

WME & NAMBE 2025 Program Key

NAMBE North American Conference on Molecular Beam Epitaxy
WME Workshop on MBE for Emerging Emitter Technologies

WME & NAMBE 2025 Program Overview

Room /Time	Tamaya ABC	Tamaya DE
SaM	WME1-SaM: Photonic-Crystal Surface-Emitting Lasers (PCSELs) WME2-SaM: Emerging Materials and Growth Technologies	
SaA	WME1-SaA: Emitters on Silicon WME2-SaA: Al/ML Techniques for MBE	
SuM	WME1-SuM: Quantum-Dot based Single Photon Emitters I WME2-SuM: Quantum-Dot based Single Photon Emitters II	
MoM	NAMBE1-MoM: Remote and van der Waals Epitaxy NAMBE2-MoM: Bismuth-containing Alloys	
MoA	NAMBE1-MoA: Photonic Devices NAMBE2-MoA: Infrared Materials	
MoP		Poster Sessions
TuM	NAMBE1-TuM: Quantum Materials NAMBE2-TuM: III-Nitrides	
TuA	NAMBE1-TuA: Oxides and Group IV Materials NAMBE2-TuA: Low Dimensional Nanostructures	
WeM	NAMBE1-WeM: Heteroepitaxy NAMBE2-WeM: Advanced MBE Techniques	

Saturday Morning, August 23, 2025

Room Tamaya ABC		
8:00am	WME1-SaM-1 Welcome & Opening Remarks, <i>Ganesh Balakrishnan</i> , University of New Mexico	Workshop on MBE for Emerging Emitter Technologies Session WME1-SaM Photonic-Crystal Surface-Emitting Lasers (PCSELS) Moderator: Ricky Gibson , Air Force Research Laboratory
8:15am	INVITED: WME1-SaM-2 Passively Coupled Coherent PCSEL Arrays, <i>Mingsen Pan</i> , University of Texas at Arlington; <i>Chhabindra Gautam</i> , Semergytech, Inc.; <i>Thomas Rotter</i> , <i>Ganesh Balakrishnan</i> , University of New Mexico; <i>Shanhui Fan</i> , Stanford University; Weidong Zhou , University of Texas at Arlington	
8:45am	INVITED: WME1-SaM-4 GaSb-Based Photonic Crystal Surface Emitting Diode Lasers, Leon Shterengas , <i>Gela Kipshidze</i> , SUNY at Stony Brook; <i>Aaron Stein</i> , <i>Dmitri Zakharov</i> , <i>Kim Kisslinger</i> , Brookhaven National Laboratory; <i>Gregory Belenky</i> , SUNY at Stony Brook	
9:15am	INVITED: WME1-SaM-6 III-V/Si Bound States in Continuum Lasers with Quantum Well (QW) and Quantum Dot (QD) Gain, Ashok Kodigala , Sandia National Laboratories	
9:45am	WME1-SaM-8 Panel Discussion	
10:15am	BREAK	
10:30am	INVITED: WME2-SaM-11 Clean Oxides at High Temperatures, <i>Joseph Falson</i> , California Institute of Technology	Workshop on MBE for Emerging Emitter Technologies Session WME2-SaM Emerging Materials and Growth Technologies Moderator: Carolina Adamo , Northrop Grumman
11:00am	INVITED: WME2-SaM-13 Dislocation-Tolerant Quantum Dot Light Emitters: From Growth on Silicon to Remote Epitaxy, Minjoo Larry Lee , University of Illinois at Urbana-Champaign	
11:15am		
11:30am	INVITED: WME2-SaM-15 Thermal Laser Epitaxy for Emerging Emitter Materials, Brendan Faeth , epi-ray	
12:00pm	WME2-SaM-17 Panel Discussion	
12:00pm		

Saturday Afternoon, August 23, 2025

Room Tamaya ABC	
1:30pm	<p>INVITED: WME1-SaA-1 MBE Growth of Interband Antimonide Lasers on Silicon, Laurent Cerutti, <i>Maëva Fagot, Daniel Díaz-Thomas, Andres Remis</i>, IES, University of Montpellier, CNRS, France; <i>Audrey Gilbert</i>, University of Montpellier, France; <i>Yves Rouillard, Jean-Baptiste Rodriguez, Eric Tournié</i>, IES, University of Montpellier, CNRS, France</p>
2:00pm	<p>INVITED: WME1-SaA-3 Molecular Beam Epitaxy of III-V Infrared Emitters on Silicon, Stephanie Tomasulo, U.S. Naval Research Laboratory</p>
2:30pm	<p>INVITED: WME1-SaA-5 High-Quality Epitaxy of SiSn, GeSn, and SiGeSn Alloys Using MBE for Si-Based Optoelectronic Applications, Shui-Qing Yu, <i>Diandian Zhang, Nirosh Eldose, Dinesh Baral, Hryhorii Stanchu, Fernando Oliveira, Wei Du, Gregory Salamo</i>, University of Arkansas</p>
3:00pm	<p>INVITED: WME1-SaA-7 Quantum Dot Lasers – Old Dog, New Trick, Niche Production to High-Volume Manufacturing, Andrew Clark, <i>Kathryn E. Sautter, Amy Liu</i>, IQE Inc.</p>
3:30pm	<p>WME1-SaA-9 Panel Discussion</p>
4:00pm	<p>BREAK</p>
4:15pm	<p>INVITED: WME2-SaA-12 Invited Paper, Remi Dingreville, Sandia National Laboratories</p>
4:45pm	<p>INVITED: WME2-SaA-14 Machine Learning Methods for MBE Growth Optimization, Mingyu Yu, University of Delaware; <i>Isaiah Moses</i>, Pennsylvania State University, United States Minor Outlying Islands (the); <i>Ryan Trice, Wesley Reinhart, Stephanie Law</i>, Pennsylvania State University</p>

Workshop on MBE for Emerging Emitter Technologies
Session WME1-SaA
Emitters on Silicon
Moderator:
Ganesh Balakrishnan, University of New Mexico

Workshop on MBE for Emerging Emitter Technologies
Session WME2-SaA
AI/ML Techniques for MBE
Moderator:
Kurt Eyink, Air Force Research Labs

Sunday Morning, August 24, 2025

Room Tamaya ABC		
8:00am	WME1-SuM-1 Welcome & Opening Remarks,	Workshop on MBE for Emerging Emitter Technologies Session WME1-SuM Quantum-Dot based Single Photon Emitters I Moderator: Richard Mirin , National Institute of Standards and Technology
8:15am	INVITED: WME1-SuM-2 Invited Paper, <i>Edo Waks</i> , University of Maryland	
8:45am	INVITED: WME1-SuM-4 Low Noise Epitaxial Quantum Dots for Photonic Quantum Technologies, <i>Alisa Javadi</i> , University of Oklahoma	
9:15am	INVITED: WME1-SuM-6 Growth and Characterization of Epitaxial InAs Quantum Dots for Efficient and Pure Single Photon Sources, <i>Kevin Silverman</i> , NIST - Boulder	
9:45am	BREAK	
10:15am	INVITED: WME2-SuM-10 Quantum Dots Obtained by Droplet Etching Epitaxy for Quantum Science and Technology, <i>Armando Rastelli</i> , Institute of Semiconductor and Solid State Physics, Johannes Kepler University (JKU) Linz, Austria	Workshop on MBE for Emerging Emitter Technologies Session WME2-SuM Quantum-Dot based Single Photon Emitters II Moderator: Richard Mirin , National Institute of Standards and Technology
10:45am	INVITED: WME2-SuM-12 Toward a Scalable Single Photon Platform, <i>Chen Shang (Student)</i> , University of California Santa Barbara; <i>Sahil Patel, Zihang Wang, Sean Doan, Dirk Bouwmeester, Galan Moody, John Bowers</i> , University California Santa Barbara	
11:15am	INVITED: WME2-SuM-14 Invited Paper, <i>Matthew Doty</i> , University of Delaware	
11:45am	WME2-SuM-16 Panel Discussion	
12:15pm	WME2-SuM-18 Closing Remarks	

