Materials: IR Superlattices II Moderator: Philip Klipstein, Semiconductor Devices, Israel
10:45am		
11:00am	INVITED: WEG-SuM2-10 Molecular Beam Epitaxy of Antimonides for Mid-to-Long Wavelength Infrared Sensing, <i>Stephanie Tomasulo, M. Twigg, A. Grede, W. Bewley, J. Massengale, I. Vurgatman</i> , U.S. Naval Research Laboratory; <i>J. Nolde</i> , U.S. Naval Research Lab	
11:15am		
11:30am	WEG-SuM2-12 Panel Discussion	
11:45am		
12:00pm		
12:15pm	WEG-SuM2-15 Closing Remarks & Sponsor Thank Yous	

Monday Morning, July 22, 2024

Room Cummings Ballroom		
8:00am	NAMBE1-MoM-1 Welcome & Sponsor Thank Yous	NAMBE Session NAMBE1-MoM Low Dimensional Materials Moderator: Badih A. Assaf, University of Notre Dame
8:15am	INVITED: NAMBE1-MoM-2 Art Gossard MBE Innovator Awardee Talk,	
8:30am		
8:45am	NAMBE1-MoM-4 Site-Templated MBE Grown InAs/GaAs Quantum Dot Platforms with Spectral Homogeneity and Tunability, Nazifa Tasnim Arony , University of Delaware; L. McCabe , University of Delaware (Now working at Yale University); J. Rajagopal , L. Murray , L. Mai , P. Ramesh , T. Long , M. Doty , J. Zide , University of Delaware	
9:00am	NAMBE1-MoM-5 Site Controlled InAs/GaAs Quantum Dots for Photonic Integration, Ian Farrer , C. Chan , A. Verma , A. Trapalis , C. Oviden , D. Hallett , E. Clarke , M. Skolnick , J. Heffernan , University of Sheffield, UK	
9:15am	NAMBE1-MoM-6 Commercializing Nanowire LEDs, David Laleyan , B. Le , G. Frolov , NS Nanotech Canada; M. Stevenson , S. Coe-Sullivan , NS Nanotech	
9:30am	NAMBE1-MoM-7 Epitaxial Ge Membranes Detachment via Porous Ge Layer and Adhesion Force Engineering, Ahmed Ayari , T. Hanuš , N. Paupy , F. Zouaghi , 1-Institut Interdisciplinaire d'Innovation Technologique (3IT), Université de Sherbrooke, 2-Laboratoire Nanotechnologies Nanosystèmes (LN2)-IRL3463, CNRS, Université de Sherbrooke., Canada; B. Ilahi , 1-Institut Interdisciplinaire d'Innovation Technologique (3IT), Université de Sherbrooke, 2-Laboratoire Nanotechnologies Nanosystèmes (LN2)-IRL3463, CNRS, Université de Sherbrooke., Canada 3-DistriQ - Zone d'Innovation Quantique, Canada; J. Cho , K. Dessein , Umicore Electro-Optic Materials, Belgium; D. Machon , 1-Institut Interdisciplinaire d'Innovation Technologique (3IT), Université de Sherbrooke, 2-Laboratoire Nanotechnologies Nanosystèmes (LN2)-IRL3463, CNRS, Université de Sherbrooke., Canada 3-Université de Lyon, INSA Lyon, CNRS., Canada; A. Boucherif , 1-Institut Interdisciplinaire d'Innovation Technologique (3IT), Université de Sherbrooke, 2-Laboratoire Nanotechnologies Nanosystèmes (LN2)-IRL3463, CNRS, Université de Sherbrooke., Canada	
9:45am	NAMBE1-MoM-8 Synthesis of InSe Thin Films on Sapphire using Molecular Beam Epitaxy, Emily Toph , C. Voigt , Georgia Institute of Technology; B. Wagner , Georgia Tech Research Institute; E. Vogel , Georgia Institute of Technology	
10:00am	BREAK & EXHIBITS	NAMBE Session NAMBE2-MoM III-Vs Moderator: Eric Jin, Naval Research Laboratory
10:15am		
10:30am	NAMBE2-MoM-11 Exploring MBE Growth Parameters and Material Quality of III-V Topological Insulators Grown on GaSb(111)A Substrates, James R Rushing , L. Qui , Tufts University; X. Xie , tufts University; T. Menasuta , J. Mcelearnay , P. Simmonds , Tufts University	
10:45am	NAMBE2-MoM-12 Molecular Beam Epitaxy Growth and Regrowth of InAs/Al Heterostructures, Ido Levy , New York University; J. Issokson , New York University; A. Danilenko , P. Strohbeen , T. Cowan , New York University; W. Strickland , New York University; L. Baker , M. Mikalsen , J. Shabani , New York University	
11:00am	NAMBE2-MoM-13 Engineering MBE Structures for Ultraclean 2D Hole Systems with Mobilities Exceeding 10^7 cm ² /Vs, Adbhut Gupta , C. Wang , S. Singh , K. Baldwin , Princeton University; R. Winkler , Northern Illinois University; M. Shayegan , L. Pfeiffer , Princeton University	
11:15am	NAMBE2-MoM-14 Selective Area Regrowth of High Aspect Ratio Microstructures for Mid-Infrared Optoelectronics, Ashlee Garcia , B. Aguilar , W. Doyle , University of Texas at Austin; Y. Wang , University of Illinois at Urbana-Champaign; D. Ironside , A. Skipper , M. Berghold , University of Texas at Austin; M. Lee , University of Illinois at Urbana-Champaign; D. Wasserman , S. Bank , University of Texas at Austin	
11:30am	NAMBE2-MoM-15 Shadow Mask Molecular Beam Epitaxy, S. Mukherjee , R. Sitaram , X. Wang , University of Delaware; Stephanie Law , Penn State University	
11:45am	NAMBE2-MoM-16 Electron Microscopy Characterization of GaSb islands on Silicon substrates grown via Molecular Beam Epitaxy, Mega Frost , S. Seth , F. Ince , University of New Mexico; N. Arony , L. Mai , University of Delaware; D. Shima , T. Rotter , University of New Mexico; M. Doty , J. Zide , University of Delaware; G. Balakrishnan , University of New Mexico	

