

Program Key

Conference Topics

MBE MBE

Program Overview

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| Room /Time | Elder Tom Crane Bear | Max Bell Auditorium |
| SuM | | MBE-SuM: Nanowires/Novel III-V Compounds and Growth Techniques |
| MoM | | MBE-MoM: Novel III-N Growth and Applications/III-Nitrides for Electronics |
| MoA | | MBE-MoA: Novel Materials and Oxides/2D Materials and Characterization |
| MoP | Poster Sessions | |
| TuM | | MBE-TuM: Bismuth Alloys/Antimonides |
| TuA | | MBE-TuA: Solar Cells |
| WeM | | MBE-WeM: II-VI Materials and Heterovalent Growth/Topological Insulators and Quantum Computing |
| WeA | | MBE-WeA: Quantum Dots/Growth and Heterogeneous Integration on Si, Ge |

Special Events Sunday

Special Events Sunday

7:00 AM Continental Breakfast/Vistas Dining Room
10:00 AM Coffee Break/Max Bell Foyer
12:00 PM Lunch/Vistas Dining Room

Sunday Morning, September 30, 2018

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| MBE Room Max Bell Auditorium - Session MBE-SuM Nanowires/Novel III-V Compounds and Growth Techniques Moderators: Richard Ares, Université de Sherbrooke, Amy Liu, IQE Inc. | |
| 8:45am | MBE-SuM-1 Optically Active Dilute-Antimonide Ga(In,Sb)N Nanostructures for Deep-visible Optoelectronics and Solar Fuel Applications, Faqrul A. Chowdhury , Q Shi, H Guo, McGill University, Canada; Z Mi, University of Michigan |
| 9:00am | MBE-SuM-2 The Effects of N Incorporation in GaAsSb based Core-shell Nanowires, Prithviraj Deshmukh , M Sharma, S Nalamati, North Carolina A&T State University; C Reynolds, Y Liu, North Carolina State University; S Iyer, North Carolina A&T State University |
| 9:15am | MBE-SuM-3 Growth of GaAsSb Axial Nanowires on Graphene by Molecular Beam Epitaxy, S Nalamati, M Sharma, Prithviraj Deshmukh , North Carolina A&T State University; D Snyder, J Kronz, Pennsylvania State University; M Zugger, L Reynolds, Y Liu, North Carolina State University; S Iyer, North Carolina A&T State University |
| 9:30am | MBE-SuM-4 Cylindrically Confined Superparamagnetic MnAs Nanocrystals Embedded in Wurtzite (In,Ga)As-(Al,Ga)As Core-shell Nanowires, Janusz Sadowski , Linnaeus University, Sweden; S Kret, A Kaleta, B Kurowska, M Sawicki, Institute of Physics, Polish Academy of Sciences, Poland |
| 9:45am | MBE-SuM-5 Bright Single InAsP Quantum Dots at Telecom Wavelengths in Position-Controlled InP Nanowires, Philip Poole , S Haffouz, NRC, Canada; K Zeuner, KTH Royal Institute of Technology, Sweden; D Dalacu, J Lapointe, D Poitras, K Mnaymneh, X Wu, M Couillard, M Korkusinski, NRC, Canada; E Scholl, K Jons, V Zwiller, KTH Royal Institute of Technology, Sweden; R Williams, NRC, Canada |
| 10:00am | Break |
| 10:15am | Break |
| 10:30am | MBE-SuM-8 Continuously-Graded Parabolic Quantum Wells in AlGaAs, Chris Deimert , Z Wasilewski, University of Waterloo, Canada |
| 10:45am | MBE-SuM-9 Growth and Characterization of Al _{0.48} In _{0.52} As on InP (100) by Hybrid MBE-CBE for Optoelectronics Applications, Thierno Mamoudou Diallo , A Pougoue Mbeunmi, M El-Gahouchi, M Jellite, S Fafard, R Arès, A Boucherif, Université de Sherbrooke, Canada |
| 11:00am | MBE-SuM-10 InAlAs/InGaAs Growth on InP(111)A and InP(111)B Substrates with Varying Substrate Offcut Angle, Ida Sadeghi , M Tam, Z Wasilewski, University of Waterloo, Canada |
| 11:15am | MBE-SuM-11 Growth and Characterization of Undoped InGaAs by Hybrid MBE-CBE for Optoelectronic Applications, Alex Brice Pougoue Mbeunmi , T Diallo, M El-Gahouchi, M Jellite, G Gomme, A Boucherif, S Fafard, R Ares, Université de Sherbrooke, Canada |
| 11:30am | MBE-SuM-12 Epitaxial Growth and Properties of II ₃ V ₂ Semiconductors: Mg ₃ N ₂ and Zn ₃ N ₂ , Peng Wu , T Tiedje, University of Victoria, Canada |
| 11:45am | MBE-SuM-13 Examining the Effects of Strain and TI Content on the Properties and Structure of TI/GaAs Films, Kevin Grossklaus , J Ganguly, M Stevens, J McElearney, T Vandervelde, Tufts University |