Monday Morning, August 25, 2025

Room Tamaya ABC		
8:00am	NAMBE1-MoM-1 Welcome & Sponsor Thank Yous,	NAMBE Session NAMBE1-MoM Remote and van der Waals Epitaxy Moderator: Justine Koepke , Sandia National Laboratories
8:15am	INVITED: NAMBE1-MoM-2 Art Gossard MBE Innovator Awardee Talk	
8:45am	NAMBE1-MoM-4 Epitaxy and Magnetotransport of GdAuGe on Gallium-Intercalated Graphene/SiC (0001), Zachary LaDuca (Student) , University of Wisconsin - Madison; Chengye Dong , Pennsylvania State University; Nicholas Hagopian , Paul Voyles , University of Wisconsin - Madison; Joshua Robinson , Pennsylvania State University; Jason Kawasaki , University of Wisconsin - Madison	
9:00am	NAMBE1-MoM-5 Challenges of Remote Epitaxy in Ultra-High Vacuum: Clean Semiconductor-2D Material Stacks, Manny de Jesus Lopez (Student) , Sadhvikas Addamane , Justine Koepke , Sandia National Laboratories, USA; Kevin Jones , University of Florida, Gainesville; Scott Schmucker , Sandia National Laboratories, USA	
9:15am	NAMBE1-MoM-6 Impact of Graphene-induced Surface Reconstructions on the Mechanisms for Remote and van der Waals Epitaxy of GdAuGe on Graphene/SiC (0001), Taehwan Jung (Student) , Nicholas Hagopian , University of Wisconsin - Madison; Quinn Campbell , Sandia National Laboratories; Anshu Sirohi , University of Wisconsin - Madison; Chengye Dong , The Pennsylvania State University; Sadhvikas Addamane , Justine Koepke , Sandia National Laboratories; Joshua Robinson , The Pennsylvania State University; Paul Voyles , Jason Kawasaki , University of Wisconsin - Madison	
9:30am	NAMBE1-MoM-7 Selective Area Epitaxy of van der Waals Materials, Ryan Trice (Student) , Stephanie Law , Penn State University	
9:45am	NAMBE1-MoM-8 Impact of Point and Extended Defects on the Mechanism for Remote Epitaxy of GaAs on Graphene/Ge, Anshu Sirohi , Patrick Strohbeen , Sebastian Manzo , Katherine Su , Vivek Saraswat , Nicholas Hagopian , Paul Voyles , Michael Arnold , Jason Kawasaki , University of Wisconsin - Madison	
10:00am	BREAK & EXHIBITS	
10:30am	NAMBE2-MoM-11 Molecular Beam Epitaxy Growth and Optoelectronic Properties of Droplet-Free Lattice-Matched GaInAsSbBi on GaSb with Photoluminescence Wavelength Exceeding 5 μm , Preston T. Webster , Air Force Research Laboratory, Space Vehicles Directorate; Rigo A. Carrasco , Alexander T. Newell , Alexander W. Duchane , Air force Research Laboratory, Space Vehicles Directorate; Aaron J. Muhowski , Victor J. Patel , Samuel D. Hawkins , Sandia National Laboratories; Marko S. Milosavljevic , Shane R. Johnson , Arizona State University; Julie V. Logan , Christian P. Morath , Diana Maestas , Air force Research Laboratory, Space Vehicles Directorate	
10:45am	NAMBE2-MoM-12 Growth of InGaBiAs for Extended Short Wave Infrared Photodetectors, Mrudul Parasnis (Student) , Md Toriqul Islam , Nuha Ahmed-Babikir , James Bork , Abhilasha Kamboj , Alimur Razi , Jamie Phillips , Joshua Zide , University of Delaware	
11:00am	NAMBE2-MoM-13 Performance of Mid-Wave Infrared GaInAsSbBi nBn Photodetectors Before and as a Function of High Energy Proton Exposure, Julie Logan , Alex Newell , Rigo Carrasco , Christopher Hains , Gamini Ariyawansa , Joshua Duran , Diana Maestas , Christian Morath , Preston Webster , Air Force Research Lab	
11:15am	NAMBE2-MoM-14 Improving Bi Incorporation in InSbBi and AllnSbBi, Amberly Ricks (Student) , University of Texas at Austin; Corey White , University of Illinois at Urbana Champaign; Seth Bank , University of Texas at Austin	
11:30am	NAMBE2-MoM-15 Impact of Hydrogenation on the Minority Carrier Lifetime of InAsSbBi and the Sensitivity of InAsSbBi nbn Photodetectors, Mach Michaels (Student) , Georgia Institute of Technology; Mangal Dhoubhadel , Khalid Hossain , JP Analytical, LLC; Alexander Duchane , Rigo Carrasco , Luke Helms , Air Force Research Laboratory; Christopher Hains , A-Tech, LLC, a BlueHalo Company (ATA BlueHalo); Julie Logan , Christian Morath , Diana Maestas , Preston Webster , Air Force Research Laboratory	
11:45am	NAMBE2-MoM-16 Synthesis of Epitaxial Bi _{1-x} Sb _x Nanomembranes, Saad Mohammad Bhuiya , University of New Mexico, Bangladesh	