Monday Afternoon, July 22, 2024

Room Cummings Ballroom		
1:30pm	NAMBE1-MoA-1 Determination of the Temperature Dependent Complex Refractive Index of GaSbBi Films by Variable Angle Spectroscopic Ellipsometry, <i>John McElearney, K. Grossklous, T. Vandervelde</i> , Tufts University	NAMBE Session NAMBE1-MoA Small Bandgap Materials: Bismuthides and SiGeSn Moderator: Kevin A. Grossklous , MIT Lincoln Laboratory
1:45pm	NAMBE1-MoA-2 Interplay of Al and Bi Incorporation in AlInSbBi, <i>Amberly Ricks, R. White</i> , University of Texas at Austin; <i>H. Hijazi</i> , Rutgers University; <i>S. Bank</i> , University of Texas at Austin	
2:00pm	NAMBE1-MoA-3 Growth of GaBi Thin Films via Molecular Beam Epitaxy, <i>Molly McDonough, S. Law</i> , Pennsylvania State University	
2:15pm	NAMBE1-MoA-4 Long-Wave Infrared Sensing via InSb-Based Dilute-Bismide Alloys, <i>Corey White, M. Berghold, A. Ricks, F. Estévez, D. Wasserman, S. Bank</i> , The University of Texas at Austin	
2:30pm	NAMBE1-MoA-5 GePb Alloys Grown using Molecular Beam Epitaxy for Infrared Photodetector Applications, <i>Tyler McCarthy, A. McMinn</i> , Arizona State University; <i>X. Liu, R. Hossain, X. Qi</i> , arizona state University; <i>Z. Ju</i> , Arizona State University; <i>Y. Zhang</i> , arizona state University	
2:45pm	NAMBE1-MoA-6 Temperature Dependent Optical Constants of Germanium-Tin Alloys, <i>Amanda Lemire</i> , Tufts University; <i>K. Grossklous</i> , MIT Lincoln Laboratory; <i>T. Vandervelde</i> , Tufts University	
3:00pm	BREAK & EXHIBITS	
3:15pm		
3:30pm	NAMBE2-MoA-9 Principal Component Analysis of Rheed as an Indicator of Process Change During Molecular Beam Epitaxial Growth, <i>Kurt Eyink, Y. Zhang, K. Mahalingam, R. Bedford</i> , Air Force Research Laboratory, Materials and Manufacturing Directorate, USA	NAMBE Session NAMBE2-MoA Advances in In Situ Characterization Moderator: Zachary LaDuca , University of Wisconsin - Madison
3:45pm	NAMBE2-MoA-10 Automated Machine Learning of in-Situ RHEED Data Provides Real-Time Guidance for Materials Growth Optimization, <i>Christopher Price, J. Munro</i> , Atomic Data Sciences; <i>G. Zhou, Y. Li, C. Hinkle</i> , University of Notre Dame	
4:00pm	NAMBE2-MoA-11 On-the-Fly Analysis of RHEED Images During Deposition Using Artificial Intelligence, <i>Tiffany Kaspar</i> , Pacific Northwest National Lab; <i>J. Pope, S. Akers, H. Sprueill, A. Ter-Petrosyan, D. Hopkins</i> , Pacific Northwest National Laboratory	
4:15pm	NAMBE2-MoA-12 The Development of Order and Interfaces During Oxide MBE Growth: Real Time X-Ray Diffraction Measurements, <i>Hawoong Hong, D. Fong, A. Bhattacharya</i> , Argonne National Laboratory	
4:30pm	NAMBE3-MoA-13 James S. Harris NAMBE Student Paper Awardee Talk	NAMBE Session NAMBE3-MoA Late News I Moderator: John McElearney , Tufts University
4:45pm		
5:00pm	NAMBE3-MoA-15 Interfacial Misfit Arrays in Ternary III-V Compounds for Virtual Substrates on Si with Arbitrary Lattice Constant, <i>Trent Garrett</i> , Boise State University; <i>J. Rushing</i> , Tufts University; <i>J. Tenorio</i> , Boise State University; <i>P. Simmonds</i> , Tufts University	

NAMBE

Room Cummings Lobby - Session NAMBE-MoP

NAMBE Poster Session

5:15 – 7:00 pm

NAMBE-MoP-1 Synthesis and Characterization of Molybdate Pyrochlore Thin Films, *Kyeong-Yoon Baek, M. Anderson, C. Brooks, J. Mundy*, Harvard University

NAMBE-MoP-2 Growth of InGaBiAs for Extended Short Wave Infrared Photodetectors, *Mrudul Parasnis, J. Bork, M. Islam, A. Razi, N. Babikir, J. Phillips, J. Zide*, University of Delaware

NAMBE-MoP-3 Investigating the Influence of Bismuth Surfactant on InSb Thin Films for Mid-Infrared Devices Applications, *Pan Menasuta, J. McElearney*, Tufts University; *K. Grossklaus*, Lincoln Lab; *T. Vandervelde*, Tufts University