Monday Afternoon, August 25, 2025

Room Tamaya ABC		
1:30pm	NAMBE1-MoA-1 ErAs/Semiconductor Nanocomposites for 1.55 μm -Pumped and Hybrid Terahertz Photoconductive Switches, <i>Angelique Gordon (Student), Wilder Acuna, Weipeng Wu, James Bork, Matthew Doty, Xi Wang, M. Benjamin Jungfleisch, Lars Gundlach, Joshua Zide</i> , University of Delaware	NAMBE Session NAMBE1-MoA Photonic Devices Moderator: Thomas E. Vandervelde , Tufts University
1:45pm	NAMBE1-MoA-2 Regrowth of Gasb Photonic Crystal Surface-Emitting Lasers by Molecular Beam Epitaxy, <i>Bradley J. Thompson</i> , Air Force Research Laboratory, Sensors Directorate; <i>Samuel M. Linser</i> , KBR & Air Force Research Laboratory, Sensors Directorate; <i>Sadhvikhas Addamane</i> , Sandia National Laboratories; <i>Thomas Rotter</i> , <i>Ganesh Balakrishnan</i> , University of New Mexico; <i>Ricky Gibson</i> , Air Force Research Laboratory, Sensors Directorate	
2:00pm	NAMBE1-MoA-3 Growth and Optimization of Opto-electronic performance of InGaAsSb Photodetectors using Molecular Beam Epitaxy, <i>Neha Nooman (Student)</i> , <i>Nathan Gajowski</i> , <i>Punam Murkute</i> , <i>Vinita Rogers</i> , <i>Sanjay Krishna</i> , The Ohio State University	
2:15pm	NAMBE1-MoA-4 Growth-Temperature Effect on Group-V Compositions in 'W' Structured GaAsSb/InGaAs/GaAsP Quantum Wells, <i>Zon Ma</i> , <i>Charles W. Tu</i> , <i>National Chung Hsing University</i> , Taiwan	
2:30pm	NAMBE1-MoA-5 III-V Quantum Dot Lasers and Photodetectors Monolithically Integrated with Silicon Photonics by Two-Step Growth, <i>Alec Skipper</i> , <i>Rosalyn Kosica</i> , UC Santa Barbara; <i>Bei Shi</i> , Aeluma Inc.; <i>Gerald Leake</i> , <i>Joshua Herman</i> , AIM Photonics; <i>Michael Zylstra</i> , Analog Photonics; <i>Kaiyin Feng</i> , <i>Chen Shang</i> , UC Santa Barbara; <i>David Hareme</i> , AIM Photonics; <i>Jonathan Klamkin</i> , Aeluma Inc.; <i>John Bowers</i> , UC Santa Barbara	
2:45pm	NAMBE1-MoA-6 Optical Enhancement of GaAsP Solar Cells on GaP/Si with Distributed Bragg Reflectors, <i>Bora Kim (Student)</i> , <i>Adrian Birge</i> , <i>Brian Li</i> , <i>Corey White</i> , <i>Devon Lee</i> , <i>Minjoo Larry Lee</i> , University of Illinois Urbana-Champaign	
3:00pm	NAMBE1-MoA-7 Interface Fermi-Level Engineering for Selective Hole Extraction Without P-Type Doping in CdTe Solar Cells to Reach High Open Circuit Voltage (>1 V), <i>Zheng Ju</i> , <i>Xin Qi</i> , <i>Xiaoyang Liu</i> , Arizona State University; <i>Jiarui Gong</i> , Texas A&M University; <i>Razine Hossain</i> , <i>Nathan Rosenblatt</i> , <i>Tyler McCarthy</i> , <i>Allison McMinn</i> , <i>Martha McCartney</i> , <i>David Smith</i> , Arizona State University; <i>Zhenqiang Ma</i> , University of Wisconsin - Madison; <i>Yong-Hang Zhang</i> , Arizona State University	
3:15pm	BREAK & EXHIBITS	
3:30pm	INVITED: NAMBE2-MoA-9 James S. Harris MBE Scientific Discovery Awardee Talk	NAMBE Session NAMBE2-MoA Infrared Materials Moderator: Aaron J. Muhowski , Sandia National Laboratories
4:00pm	NAMBE2-MoA-11 Deep Level Transient Spectroscopy and Time-Resolved Photoluminescence as a Function of Room Temperature 63 MeV Proton Irradiation of InAs Nbn Detectors Grown by Molecular Beam Epitaxy, <i>Rigo Carrasco</i> , Air Force Research Laboratory, USA; <i>Christopher Hains</i> , <i>Alexander Newell</i> , <i>Christian Morath</i> , <i>Preston Webster</i> , Air Force Research Laboratory; <i>Evan Anderson</i> , Sandia National Laboratory	
4:15pm	NAMBE2-MoA-12 Evaluation of the Optical Absorption Properties of MBE Grown InAs/InAsSb and InGaAs/InAsSb Superlattices for Infrared Photodetector Applications, <i>Marko Milosavljevic (Student)</i> , Arizona State University; <i>Rigo Carrasco</i> , <i>Alexander Newell</i> , Air Force Research Laboratory, USA; <i>Jaden Love</i> , <i>Stefan Zollner</i> , New Mexico State University; <i>Christian Morath</i> , <i>Diana Maestas</i> , <i>Preston Webster</i> , Air Force Research Laboratory, USA; <i>Shane Johnson</i> , Arizona State University	
4:30pm	NAMBE2-MoA-13 Tunable Low-Loss Plasmonic Resonances in Heavily-Doped InAs for Infrared Optoelectronic Devices, <i>Thomas Shearer</i> , <i>Ethan Caudill</i> , <i>Kiernan Arledge</i> , <i>Tetsuya Mishima</i> , University of Oklahoma; <i>Chadwick Canedy</i> , <i>John Murphy</i> , <i>Jill Nolde</i> , <i>Chase Ellis</i> , US Naval Research Laboratory; <i>Priyantha Weerasinghe</i> , Amethyst Research Inc.; <i>Michael Lloyd</i> , NIST-Gaithersburg; <i>Terry Golding</i> , Amethyst Research Inc.; <i>Igor Vurgaftman</i> , <i>Jerry Meyer</i> , US Naval Research Laboratory; <i>Michael Santos</i> , <i>Joseph Tischler</i> , University of Oklahoma	
4:45pm	NAMBE2-MoA-14 Impact of Uncracked Group V Species on Unintentional Doping in AlInAsSb, <i>Ellie Wang (Student)</i> , <i>J. Andrew McArthur</i> , University of Texas at Austin; <i>Hannaneh Karimi</i> , <i>Joe Campbell</i> , University of Virginia; <i>Seth Bank</i> , University of Texas at Austin	

NAMBE

Room Tamaya DE - Session NAMBE-MoP

NAMBE Poster Session

5:00 – 7:00 pm

NAMBE-MoP-1 A Simple Method of SrTiO₃ Growth on GaAs by Molecular Beam Epitaxy, *Maria Baskin*, Technion Israel Institute of Technology, Israel; *Sergey Shay Shusterman, Doron Cohen-Elias, Noam Sicon*, The Israel Center for Advanced Photonics, Israel; *Lior Kornblum*, Technion Israel Institute of Technology, Israel

NAMBE-MoP-2 Computational Design of Metal-Organic Precursors for Controlled Metal Oxide Growth, *Benazir Fazloglu*, Harvard University; *Cem Sanga*, Istanbul Technical University, Turkey; *Adri van Duin*, Penn State University; *Roman Engel-Herbert, Nadire Nayir*, Paul Drude Institute, Germany

NAMBE-MoP-3 Fully Relaxed, Ultra-Thin (Si)GeSn Epilayers on Insulating Substrates with Large-Scale Direct Transfer Technique, *Suho Park, Haochen Zhao, Chandan Samanta, Tuofu Zhama*, University of Delaware; *Jifeng Liu*, Dartmouth; *Shui-Qing Yu*, University of Arkansas; *Yuping Zeng*, University of Delaware

NAMBE-MoP-4 Spectroscopic Ellipsometry and Optical Constants of MBE-Grown Quinary GaInAsSbBi Alloys for Mid-Wavelength Infrared Detectors, *Sonam Yadav (Student)*, New Mexico State University; *Rigo A. Carrasco, Preston T. Webster*, Air Force Research Laboratory; *Stefan Zollner, Jan Hrabovsky*, New Mexico State University

NAMBE-MoP-5 Optical and Electrical Properties Study of Transferred Ge_{0.82}Sn_{0.18} Flakes Based on Layer Transfer Process, *Yuping Zeng, Haochen Zhao (Student), Suho Park, Shedrack Dafe, Tuofu Zhama, Chandan Samanta, Zijun Chen*, University of Delaware

NAMBE-MoP-6 Growth and Characterization of Single Crystal Cubic TaN and Hexagonal Ta₂N Films on C-Plane Sapphire, *Anand Ithepalli (Student)*, Cornell University; *Amit Rohan Rajapurohita, Arjan Singh, Rishabh Singh, John Wright, Farhan Rana, Valla Fatemi, Huili (Grace) Xing*, Cornell University; *Deeep Jena*, Cornell University

NAMBE-MoP-7 Impact of Ga on Incorporation Properties of Bi Evaluated with Time-Resolved and Steady State Photoluminescence Characterizations of Lattice-Matched GaInAsSbBi on GaSb, *Alexander Duchane (Student), Preston Webster, Rigo Carrasco, Alexander Newell*, Air Force Research Laboratory; *Marko Milosavljevic*, Arizona State University; *Shane Johnson*, University of Arizona; *Julie Logan, Diana Maestas, Christian Morath*, Air Force Research Laboratory

NAMBE-MoP-8 Examining Magnetic Depth Profiles of Oxide MBE Grown PdCoO₂ Delafossite Thin Films with Post-Growth Helium Implantation, *Sangsoo Kim*, Oak Ridge National Laboratory

NAMBE-MoP-9 Investigation of Interface Electric Fields of GaAs/AlGaAs Quantum Dots Grown by Droplet Epitaxy, *Taein Kang, Jong Su Kim*, Yeungnam University, Republic of Korea; *Sang Jun Lee*, Korea Research Institute of Standards and Science, Republic of Korea; *Jin Dong Song*, Korea Institute of Science and Technology (KIST), Republic of Korea

NAMBE-MoP-11 Eu-Doped ZnO-Based Short-Period Multi-Quantum Well Structures, *Juby Alphonsa Mathew (Student), Piotr Dluzewski, Aleksandra Wierzbička, Anastasiia Lysak, Jacek M Sajkowski, Yaroslav Zhydashchyyk, Adrian Kozanecki*, Institute of Physics Polish Academy of Sciences, Poland

NAMBE-MoP-12 Identifying Detector and Material Properties for Optimizing Mid-Wave Infrared Event Based Sensor Performance, *Zinah Alsaad (Student), Julie Logan, Christian Morath, Diana Maestas*, Air Force Research Laboratory; *Payman Zarkesh-Ha*, University of New Mexico; *Preston Webster*, Air Force Research Laboratory

NAMBE-MoP-13 Temperature-Dependent X-Ray Diffraction of Single-Crystal, Epitaxial Films, *Arnold Kiefer, Charles Reyner*, Air Force Research Laboratory

NAMBE-MoP-14 Dual Channel 2DEG Micro Hall Effect Sensor, *Satish Shetty (Student), Yuriy I. Mazur, H. Alan Mantooth, Gregory J. Salamo*, University of Arkansas

NAMBE-MoP-15 Molecular Beam Epitaxy of Uranium Nitrides, *Kevin Vallejo*, Idaho National Laboratory; *Zach Cresswell*, University of Minnesota; *Ahmed Mustakim, Krzysztof Gofryk, David Hurley, Brelon May*, Idaho National Laboratory

NAMBE-MoP-16 Adsorption-controlled Growth and Influence of Stacking Disorder in van der Waals GaSe Films on GaAs (111)B, *Joshua Eickhoff (Student)*, University of Wisconsin - Madison; *Wendy Sarney, Ibrahim Boulares, Sina Nojmaei, DEVCOM ARL, Daniel Rhodes, Jason Kawasaki*, University of Wisconsin - Madison

NAMBE-MoP-17 Thermal Modulation Spectroscopy for Bandgap Determination in PAMBE-Grown AlN, *Edgar Agustín Contreras (Student)*, CINVESTAV-IPN Unidad Zacatenco, Mexico; *Jesus Roberto Millan-Almaraz*, Universidad Autónoma de Sinaloa, Mexico; *Yenny Lucero Casallas-Moreno*, UPIITA-IPN, Mexico; *Salvador Gallardo-Hernandez, Raul Trejo-Hernández*, CINVESTAV-IPN Unidad Zacatenco, Mexico; *Cristo Manuel Yee-Rendón*, Universidad Autónoma de Sinaloa, Mexico; *Máximo López-López*, CINVESTAV-IPN Unidad Zacatenco, Mexico

NAMBE-MoP-18 Growth, Defect Creation, and Passivation in 2D MoSe₂, *Collin Mauritua (Student)*, University of Delaware

NAMBE-MoP-20 Influence of the Growth Temperature and Surface Reconstruction on the Performance of Intermediate-Band Solar Cells Based on InAs Submonolayer Quantum Dots, *Ahmad Alzeidan, Lucas A. T de Souza, Alain A. Quivy*, Institute of Physics, University of São Paulo, Brazil

NAMBE-MoP-21 Influence of Deposition Rate on Twinning in MBE Grown Bi₂Se₃ Nucleation Layers, *Trent Johnson*, Air Force Research Laboratory

NAMBE-MoP-22 Epitaxial ScAlN/GaN Ferroelectric Transistors with a Subthreshold Sway of <50 mV/dec from 0.0017 to 38 mA/mm for both VGS Scan Directions, *Shizhao Fan*, Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, China

NAMBE-MoP-23 Heteroepitaxial Growth of GaN on AlN Towards RF Device Applications, *Haiyang Zhao (Student), Yihao Yin, Zhichao Wang, Shizhao Fan*, Suzhou Institute of Nano-Tech and Nano-Bionics, Chinese Academy of Sciences, China

NAMBE-MoP-24 Evidence of a Charged Defect Layer in the AlGaAsSb Barrier of MWIR nBn Photodetectors and its Influence on Detector Performance, *Alexander Newell, Rigo Carrasco, Julie Logan*, AFRL; *Chris Hains*, Blue halo; *Diana Maestas*, AFRL; *Darryl Shima, Ganesh Balakrishnan*, UNM; *Christian Morath, Preston Webster*, AFRL

NAMBE-MoP-25 Real-Time Multi-Wavelength Edge Detection Using Mbe-Grown GaAs/AlAs Thin Films, *Sina Mohammadi (Student)*, City College of New York, City University of New York; *Matthew Markowitz Markowitz*, Queens College of the City University of New York; *Francesco Monticone*, Cornell University; *Mohammad Ali Miri*, Queens College of the City University of New York; *Maria Tamargo*, City College of New York, City University of New York

NAMBE-MoP-26 The Role of Nanostructures in the Ferromagnetism of Mn-Doped AlN, *J. F. Fabian-Jacobi (Student), M. A. Zambrano-Serrano, Y. Kudriavtset*, CINVESTAV, Mexico; *L. E. López-González, C. A. Corona-García, J. Guerrero Sánchez*, UNAM, Mexico; *M. López-López*, CINVESTAV, Mexico