NAMBE-MoP-4 Surface Stability of Thin Film Tin Selenide, *Jonathan Chin, B. Gardner, M. Frye, J. Wahl, D. Liu*, Georgia Institute of Technology; *S. Marini*, Cornell University; *J. Shallenberger*, The Pennsylvania State University; *M. Hilse*, Pennsylvania State University; *S. Law*, The Pennsylvania State University; *L. Garten*, Georgia Institute of Technology

NAMBE-MoP-5 Si / TiN Backside Thermal Absorbers for MBEGrowth on Transparent Substrates, *D. Scott Katzer, M. Hardy, N. Nepal, E. Jin, D. Meyer, V. Wheeler*, US Naval Research Laboratory

NAMBE-MoP-6 Verification of Epitaxially Grown InAs/GaN/Sb Topological Insulators using Spectroscopic Ellipsometry, *Lawrence Qiu, P. Simmonds, J. Rushing, X. Xie*, Tufts University

NAMBE-MoP-7 Investigation of Tunable Parameters Influence in InAs/GaN/Sb Quantum Wells Heterostructure, *Xikai Xie, P. Simmonds*, Tufts University

NAMBE-MoP-8 Exploring In situ Aluminum Deposition Kinetics on InSb Substrates for Hybrid Superconductor/Semiconductor Materials Systems, *Ahmed Elbaroudy*, University of Waterloo, Canada

NAMBE-MoP-9 Phases Control of Epitaxial MnTe through Buffer Layers, *Yuxing Ren, H. Huang, L. Tai, Q. Tao, K. Wang*, University of California at Los Angeles

NAMBE-MoP-10 Self-Bias Bi-Directional Photocurrent Switching Effect in Epitaxial GaN-NWn, *PARGAM VASHISHTHA*, RMIT University, Australia; *G. Gupta*, CSIR-National Physical Laboratory, India; *S. Walia*, RMIT University, Australia

NAMBE-MoP-11 Systematic Study on Synthesis of High Quality SnTe Layers by Molecular Beam Epitaxy, *Qihua Zhang, M. Hilse, J. Gray, M. Stanley, N. Samarth, S. Law*, Pennsylvania State University

NAMBE-MoP-12 Single-Mode Interband Cascade Lasers for Environmental Gas Sensors, *Stefania Isceri, G. Marschick, M. Giparakis, W. Schrenk*, Technische Universität Wien, Austria; *S. Höfling*, Universität Würzburg, Germany; *J. Koeth, R. Weih*, nanoplus Advanced Photonics Gerbrunn GmbH, Germany; *E. Kolibalova, J. Michalicka*, CEITEC, Czechia; *B. Schwarz, G. Strasser, A. Andrews*, Technische Universität Wien, Austria

NAMBE-MoP-13 Self-Limiting Stoichiometry of SnSe Thin Films, *Jonathan Chin, M. Frye, J. Wahl*, Georgia Institute of Technology; *D. Liu, M. Hilse*, The Pennsylvania State University; *I. Graham*, Georgia Institute of Technology; *J. Shallenberger, K. Wang*, The Pennsylvania State University; *R. Engel-Herbert*, Paul-Drude-Institut für Festkörperelektronik Leibniz-Institut im Forschungsverbund Berlin, Germany; *M. Wang*, The Pennsylvania State University; *Y. Shin*, Pennsylvania State University; *N. Nayir*, Istanbul Technical University, Turkey; *S. Law, A. van Duin*, The Pennsylvania State University; *L. Garten*, Georgia Institute of Technology

NAMBE-MoP-14 In Situ Curvature Measurement: A Great Breakthrough for MBE Growth Monitoring, *Romain Bruder, Y. Rousseau*, RIBER, France

NAMBE-MoP-15 Synthesis and Transport Properties of Doped Samarium Nitride Thin Films, *Kevin Vallejo, Z. Cresswell, B. May, V. Buturlim, S. Regmi, K. Gofryk*, Idaho National Laboratory

NAMBE-MoP-16 Tunable Ordering of 2D Tin on Silicon, *Caitlin McCowan, S. Misra*, Sandia National Laboratories

NAMBE-MoP-17 Continuous Wave Lasing from Individual InAs Nanowires, *Steffen Meder*, Technical University Munich, Germany

NAMBE-MoP-18 Impact of Growth Temperature on the Formation of AlGaIn During the MME Growth of AlN/AlGaIn Short Period Superlattice Structures, *Alexander Chaney, S. Mou, K. Averett, T. Asel*, Air Force Research Laboratory, Materials and Manufacturing Directorate, USA

NAMBE-MoP-19 Buffer Layer Approach for Smooth GaSe Epitaxial Films on GaAs (111) B, *Joshua Eickhoff*, University of Wisconsin; *M. Yu, M. Hilse, S. Law*, Penn State University; *D. Rhodes, J. Kawasaki*, University of Wisconsin - Madison

NAMBE-MoP-20 Incorporating ErAs Into InGaAlBiAs Material by Interrupted Growth: Effects on Optical and Electronic Properties Targeting Terahertz Pulse Emitters and Detectors for Telecom Wavelength Excitation, *Wilder Acuna, W. Wu, J. Bork, M. Doty, M. Jungfleisch, L. Gundlach, J. Zide*, University of Delaware