NAMBE-MoP-27 Growth of Ge-Sn Digital Alloys Towards Group-IV Topological Materials, *Adelaide Bradicich*, Sandia National Laboratories; *Ram Joshi*, University of Arkansas; *Yunfan Liang*, Rensselaer Polytechnic Institute; *Fisher Yu*, University of Arkansas; *Jifeng Liu*, Dartmouth; *Damien West, Shengbai Zhang*, Rensselaer Polytechnic Institute; *Hiro Nakamura*, University of Arkansas; *Ezra Bussmann*, Sandia National Laboratories

NAMBE-MoP-28 Continuum Model of Self-Organizing Epitaxial Structures Through Augmented Cahn-Hilliard Equations, *Lawrence Qiu (Student)*, Tufts University; *Arkadz Kirshtein*, Texas A&M University; *T. Pan Menasuta, Chanita Tubthong, Thomas E. Vandervelde*, Tufts University

NAMBE-MoP-29 Wafer-Scale Etch-Free Transfer of Carbon Nanostructures from Metal Thin Films to Diverse Substrates, *Kentaro Yumigeta, Muhammed Yusufoglu*, University of Arizona; *Mamun Sarker*, University of Nebraska-Lincoln; *Franco Daluisio, Richard Holloway, Howard Yawit, Thomas Sweepe, Julian Battaglia, Shelby Janssen, Alex Welch*, University of Arizona; *Alexander Sinitskii*, University of Nebraska-Lincoln; *Zafer Mutlu*, University of Arizona

NAMBE-MoP-30 Molecular Beam Epitaxy Growth of InAs/Nb Heterostructures, *Ido Levy, Jacob Issokson, Patrick Strohbeen, Tyler Cowan, Krishna Dindial, William Strickland, Lukas Baker, Melissa Mikalsen*, New York University; *Salva Salmani-Rezaie*, The Ohio State University; *Javad Shabani*, New York University

NAMBE-MoP-31 Scanning Tunneling Microscopy for the Exploration of the SRO in GeSn Grown on Ge(001) using MBE, *Dinesh Baral, Nirosh M. Eldose, Ram Joshi, Diandian Zhang, Hryhorii Stanchu, Fernando Maia de Oliveira, Wei Du, Hiroyuki Nakamura, Shui-Qing Yu, Gregory J. Salamo*, University of Arkansas

NAMBE-MoP-32 Development of High-Quality SiSn and SiGeSn Alloys for Optoelectronic and Photonic Applications, *Diandian Zhang, NIROSH ELDOSE, Dinesh Baral, Hryhorii Stanchu, Fernando Oliveira, Wei Du, Gregory Salamo, Shui-Qing Yu*, University of Arkansas

NAMBE-MoP-33 Templated Growth of Screw Dislocations in Epitaxial Nanomembranes, *Ruhin Chowdhury (Student), Emma J. Renteria*, University of New Mexico; *Sadhivakas J. Addame*, Sandia National Laboratories; *Darryl M. Shima, Divya J. Prakash, Jordan P. Neely, Francesca Cavallo*, University of New Mexico

NAMBE-MoP-34 Synthesis and Nitrogen-Vacancy Magnetometry of ferromagnetic MnSb, **Nurul Azam**, *Jeff Rable*, *Syed M. Shahed*, Northeastern University; *Sugata Chowdhury*, Howard University; *Alberto De la Torre*, Northeastern University

NAMBE-MoP-35 Metamorphic InAs 2DEGs for Quantum Computation Platforms, **Giorgio Biasiol**, *Davide Curcio*, *Oyut Batchuluun*, *Luca Sbuelz*, *Magdhi Kirti*, CNR IOM, Italy; *Mate Suto*, *Endre Tóvári*, *Peter Makk*, *Tamas Prok*, *Szabolcs Csonka*, Budapest University of Technology and Economics, Hungary

NAMBE-MoP-36 Atomically Precise Graphene Nanoribbon Transistors with Long-Term Stability and Reliability, **Muhammed Yusufoglu (Student)**, *Zafer Mutlu*, University of Arizona

NAMBE-MoP-37 Growth of InSb Quantum Dots in InAs Matrix for Infrared Emitters, **Molly McDonough (Student)**, *Eric Welp*, *Qihua Zhang*, *Stephanie Law*, Pennsylvania State University

NAMBE-MoP-38 AllInN/AlN Quantum Wells Grown on Si(111) Substrates by Metal Modulated Epitaxy, **Luis Vargas Hernández (Student)**, CINVESTAV-IPN Unidad Zacatenco, Mexico; *Jorge Ivan Hernández Martínez*, CINVESTAV-IPN Unidad Guadalajara, Mexico, Mexico; *Mario Alberto Zambrano Serrano*, CINVESTAV-IPN Unidad Zacatenco, Mexico; *Yenny Lucero Casallas Moreno*, UPIITA - IPN, Mexico; *Salvador Gallardo Hernández*, *Máximo López López*, CINVESTAV-IPN Unidad Zacatenco, Mexico

NAMBE-MoP-39 Quantum and Classical Supervised Learning-Based Design Rules for Radio Frequency Nitrogen Plasma, **Andrew Messecar (Student)**, *Clifford Aidoo-Mensah*, Western Michigan University; *Steven Durbin*, University of Hawai'i at Mānoa; *Robert Makin*, Western Michigan University

NAMBE-MoP-40 Modeling Processing Spaces of Epitaxially Grown Nitrides with Quantum and Classical Machine Learning Algorithms, **Andrew Messecar (Student)**, Western Michigan University; **Kevin Vallejo**, Idaho National Laboratory; *Steven Durbin*, University of Hawai'i at Mānoa; *Brelon May*, Idaho National Laboratory; *Robert Makin*, Western Michigan University

NAMBE-MoP-41 Photonic Crystal Surface Emitting Lasers (PCSEs) based on InAs Quantum Dots-in-a-Well, **Thomas Rotter**, *Subhashree Seth*, *Mega Frost*, *Andrei Sharma*, *Carter Heinrich*, *Samiha Nuzhat*, Center for High Technology Materials, UNM; *Chhabindra Gautam*, University of Texas at Arlington; *Sadhvikas Addamane*, Center for Integrated Nanotechnologies, Sandia National Laboratories; *Weidong Zhou*, University of Texas at Arlington; *Ganesh Balakrishnan*, Center for High Technology Materials, UNM

NAMBE-MoP-42 High-Performance Core-Shell GaAsSb Nanowires on Functionalized Graphene via MBE for NIR Photodetection, **Yugwini Deshmukh (Student)**, *Hirandeep Reddy Kuchoor*, *Rashmita Baruah*, *Joshua White*, *Jia Li*, *Shanthi Iyer*, North Carolina A&T State University