NAMBE-MoP-21 Ferromagnetic Nanostructures Formation by Metal Modulated Epitaxy of AlN:Mn, *Jesús Fernando Fabian Jacobi, S. Gallardo Hernández, A. Cande Gallardo*, CINVESTAV, Mexico; *D. Olguin Melo*, CINVESTAV-Queretaro, Mexico; *Y. Casallas Moreno*, UPIITA - Unidad Profesional Interdisciplinaria en Ingeniería y Tecnologías Avanzadas IPN, Mexico; *M. Zambrano Serrano, M. López López*, CINVESTAV, Mexico

NAMBE-MoP-22 Ultralow Threshold Surface Emitting Ultraviolet Lasing by Low-Temperature Selective Area Epitaxy of GaN Nanowires, *Mohammad Fazel Vafadar, S. Zhao*, McGill University, Canada

NAMBE-MoP-23 Trade-Off between Hall Sensitivity and Frequency Limit of Two-Dimensional Electron Gas Iii-Nitride Hall Effect Sensor, *Satish Shetty*, Institute for Nanoscience and Engineering, University of Arkansas, Fayetteville, AR, 72701, USA; *A. Hassan*, Department of Electrical Engineering, University of Arkansas, Fayetteville, AR, 72701, USA; *Y. Mazur*, Institute for Nanoscience and Engineering, University of Arkansas, Fayetteville, AR, 72701, USA; *H. Mantooth*, Department of Electrical Engineering, University of Arkansas, Fayetteville, AR, 72701, USA; *G. Salamo*, Institute for Nanoscience and Engineering, University of Arkansas, Fayetteville, AR, 72701, USA

NAMBE-MoP-24 Photonic Crystal Surface Emitting Lasers (PCSELS) based on InAs Quantum Dots-in-a-Well, *Thomas J Rotter, S. Seth, K. Reilly, F. Ince*, Center for High Technology Materials, The University of New Mexico, Albuquerque, NM; *A. Kalapala, C. Gautam, Z. Liu*, Department of Electrical Engineering, The University of Texas at Arlington, Arlington, TX; *S. Addamane*, Center for Integrated Nanotechnologies, Sandia National Laboratories, Albuquerque, NM; *W. Zhou*, Department of Electrical Engineering, The University of Texas at Arlington, Arlington, TX; *G. Balakrishnan*, Center for High Technology Materials, The University of New Mexico, Albuquerque, NM

NAMBE-MoP-25 Determination of Optical Properties and Band Structure Parameters of MBE-grown InAs and InAsSb Bulk and InAs/InAsSb and InGaAs/InAsSb Superlattices from Photoluminescence Lineshape, *Marko Milosavljevic*, Arizona State University; *P. Webster*, Air Force Research Lab; *S. Johnson*, Arizona State University

NAMBE-MoP-26 Comparative Study of the Temperature Quenching of the Excitonic Emission of CdSe and ZnCdSe Quantum Wells, *J. Pérez-Saavedra, Y. Vázquez-Soto, F. Sutara, Isaac Hernández-Calderón*, CINVESTAV, Mexico

NAMBE-MoP-27 Mbe Epitaxy Solution of the Quantum Well Heterostructure: Atomistic Tnl-Epigrow Simulator, *Praveen Kumar Saxena*, Tech Next Lab, Lucknow, India; *P. Srivastava, A. Srivastava*, Tech Next Lab, India

NAMBE-MoP-28 Room Temperature Extended Shortwave Infrared Light Emitting Diode, *M. Benker*, Applied NanoFemto Technologies LLC; *G. Gu*, Stonehill College; *Xuejun Lu*, University of Massachusetts - Lowell

NAMBE-MoP-29 Infrared Plasmon-Polariton Modes in Hyperbolic Metamaterials Made from Patterned Doped/Undoped InAs Multilayers, *E. Caudill*, University of Oklahoma; *M. Lloyd*, US Naval Research Laboratory; *K. Arledge, T. Mishima, C. Caillide*, University of Oklahoma; *J. Nolde, C. Ellis*, US Naval Research Laboratory; *P. Weerasinghe, T. Golding*, Amethyst Research Inc; *J. Murphy*, US Naval Research Laboratory; *Michael Santos, J. Tischler*, University of Oklahoma

NAMBE-MoP-30 Impact Ionization Coefficients in Al_{0.9}Ga_{0.1}Sb_{0.08}Sb_{0.92} Lattice Matched to GaSb, *Jingze Zhao, E. Portyankin, L. Sheterengas, D. Donetski, G. Kipshidze, G. Belenky*, Stony Brook University/Brookhaven National Laboratory

NAMBE-MoP-31 High-Mobility III-V Core-Shell Nanowire Heterostructures for Thermoelectric Energy Conversion, *Genet Bacha Hirpessa*, Technical University of Munich, Germany; *S. Fust, R. Maier*, Technical University Munich, Germany; *F. Del Guidice, J. Finley*, Technical University of Munich, Germany; *G. Koblmüller*, Technical University Munich, Germany

NAMBE-MoP-32 Wafer Scale GaAs/AlGaAs Core-Shell Nanowires on 2-inch Si Substrate Showing Efficient Light Emission/Absorption with High Thermal Stability, *Keisuke Minehisa, H. Hashimoto, K. Nakama*, Research Center for Integrated Quantum Electronics, Hokkaido University, Japan; *H. Kise, S. Sato, J. Takayama, S. Hiura, A. Murayama, F. Ishikawa*, Faculty of Information Science and Technology, Hokkaido University, Japan