Tuesday Morning, August 26, 2025

Room Tamaya ABC		
8:00am	INVITED: NAMBE1-TuM-1 NAMBE Young Investigator Awardee Talk	NAMBE Session NAMBE1-TuM Quantum Materials Moderator: Matthew Brahlek, Oak Ridge National Laboratory
8:30am	NAMBE1-TuM-3 Exploring MBE Deposited Superconductor Bilayers to Control Qubit Base Material Properties, Kevin Grossklau , <i>Felipe Contipelli, Kunal Tiwari, Duncan Miller</i> , MIT Lincoln Laboratory; <i>Serra Erdamar</i> , Washington University, St. Louis; <i>Luke Burkhart, Michael Gingras, Bethany Niedzielski, Christopher O'Connell, Hannah Stickler, Dan Calawa, David Kim</i> , MIT Lincoln Laboratory; <i>Aranya Goswami, William Oliver</i> , Massachusetts Institute of Technology; <i>Mollie Schwartz, Kyle Serniak</i> , MIT Lincoln Laboratory	
8:45am	NAMBE1-TuM-4 Exploring Arsenic Flux-Induced Surface Morphology Control in InAs/GaSb Quantum Wells for Spintronic and Quantum Applications, Jimmy Rushing (Student) , Tufts University	
9:00am	NAMBE1-TuM-5 Molecular Beam Epitaxy Growth of InAs _{1-x} Bi _x on GaSb for Topological Insulating States, Merve Baksi , <i>James Rushing, Xikae Xie, Avery Hanna, Larry Qui, Ekow Williams, Paul J. Simmonds</i> , Tufts University	
9:15am	NAMBE1-TuM-6 Group IV Superconductor-Semiconductor Epitaxy for Integrated Quantum Electronics, Patrick Strohbeen , New York University; <i>Julian Steele, Carla Verdi, Ardeshir Baktash</i> , University of Queensland, Australia; <i>Alisa Danilenko</i> , New York University; <i>Yi-Hsun Chen</i> , University of Queensland, Australia; <i>Jechiel van Dijk</i> , New York University; <i>Lianzhou Wang</i> , University of Queensland, Australia; <i>Eugene Demler</i> , ETH Zurich, Switzerland; <i>Salva Salmani-Rezaie</i> , Ohio State University; <i>Peter Jacobson</i> , University of Queensland, Australia; <i>Javad Shabani</i> , New York University	
9:30am	NAMBE1-TuM-7 Characterization and Thermal Behavior of Epitaxial Aluminum Films on InGaAs for Topological Qubits, Ahmed Elbaroudy (Student) , <i>Francois Sfigakis, Sandra Gibson, Peyton Shi, Jonathan Baugh, Zbigniew Wasilewski</i> , University of Waterloo, Canada	
9:45am	NAMBE1-TuM-8 Synthesis and Temperature-Dependent Momentum Microscopy of Type-II Dirac Semimetal NiTe ₂ , Nurul Azam , <i>Syed Mohammad Shahed</i> , Northeastern University, Quantum Materials and Sensing Institute; <i>Imrankhan Mulani</i> , Howard University, Quantum Materials and Sensing Institute; <i>Sugata Chowdhury</i> , Howard University; <i>Alberto De la Torre, Arun Bansil, Swastik Kar</i> , Northeastern University, Quantum Materials and Sensing Institute	
10:00am	BREAK & EXHIBITS	
10:30am	NAMBE2-TuM-11 Kilo-Volt Class Lateral NiO _x /GaN Super-Heterojunction Diode via Ammonia Molecular Beam Epitaxy (NH ₃ -MBE), Yizheng Liu (Student) , University of California at Santa Barbara; <i>Zachary Biegler</i> , University of California Santa Barbara; <i>Ashley Wissel-Garcia, James Speck, Sriram Krishnamoorthy</i> , University of California at Santa Barbara	
10:45am	NAMBE2-TuM-12 Limitations and Effects of Heavy Metal Doping in GaN, <i>J. Pierce Fix</i> , Montana State University; <i>Kevin Vallejo</i> , Idaho National Laboratory; <i>Nicholas Borys</i> , Montana State University; Brelon May , Idaho National Laboratory	
11:00am	NAMBE2-TuM-13 Investigation of Composition Fluctuations and Band Tail States in Plasma Assisted MBE-Grown High Al-Fraction AlGa _N , David Storm , <i>Yuanping Chen, LeighAnn Larkin, Mihee Ji, Gregory Garrett, Anand Sampath, Michael Wraback</i> , Army Research Laboratory; <i>Jonathan Pratt, Agnes Xavier, Siddharth Rajan</i> , Ohio State University	
11:15am	NAMBE2-TuM-14 Sc-Rich Monocrystalline ScGa _N Grown by MBE Exhibits Attractive Ferroelectric Properties, Samuel Yang (Student) , <i>Shubham Mondal, Jae Hun Kim, Zetian Mi</i> , University of Michigan, Ann Arbor	
11:30am	NAMBE2-TuM-15 Towards High Wall-Plug Efficiency Nanowire-based Red Micro-LEDs, Yifu Guo (Student) , <i>Ayush Pandey, Reddeppa Maddaka, Yixin Xiao, Yakshita Malhotra, Jiangnan Liu, Yuanpeng Wu, Kai Sun, Zetian Mi</i> , University of Michigan, Ann Arbor	
11:45am	NAMBE2-TuM-16 High Permittivity Epitaxial BaTiO ₃ Thin Films on AlGa _N /Ga _N Heterostructures for RF Electronics, Eric Jin , <i>Vikrant Gokhale, James Champlain</i> , US Naval Research Laboratory; <i>James Hart</i> , NOVA Research, Inc.; <i>Andrew Lang, Matthew Hardy, Neeraj Nepal, D. Scott Katzer, Brian Downey, Virginia Wheeler</i> , US Naval Research Laboratory	