NAMBE-MoP-33 Optimizing Growth on GaAs (111)B for Enhanced Parametric Downconversion Efficiency in Quantum Optical Metasurfaces, *Trevor Blaikie*, University of Waterloo, Canada; *S. Stich*, Walter Schottky Institut, Technische Universität München, Germany; *M. Tam*, University of Waterloo, Canada; *M. Belkin*, Walter Schottky Institut, Technische Universität München, Germany; *M. Chekhova*, Max-Planck-Institut für die Physik des Lichts, Germany; *Z. Wasilewski*, University of Waterloo, Canada

Monday Evening, July 22, 2024

NAMBE-MoP-34 Magnetization Switching Behavior in Anisotropy Gradient GaMnAsP Film Grown by Molecular Beam Epitaxy, *Kyung Jae Lee*, Korea University, Canada; *S. Lee*, Korea University, Germany; *X. Liu*, University of Notre Dame, Canada; *M. Dobrowolska, J. Furdyna*, University of Notre Dame, Germany

NAMBE-MoP-35 Growth, Electrical and Optical Properties of SrMoO₃ Grown by Suboxide Molecular Beam Epitaxy, *Roman Engel-Herbert*, Paul-Drude-Institute for Solid State Electronics, Leibniz Institute within the Forschungsverbund Berlin, Germany; *T. Kuznetsova, J. Roth, J. Lapano, A. Pogrebnyakov*, Penn State University

NAMBE-MoP-36 Modeling and Characterization of GaAsSb/InGaAs 'W'-Quantum Wells with GaAsP Strain Compensated Layers, *Z. Li, T. Lo, Charles W. Tu*, National Chung Hsing University, Taiwan

Tuesday Morning, July 23, 2024

Room Cummings Ballroom		
8:15am	NAMBE1-TuM-1 Welcome & Sponsor Thank You	NAMBE Session NAMBE1-TuM Magnetism, Superconductivity, and Quantum Computing Moderator: Patrick Strohbeen, New York University
8:30am	INVITED: NAMBE1-TuM-2 NAMBE Young Investigator Awardee Talk,	
8:45am		
9:00am	NAMBE1-TuM-4 MBE Synthesis of Altermagnetic MnTe Exhibiting an Anomalous Hall Effect, <i>S. Bey, X. Liu</i> , University of Notre Dame; <i>A. Ievlev</i> , Oak Ridge National Laboratory; <i>S. Bennett</i> , Naval Research Laboratory; <i>M. Zhukovskiy, T. Orlova, Badih A. Assaf</i> , University of Notre Dame	
9:15am	NAMBE1-TuM-5 Lateral Strain and Magnetism Patterning in Flexomagnetic GdAuGe Thin Films via Helium Ion Implantation, <i>Zachary LaDuca, T. Samanta, T. Jung</i> , University of Wisconsin - Madison; <i>M. Brahlek, T. Ward, A. Chen</i> , Oak Ridge National Laboratory; <i>N. Hagopain, F. Fei, T. Xi, K. Su, M. Arnold, P. Voyles, J. Xiao, J. Kawasaki</i> , University of Wisconsin - Madison	
9:30am	NAMBE1-TuM-6 Synthesis and Fabrication of Superconducting Germanium Alloys for Quantum Information, <i>Patrick Strohbeen, J. van Dijk, I. Levy, M. Mikalsen, A. Daniilenko, W. Schiela, J. Shabani</i> , New York University	
9:45am	NAMBE1-TuM-7 Molecular Beam Epitaxy Growth of Al and Ta Multilayers for Superconducting Qubits, <i>Kevin A. Grossklous, D. Miller, L. Burkhart, A. Sabbah, M. Gingras, B. Nidezielski, C. O'Connell, H. Stickler, D. Calawa, A. Melville</i> , MIT Lincoln Laboratory; <i>A. Goswami</i> , Massachusetts Institute of Technology; <i>D. Kim, J. Yoder, M. Schwartz</i> , MIT Lincoln Laboratory; <i>W. Oliver</i> , Massachusetts Institute of Technology; <i>K. Serniak</i> , MIT Lincoln Laboratory	
10:00am	NAMBE1-TuM-8 Electrical, Magnetic, and Thermoelectric Characterizations of Strange Metallicity in Epitaxial Thin Film Kagome Intermetallics, <i>Minyong Han, C. John, J. Zheng, S. Fang, J. Checkelsky</i> , Massachusetts Institute of Technology	
10:15am	BREAK & EXHIBITS	
10:30am		
10:45am	NAMBE2-TuM-11 Rhombohedral-to-Cubic Phase Transition in $Ge_{1-x}In_xTe$ Thin Films Grown by MBE, <i>Xinyu Liu, K. Yoshimura, S. Bey, M. Abdu Karim, J. Wang, L. Riney, M. Zhukovskiy, T. Orlova, B. Assaf</i> , University of Notre Dame	NAMBE Session NAMBE2-TuM Chalcogenides and Topological Materials Moderator: Stephanie Law, Penn State University
11:00am	NAMBE2-TuM-12 Coherent strain through quasi van der Waals Epitaxy of magnetic topological insulators Cr: $(Bi_xSb_{1-x})_2Te_3$ on a GaAs (111) substrate and the influence from growth windows, <i>Yuxing Ren, K. Pan, Y. Chen, J. Kang, B. Regan, C. Wang, M. Goorsky, K. Wang</i> , University of California at Los Angeles	
11:15am	NAMBE2-TuM-13 Epitaxial Hexagonal $BaZrSe_3$ Thin Films with Strong Birefringence in-Plane, <i>Ida Sadeghi, V. Kamboj</i> , MIT; <i>T. Simonian</i> , College Green, Ireland; <i>J. Van Sambeek, M. Xu</i> , MIT; <i>V. Nicolosi</i> , College Green, Ireland; <i>J. LeBeau, R. Jaramillo</i> , MIT	
11:30am	NAMBE2-TuM-14 Quasi-Van Der Waals Epitaxial Growth of Thin γ' -Gase Films, <i>Mingyu Yu</i> , University of Delaware; <i>S. Law</i> , Pennsylvania State University	
11:45am	NAMBE2-TuM-15 Response of Topologically Protected Helical Modes in Monolayer WTe_2 to Band-gap Tuning, <i>Yulia Maximenko</i> , Colorado State University; <i>Y. Chang</i> , Rutgers University; <i>M. Hirsbrunner, L. Wagner, V. Madhavan, T. Hughes</i> , University of Illinois at Urbana Champaign	
12:00pm	NAMBE2-TuM-16 Phase-selective Growth of the Topological Insulators Bi_2Te_3 and Bi_4Te_3 for Integration with the Superconductor $Fe(Te,Se)$, <i>Matthew Brahlek, J. Chen, J. Lu</i> , Oak Ridge National Laboratory; <i>R. Moore</i> , Oak Ridge National Laboratory	
12:15pm	NAMBE2-TuM-17 Origin of the high Curie Temperature in $(Sb_2Te_3)_{1-x}(MnSb_2Te_4)_x$ structures grown by molecular beam epitaxy, <i>Candice Forrester</i> , The Graduate Center (CUNY); <i>C. Testelin</i> , CNRS, France; <i>K. Wickramasinghe</i> , City College of New York, City University of New York; <i>S. Mohammadi</i> , The Graduate Center (CUNY); <i>M. Tamargo</i> , City College of New York, City University of New York	

Tuesday Afternoon, July 23, 2024

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2:00pm	NAMBE1-TuA-1 Plasma Assisted Molecular Beam Epitaxial Growth of β -Ga ₂ O ₃ (100) Thin Films on MgO(100) Substrates, <i>Seth Hibbert, R. Reeves, M. Allen</i> , University of Canterbury, New Zealand	NAMBE Session NAMBE1-TuA Oxides I Moderator: Matthew Brahle , Oak Ridge National Laboratory
2:15pm	NAMBE1-TuA-2 Progresses Towards Production-Worthy Epitaxy of BaTiO ₃ and SrTiO ₃ Perovskites on Si(001) Substrates, <i>Mark O'Steen</i> , Veeco Instruments Inc.; <i>M. Baryshnikova, G. Croes</i> , IMEC, Belgium; <i>Y. Wang, S. Farrell, G. Sundaram</i> , Veeco Instruments Inc.; <i>C. Merckling</i> , IMEC, Belgium	
2:30pm	NAMBE1-TuA-3 Epitaxial Growth of Si-doped (Al, Ga) ₂ O ₃ Films by Hybrid MBE, <i>Zhuoqun Wen, E. Ahmadi</i> , University of Michigan	
2:45pm	NAMBE1-TuA-4 Correlated Phase Diagram Tunable by Structural Layering in Square-Planar Nickelates, <i>Grace Pan, D. Ferenc Segedin, S. TenHuisen</i> , Harvard University; <i>L. Bhatt</i> , Cornell University; <i>H. LaBollita</i> , Arizona State University; <i>A. Jiang</i> , Harvard University; <i>Q. Song</i> , Cornell University; <i>A. Turkiewicz</i> , Harvard University; <i>H. Paik</i> , University of Oklahoma; <i>C. Brooks, M. Mitran</i> , Harvard University; <i>B. Goodge</i> , Max Planck Institute for Chemical Physics of Solids; <i>A. Botana</i> , Arizona State University; <i>J. Mundy</i> , Harvard University	
3:00pm	NAMBE1-TuA-5 Synthesis of Layered Square-planar Lanthanum Nickelate Thin Films, La _{n+1} Ni _n O _{2n+2} , <i>Dan Ferenc Segedin, G. Pan, A. Turkiewicz, A. Jiang, C. Brooks, J. Mundy</i> , Harvard University	
3:15pm	BREAK & EXHIBITS	
3:30pm		
3:45pm	NAMBE2-TuA-8 Signatures of Bosonic Coupling in Superconducting LiTi ₂ O ₄ Thin Films, <i>Zubia Hasan, G. Pan</i> , Harvard University; <i>M. Barone</i> , Cornell University; <i>C. Brooks</i> , Harvard University; <i>A. Kaczmarek</i> , Cornell University; <i>S. Sung</i> , Harvard University; <i>E. Mercer</i> , Northeastern University; <i>S. Sharma</i> , Arizona State University; <i>I. El Baggari</i> , Harvard University; <i>K. Nowack</i> , Cornell University; <i>A. Botana</i> , Arizona State University; <i>B. Faeth</i> , Cornell University; <i>A. De La Torre Duran</i> , Northeastern University; <i>J. Mundy</i> , Harvard University	NAMBE Session NAMBE2-TuA Oxides II Moderator: Zach Cresswell , Idaho National Laboratory
4:00pm	NAMBE2-TuA-9 Defect Engineering in Thin Films of the Pyrochlore Frustrated Magnet Tb ₂ Ti ₂ O ₇ , <i>Margaret Anderson, I. El Baggari, C. Brooks, T. Powell</i> , Harvard University; <i>C. Lygouras</i> , Johns Hopkins University; <i>A. N'diaye</i> , Lawrence Berkeley National Laboratory; <i>S. Koohpayeh</i> , Johns Hopkins University; <i>J. Nordlander</i> , Paul Drude Institute, Germany; <i>J. Mundy</i> , Harvard University	
4:15pm	NAMBE2-TuA-10 Soft Chemical Manipulation of MBE-Synthesized Ruddlesden-Popper Nickelates, <i>Abigail Jiang, A. Turkiewicz, G. Pan, D. Ferenc Segedin, C. Brooks, J. Mason, J. Mundy</i> , Harvard University	
4:30pm	NAMBE2-TuA-11 BaTiO ₃ Films for Integrated Electro-Optics, <i>Larissa Little, B. Fazlioglu-Yalcin, A. Cavanagh, N. Sinclair, T. Zulu, K. Powell, C. Brooks, R. Westervelt, M. Loncar</i> , Harvard University; <i>D. Barton</i> , Northwestern University; <i>J. Mundy</i> , Harvard University	
4:45pm	NAMBE2-TuA-12 Exploration of Erbium-Doped Oxide Thin Films on Silicon for Quantum Memory-Oriented Nanophotonics Development, <i>Ignas Masulionis</i> , University of Chicago/Argonne National Laboratory; <i>G. Grant</i> , University of Chicago; <i>R. Chebrolu</i> , University of Chicago / Argonne National Laboratory; <i>A. Dibos, J. Zhang, F. Heremans, S. Guha</i> , Argonne National Lab	
5:00pm	NAMBE2-TuA-13 Simultaneous Optical and Microstructural Characterization of Er-Doped CeO ₂ on Silicon, <i>Gregory Grant</i> , University of Chicago; <i>J. Zhang</i> , Argonne National Laboratory; <i>I. Masulionis</i> , University of Chicago; <i>S. Chattaraj, K. Sautter</i> , Argonne National Laboratory; <i>S. Sullivan</i> , memQ; <i>R. Chebrolu</i> , University of Chicago; <i>Y. Liu, J. Martins, J. Niklas, A. Dibos</i> , Argonne National Laboratory; <i>S. Kewalramani</i> , Northwestern University; <i>J. Freeland, J. Wen, O. Poluektov, F. Heremans</i> , Argonne National Laboratory; <i>D. Awschalom</i> , University of Chicago; <i>S. Guha</i> , Argonne National Laboratory	