Tuesday Afternoon, August 26, 2025

Room Tamaya ABC	
1:30pm	<p>NAMBE1-TuA-1 Development of Erbium Doped Epitaxial Scheelite Thin Films for Quantum Communication Applications, <i>Ignas Masiulionis (Student)</i>, University of Chicago; <i>Bonnie Lin</i>, Massachusetts Institute of Technology; <i>Gregory D. Grant</i>, University of Chicago; <i>Junghwa Kim</i>, Massachusetts Institute of Technology; <i>Jiefei Zhang</i>, Argonne National Laboratory; <i>James M. LeBeau</i>, Massachusetts Institute of Technology; <i>David D. Awschalom</i>, <i>Supratik Guha</i>, University of Chicago</p>
1:45pm	<p>NAMBE1-TuA-2 Rapid Exploration of Oxide Growth Space through <i>in situ</i> Growth and Etching, <i>Stephen Schaefer</i>, <i>Davi Febba</i>, National Renewable Energy Laboratory; <i>Michelle Smeaton</i>, <i>Kingsley Egbo</i>, <i>Glenn Teeter</i>, <i>Syed Hasan</i>, <i>William Callahan</i>, <i>Andriy Zakutayev</i>, national renewable Energy Laboratory; M. Brooks Tellekamp, National Renewable Energy Laboratory</p>
2:00pm	<p>NAMBE1-TuA-3 Metastable Iron-Oxide Phases by Epitaxial Matching to 4H-SiC (0001), <i>Alexandra Fonseca Montenegro</i>, <i>Faisal Kimbugwe Kimbugwe</i>, <i>Marzieh Baan</i>, <i>Sevim Polat Genlik</i>, <i>Maryam Ghazisaeidi</i>, <i>Tyler Grassman</i>, <i>Roberto Myers</i>, The Ohio State University</p>
2:15pm	<p>NAMBE1-TuA-4 SiGe/SnGe Superlattices Grown Using Molecular Beam Epitaxy, <i>Allison McMinn (Student)</i>, <i>Tyler McCarthy</i>, Arizona State University; <i>Yicheng Wang</i>, Dartmouth; <i>Xiaoyang Liu</i>, <i>Razine Hossain</i>, <i>Xin Qi</i>, <i>Zheng Ju</i>, Arizona State University; <i>David Jaeger</i>, University of North Texas; <i>Jifeng Liu</i>, Dartmouth; <i>David Smith</i>, <i>Yong-Hang Zhang</i>, Arizona State University</p>
2:30pm	<p>NAMBE1-TuA-5 Intervalence Band Transitions of α-Sn Films on InSb Substrates with Different Surface Reconstructions, <i>Jaden Love (Student)</i>, <i>Jan Hrabovsky</i>, <i>Carlos A. Armenta</i>, New Mexico State University; <i>Aaron N. Engel</i>, <i>Chris Palmstrom</i>, University of California at Santa Barbara; <i>Stefan Zollner</i>, New Mexico State University</p>
2:45pm	<p>NAMBE1-TuA-6 Epitaxial Growth and Optical Properties of GeSn Alloys on Ge (100) and Si (100) via Molecular Beam Epitaxy, <i>Nirosh Meckamalil Eldose</i>, <i>Diandian Zhang</i>, <i>Dinesh Baral</i>, <i>Hryhorii Stanchu</i>, <i>Fernando Maia de Oliveira</i>, <i>Sudip Acharya</i>, <i>Wei Du</i>, <i>Fisher Yu</i>, <i>Gregory J Salamo</i>, University of Arkansas</p>
3:00pm	BREAK & EXHIBITS
3:30pm	<p>NAMBE2-TuA-9 Optical and Structural Investigations of Antimonide-Exposed InAs/GaAs Quantum Dots in an InGaAs Quantum Well Matrix for 1380 nm Photoluminescent Emission, <i>Bhavya Kondapavuluri (Student)</i>, <i>Kai-Yang Hsu</i>, <i>Pin-Chih Liu</i>, Yuan Ze University, Taiwan; <i>Wei-Sheng Liu</i>, Yuan Ze University, Taiwan; <i>Ba Laji</i>, Yuan Ze University, Taiwan; <i>Jen-Inn Chyi</i>, National Central University, Taiwan</p>
3:45pm	<p>NAMBE2-TuA-10 Low Temperature Growth of Ultra-Thin CdSe/ZnSe Quantum Wells, <i>Yang A. Vázquez-Soto</i>, <i>Jorge Pérez-Saavedra</i>, <i>Frantisek Sutara</i>, Isaac Hernández-Calderón, CINVESTAV, Mexico</p>
4:00pm	<p>NAMBE2-TuA-11 Spatial and Spectral Control Over MBE Grown InAs/GaAs Quantum Dots for Device Platforms, <i>Nazifa Tasnim Arony (Student)</i>, University of Delaware; <i>Lauren N. McCabe</i>, University of Delaware (Now working at Yale University); <i>Joshya Rajagopal</i>, <i>Lan Mai</i>, <i>Lottie Murray</i>, <i>Prashant Ramesh</i>, <i>Matthew Doty</i>, <i>Joshua Zide</i>, University of Delaware</p>
4:15pm	<p>NAMBE2-TuA-12 2D-Assisted Nanoscale Nucleation for Selective III-V on Silicon Heteroepitaxy, <i>Corey White</i>, University of Illinois Urbana-Champaign; <i>Yiteng Wang</i>, University of Illinois at Urbana-Champaign; <i>Archishman Saha</i>, <i>Soo Ho Choi</i>, University of Illinois Urbana-Champaign; <i>Kuangye Lu</i>, <i>Ne Myo Han</i>, Massachusetts Institute of Technology; <i>Ze-Wei Chen</i>, University of Illinois Urbana-Champaign; <i>Doa Kwon</i>, <i>Jeehwan Kim</i>, Massachusetts Institute of Technology; <i>Hyunseok Kim</i>, University of Illinois at Urbana-Champaign; <i>Minjoo Larry Lee</i>, University of Illinois Urbana-Champaign</p>
4:30pm	<p>NAMBE2-TuA-13 Production Processing of 300mm BTO Films on Silicon, for Photonic Applications, <i>Sabina Hatch</i>, DCA Instruments, Finland</p>
4:45pm	<p>NAMBE2-TuA-14 MBE of Epitaxial Al/Ge Quantum Wells for Quantum Computing, <i>Jason Dong</i>, <i>Joshua Thompson</i>, <i>Bernardo Langa Jr.</i>, <i>Chomani Gaspe</i>, <i>Riis Card</i>, Laboratory for Physical Sciences; <i>Brycelynn Bailey</i>, <i>Shiva Davari Dolatabadi</i>, <i>Hugh Churchill</i>, University of Arkansas; <i>Thomas Hazard</i>, <i>Kyle Serniak</i>, MIT Lincoln Laboratory; <i>Kasra Sardashti</i>, <i>Christopher Richardson</i>, Laboratory for Physical Sciences</p>
5:00pm	<p>NAMBE2-TuA-15 Reducing Contact Resistance of Ultra-thin High Al-content AlGaN pMOSFETs Grown by NH₃-MBE, <i>Ashley Wissel-Garcia (Student)</i>, University of California at Santa Barbara; <i>Yinxuan Zhu</i>, <i>Siddharth Rajan</i>, The Ohio State University; <i>James Speck</i>, University of California at Santa Barbara</p>
5:15pm	<p>NAMBE2-TuA-16 Molecular Beam Epitaxy Growth and X-Ray Analysis of α and γ MnTe, <i>Candice R. Forrester (Student)</i>, <i>Sina Mohammadi</i>, <i>Aran Barton</i>, <i>Jisoo Moon</i>, The City University of New York; <i>Rei Miyazawa</i>, <i>Masakazu Kobayashi</i>, Waseda University, Japan; <i>Maria C. Tamargo</i>, The City University of New York</p>

NAMBE
Session NAMBE1-TuA
Oxides and Group IV Materials
Moderators:
 Ezra Bussman, Sandia National Laboratories,
 Sriram Krishnamoorthy, University of California at Santa Barbara

NAMBE
Session NAMBE2-TuA
Low Dimensional Nanostructures
Moderator:
 Kunal Mukherjee, Stanford University