Wednesday Morning, July 24, 2024

Room Cummings Ballroom		
8:15am	NAMBE1-WeM-1 Welcome & Sponsor Thank You	NAMBE Session NAMBE1-WeM Nitrides Moderator: Kevin Vallejo, Idaho National Laboratory
8:30am	NAMBE1-WeM-2 Tunnel Junction Engineered MBE-grown Nanowires: Toward Self-Powered, Dual-Wavelength Photoelectrochemical Photodetectors for Secure and Efficient Underwater Wireless Sensors Networks, <i>S. Zhao, Milad Fathabadi</i> , McGill University, Canada	
8:45am	NAMBE1-WeM-3 MBE Growth of n-type AlN and Defect Characterization Using Deep UV Photoluminescence, <i>Neeraj Nepal, M. Hardy, A. Lang, B. Downey, D. Katzer, E. Jin, V. Gokhale, T. Growden, D. Meyer, V. Wheeler</i> , Naval Research Laboratory	
9:00am	NAMBE1-WeM-4 Evolution of AlN: from 1 nm Nitridation to 2 μm by Molecular Beam Epitaxy, <i>M. Liao, D. Luccioni, K. Huynh, Y. Wang, L. Matto</i> , University of California Los Angeles; <i>H. Ahmad</i> , Georgia Institute of Technology; <i>Z. Zhang</i> , Argonne National Laboratory; <i>W. Doolittle</i> , Georgia Institute of Technology; <i>Mark Goorsky</i> , University of California Los Angeles	
9:15am	NAMBE1-WeM-5 Addressing the High Coercive Field of Sc _x Al _{1-x} N via Magnesium Doping in Molecular Beam Epitaxy, <i>Samuel Yang, D. Wang, D. Wang, Z. Mi</i> , University of Michigan, Ann Arbor	
9:30am		
9:45am	NAMBE1-WeM-7 Epitaxial Integration of Transition-Metal Nitrides with Cubic Gallium Nitride, <i>Zach Cresswell, N. Fessler, T. Garrett, K. Vallejo, B. May</i> , Idaho National Laboratory	
10:00am	NAMBE1-WeM-8 Epitaxial Growth of High ScN Fraction ScAlN on (111) Si, <i>Matthew Hardy, E. Jin, N. Nepal, B. Downey, V. Gokhale, D. Katzer, V. Wheeler, V. Wheeler</i> , U.S. Naval Research Laboratory	
10:15am	BREAK	
10:30am		
10:45am	NAMBE2-WeM-11 Characterization of Random Alloy Al _{0.85} Ga _{0.15} As _{0.07} Sb _{0.93} for Mid-Wave Infrared Avalanche Photodiodes, <i>Nathan Gajowski, M. Muduli, T. Ronningen, S. Krishna</i> , Ohio State University	NAMBE Session NAMBE2-WeM IR Materials and Devices (and SiGeSn) Moderator: Carolina Adamo, Northrop Grumman
11:00am	NAMBE2-WeM-12 Comparison Study of InAs/InAsSb and InAs/GaSb Type-II Superlattices, <i>Allison McMinn, Z. Ju, X. Liu, Y. Zhang</i> , Arizona State University	
11:15am	NAMBE2-WeM-13 Use of Hydrogen Plasma to Increase Minority Carrier Lifetime in InAs _x Sb _y Bi _{1-x-y} , <i>F. Estevez Hilario, M. Berghold</i> , University of Texas at Austin; <i>Oleg Maksimov, H. Bhandari</i> , Radiation Monitoring Devices; <i>C. Morath, A. Duchane, P. Webster</i> , Air Force Research Laboratory; <i>D. Wasserman</i> , University of Texas at Austin	
11:30am	NAMBE2-WeM-14 Micro-Transfer Printing of Gasb-Based Infrared Devices Grown by Molecular Beam Epitaxy, <i>Margaret A. Stevens</i> , US Naval Research Laboratory; <i>A. Grede, J. Murphy</i> , NRC Postdoctoral Fellow at the US Naval Research Laboratory; <i>S. Mack</i> , US Naval Research Laboratory; <i>K. Schmieder</i> , Formerly US Naval Research Laboratory; <i>J. Nolde</i> , US Naval Research Laboratory	
11:45am	NAMBE2-WeM-15 The InAsSb-based SACM APD with Hole-Initiated Multiplication, <i>Egor Portiankin, L. Shterengas, G. Kipshidze, J. Zhao, D. Donetski</i> , Stony Brook University/Brookhaven National Laboratory	

Wednesday Afternoon, July 24, 2024

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1:30pm	<p>NAMBE1-WeA-1 Enhanced Performance of High-Density GaAsSb Nanowire Ensemble Photodetectors with NIP Axial-Core Shell Structure on Graphene for Near-Infrared Detection, <i>Hirandeep Reddy Kuchorr, Y. Deshmukh</i>, North Carolina A&T State University, India</p>
1:45pm	<p>NAMBE1-WeA-2 Superconducting (001) and (111) Metal Nitrides on GaN, <i>Brelon May, Z. Cresswell, S. Regmi, V. Buturlim, K. Vallejo, K. Gofryk, D. Hurley</i>, Idaho National Laboratory</p>
2:00pm	<p>NAMBE1-WeA-3 Epitaxial Growth of (111) BaTiO₃ Thin Films on AlGaIn/GaN Heterostructures, <i>Eric Jin</i>, Naval Research Laboratory; <i>J. Hart</i>, NOVA Research; <i>A. Lang, M. Hardy, N. Nepal, D. Katzer, V. Wheeler</i>, Naval Research Laboratory</p>
2:15pm	<p>NAMBE1-WeA-4 Selective Area Growth for Monolithically Integrated Quantum Dot Lasers, <i>Alec Skipper, K. Feng</i>, University of California at Santa Barbara; <i>G. Leake, J. Herman</i>, SUNY Poly; <i>C. Shang, R. Koscica</i>, University of California at Santa Barbara; <i>D. Harame</i>, SUNY Poly; <i>J. Bowers</i>, University of California at Santa Barbara</p>
2:30pm	<p>NAMBE1-WeA-5 Influence of Number of Graphene Layers on Epitaxy of GdAuGe on /6H-SiC, <i>Taehwan Jung</i>, University of Wisconsin - Madison, Republic of Korea; <i>N. Hagopian</i>, University of Wisconsin - Madison; <i>C. Dong, J. Robinson</i>, Penn State University; <i>P. Voyles, J. Kawasaki</i>, University of Wisconsin - Madison</p>
2:45pm	BREAK
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3:15pm	<p>NAMBE2-WeA-8 Growth and Properties of InSe Thin Films on GaAs(111)B and Si(111), <i>Maria Hulse, D. Liu, J. Rodriguez, J. Gray, J. Yao, S. Ding</i>, Penn State University; <i>M. Li, J. Young</i>, New Jersey Institute of Technology; <i>Y. Liu</i>, Penn State University; <i>R. Engel-Herbert</i>, Paul-Drude Institute for Solid State Electronics; <i>A. Lupini</i>, Oak Ridge National Laboratory; <i>J. Redwing</i>, Penn State University</p>
3:30pm	<p>NAMBE2-WeA-9 Investigation of the Indium-flush Technique on InAs/InAlGaAs/InP (001) Quantum Dots for 1.55 μm Laser Applications, <i>Calum Dear, J. Yuan, H. Jia, J. Park</i>, University College London, UK; <i>Y. Hou</i>, Swansea University, UK; <i>K. El Hajraoui</i>, University of York, UK; <i>H. Zeng, H. Deng, M. Tang</i>, University College London, UK; <i>Q. Ramasse</i>, University of Leeds, UK; <i>H. Liu</i>, University College London, UK</p>
3:45pm	<p>NAMBE2-WeA-10 MBE Growth of Ge and GaAs on (111)-faceted V-groove Silicon, <i>Makhayeni Mtunzi, H. Jia</i>, University College London, UK; <i>Y. Hou</i>, Swansea University, UK; <i>L. Bao</i>, University of Southampton, UK; <i>M. Masteghin</i>, University of Surrey, UK; <i>H. Deng, X. Yu, H. Zeng, J. Park, Y. Wang</i>, University College London, UK; <i>W. Li, A. Li</i>, Beijing University of Technology, China; <i>K. El Hajraoui</i>, York University, UK; <i>Q. Ramasse</i>, University of Leeds, UK; <i>I. Skandalos, F. Gardes</i>, University of Southampton, UK; <i>M. Tang, S. Chen, A. Seeds, H. Liu</i>, University College London, UK</p>
4:00pm	<p>NAMBE2-WeA-11 Closing Remarks and Sponsor Thank You</p>

NAMBE
Session NAMBE1-WeA
Heterogeneous Integration
Moderators: Rafael Jaramillo, Massachusetts Institute of Technology,
John McElearney, Tufts University

NAMBE
Session NAMBE2-WeA
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John McElearney, Tufts University

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