Wednesday Morning, August 27, 2025

Room Tamaya ABC	
8:00am	<p>NAMBE1-WeM-1 Heteroepitaxial Growth of Highly Anisotropic Sb₂Se₃ Films on GaAs, <i>Kelly Xiao (Student)</i>, Stanford University; <i>Virat Tara</i>, University of Washington; <i>Pooja Reddy, Jarod Meyer</i>, Stanford University; <i>Alec Skipper</i>, University of California Santa Barbara; <i>Rui Chen</i>, University of Washington; <i>Leland Nordin</i>, University of Central Florida; <i>Arka Majumdar</i>, University of Washington; <i>Kunal Mukherjee</i>, Stanford University</p>
8:15am	<p>NAMBE1-WeM-2 Evaluating Dopant Candidates for N-Type SnTe Films Grown by Molecular Beam Epitaxy, <i>Qihua Zhang</i>, <i>Mary Kathleen Caucci</i>, <i>Maria Hilse</i>, <i>Susan Sinnott</i>, <i>Stephanie Law</i>, The Pennsylvania State University</p>
8:30am	<p>NAMBE1-WeM-3 Tunable Electrical Conductivity in Ferromagnetic Semiconductor Samarium Nitride, <i>Kevin Vallejo</i>, Idaho National Laboratory</p>
8:45am	<p>NAMBE1-WeM-4 Formation of [111]-Ge Domains in Layered α-FeGe₂ by MBE and Solid Phase Epitaxy, <i>Moritz Hansemann (Student)</i>, <i>Michael Hanke</i>, <i>Achim Trampert</i>, <i>Jens Herfort</i>, Paul-Drude-Institut für Festkörperelektronik Leibniz-Institut im Forschungsverbund Berlin, Germany</p>
9:00am	<p>NAMBE1-WeM-5 Twin-free (MnSb₂Te₄)_x(Sb₂Te₃)_{1-x} Growth on In₂Se₃/InP(111):B Substrates by Molecular Beam Epitaxy, <i>Jisoo Moon</i>, <i>Candice R. Forrester</i>, City College of New York; <i>Sina Mohammadi</i>, City College of New York, City University of New York; <i>Lia Krusin-Elbaum</i>, <i>Maria C. Tamargo</i>, City College of New York</p>
9:15am	<p>NAMBE1-WeM-6 Epitaxial Growth of SnGeSe Ternary Alloys on GaAs Substrates, <i>Kira Martin (Student)</i>, <i>Pooja D. Reddy</i>, <i>Jarod E. Meyer</i>, <i>Kelly Xiao</i>, <i>Tri Nguyen</i>, <i>Kunal Mukherjee</i>, Stanford University</p>
9:30am	<p>NAMBE1-WeM-7 Controlling Antiphase Twins in Bi₂Se₃ via Step-Terminated Al₂O₃ Substrates, <i>Matthew Brahlek</i>, <i>Jane Chen</i>, Oak Ridge National Laboratory; <i>Rob Moore</i>, Oak Ridge Nation; <i>Alessandro R. Mazza</i>, Oak Ridge National Laboratory</p>
9:45am	<p>NAMBE1-WeM-8 “Kinetic Roughening” in Low-temperature MBE Growth of III-As Heterostructures on InP(111)B, <i>Esperanza Luna</i>, Paul-Drude-Institut für Festkörperelektronik Leibniz-Institut im Forschungsverbund Berlin, Germany; <i>Seyed Ali Hosseini Farahabadi</i>, <i>Milad Entezami</i>, <i>Man Chun Alan Tam</i>, <i>Zbigniew Roman Wasilewski</i>, University of Waterloo, Canada</p>
10:00am	<p>BREAK & EXHIBITS</p>
10:30am	<p>NAMBE2-WeM-11 Artificial Intelligence for on-the-Fly Analysis and Control During Oxide Molecular Beam Epitaxy, <i>Tiffany Kaspar</i>, <i>Emily Saldanha</i>, <i>Henry Sprueill</i>, <i>Jenna Pope</i>, <i>Sarah Akers</i>, <i>Derek Hopkins</i>, <i>Ethan King</i>, Pacific Northwest National Laboratory</p>
10:45am	<p>NAMBE2-WeM-12 A Novel Approach for P-Type Doping in Semiconductor Heterostructures: Interface Fermi-Level Position Engineering, <i>Xiaoyang Liu (Student)</i>, <i>Xin Qi</i>, <i>Zheng Ju</i>, <i>Nathan Rosenblatt</i>, <i>Razine Hossain</i>, <i>Yong-Hang Zhang</i>, Arizona State University</p>
11:00am	<p>NAMBE2-WeM-13 GaP Planar Coalescence Over Embedded Dielectric Gratings by Molecular Beam Epitaxy, <i>Ashlee Garcia</i>, <i>Will Doyle</i>, University of Texas at Austin; <i>Yiteng Wang</i>, <i>Corey White</i>, University of Illinois at Urbana-Champaign; <i>Byron Aguilar</i>, University of Texas at Austin; <i>Minjoo Lee</i>, University of Illinois at Urbana-Champaign; <i>Daniel Wasserman</i>, <i>Seth Bank</i>, University of Texas at Austin</p>
11:15am	<p>NAMBE2-WeM-14 High-Efficiency Entangled Photon Sources Using (111)-Oriented Quantum Optical Metasurfaces, <i>Trevor Blaikie (Student)</i>, University of Waterloo, Canada; <i>Simon Stich</i>, Walter Schottky Institut, Technische Universität München, Germany; <i>Vitaliy Sultanov</i>, Max-Planck Institute for the Science of Light, Germany; <i>Maria Chekhova</i>, Max Planck Institute for the Science of Light, Germany; <i>Mikhail Belkin</i>, Walter Schottky Institut, Technische Universität München, Germany; <i>Zbig Wasilewski</i>, University of Waterloo, Canada</p>
11:30am	<p>NAMBE2-WeM-15 Crystalline Direction and Shadowing Effect on Overgrowth of Patterned Features on GaAs (001), <i>Xizheng Fang (Student)</i>, <i>Yiteng Wang</i>, <i>Adrian Birge</i>, <i>Minjoo Lee</i>, University of Illinois Urbana-Champaign</p>
11:45am	<p>NAMBE2-WeM-16 Thermal Laser Epitaxy System for Synthesis of Thin Films Containing Refractory Elements, <i>David Catherall (Student)</i>, <i>Yifei Yan</i>, <i>Fin Donachie</i>, <i>Austin Minnich</i>, California Institute of Technology</p>
12:00pm	<p>NAMBE2-WeM-17 Rolled-Up Metamaterials (RUMMS) for Infrared Imaging, <i>Gokul Nanda Gopakumar (Student)</i>, <i>Stephanie Law</i>, Pennsylvania State University</p>
12:15pm	<p>NAMBE2-WeM-18 Spectroscopic Ellipsometry as an in Situ Technique to Control MBE Growth, <i>Jackson Niedel</i>, <i>Owen Peterson</i>, <i>Hatim Saeed</i>, Kenyon College; <i>Qihua Zhang</i>, <i>Stephanie Law</i>, <i>Maria Hilse</i>, Penn State University; <i>Frank Peiris</i>, Kenyon College</p>
12:30pm	<p>NAMBE2-WeM-19 Closing Remarks & Thank Yous</p>

NAMBE
Session NAMBE1-WeM
Heteroepitaxy
Moderator:
Seth Bank, University of Texas at Austin

NAMBE
Session NAMBE2-WeM
Advanced MBE Techniques
Moderator:
Stephanie Law, Penn State University

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