Special Events Monday

Special Events Monday

7:00 AM Continental Breakfast/Vistas Dining Room
10:00 AM Coffee Break & Exhibits/Max Bell Centre
12:00 PM Lunch & Exhibits/Vistas Dining Room
3:00 PM Coffee Break & Exhibits/Max Bell Centre
4:45 PM Posters & Exhibits/Elder Tom Crane Bear

Monday Morning, October 1, 2018

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| <p>MBE Room Max Bell Auditorium - Session MBE-MoM Novel III-N Growth and Applications/III-Nitrides for Electronics Moderators: Thomas Tiedje, University of Victoria, Isaac Hernandez-Calderon, CINVESTAV, Maria Tamargo, City College of New York, City University of New York</p> | |
| 8:30am | INVITED: MBE-MoM-1 MBE Innovator Award Talk: Evolution, Development and Commercialization of the Quantum Dot Laser: Brief History and Recent Progress, <i>Pallab Bhattacharya</i> , University of Michigan |
| 8:45am | Invited talk continues. |
| 9:00am | Invited talk continues. |
| 9:15am | MBE-MoM-4 High Growth Rate Plasma Considerations for Indium-rich III-nitrides, <i>Evan Clinton, E Vadiee, W Doolittle</i> , Georgia Institute of Technology |
| 9:30am | MBE-MoM-5 Molecular Beam Epitaxy of III-Nitride Nanowires on Amorphous and Nanocrystalline Metals, <i>Brelon May, E Hettiaratchy, R Myers</i> , The Ohio State University |
| 9:45am | MBE-MoM-6 RF-Plasma MBE Growth of Epitaxial Metallic TaN _x Transition Metal Nitride Films on SiC, <i>D. Scott Katzer, N Nepal, M Hardy, B Downey, D Storm, D Meyer</i> , U.S. Naval Research Laboratory |
| 10:00am | Break & Exhibits |
| 10:15am | Break & Exhibits |
| 10:30am | MBE-MoM-9 Magneto-Photoluminescence Properties of an AlGaIn/GaN 2DEG Grown on Bulk GaN, <i>Stefan Schmult</i> , TU Dresden, Germany; <i>V Solovyev</i> , Institute of Solid State Physics RAS, Russia; <i>S Wirth</i> , Max-Planck-Institute for Chemical Physics of Solids, Germany; <i>A Grosser</i> , NaMLab gGmbH, Germany; <i>T Mikolajick</i> , TU Dresden & NaMLab gGmbH, Germany; <i>I Kukushkin</i> , Institute of Solid State Physics RAS, Russia |
| 10:45am | MBE-MoM-10 Kinetically Limited Growth of High Scandium Fraction Scandium Aluminum Nitride, <i>Matthew Hardy, B Downey, N Nepal, D Storm, D Katzer, D Meyer</i> , U.S. Naval Research Laboratory |
| 11:00am | MBE-MoM-11 Low Resistivity Al-rich AlGaIn Grown by Plasma-assisted Molecular Beam Epitaxy, <i>Ayush Pandey</i> , University of Michigan; <i>X Liu</i> , McGill University, Canada; <i>D Laleyan, K Mashooq, E Reid, W Shin, P Bhattacharya, Z Mi</i> , University of Michigan |
| 11:15am | MBE-MoM-12 RF-MBE Growth of AlN/GaN/AlN Resonant Tunneling Diodes on Freestanding GaN and GaN Templates, <i>David Storm</i> , U.S. Naval Research Laboratory; <i>T Growden</i> , The Ohio State University; <i>W Zhang</i> , Wright State University; <i>S Katzer, M Hardy, D Meyer</i> , U.S. Naval Research Laboratory; <i>E Brown</i> , Wright State University; <i>P Berger</i> , The Ohio State University |
| 11:30am | MBE-MoM-13 Low-resistance GaN Homojunction Tunnel Diodes and Low Voltage Drop Tunnel Contacts, <i>E Vadiee, Evan Clinton, W Doolittle</i> , Georgia Institute of Technology |
| 11:45am | MBE-MoM-14 On the Efficiency and Long-term Stability of MBE-grown III-Nitride Nanostructures for Unassisted Overall Water Splitting, <i>Faqrul A. Chowdhury, H Tran, H Guo</i> , McGill University, Canada; <i>Z Mi</i> , University of Michigan |

Monday Afternoon, October 1, 2018

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| <p>MBE Room Max Bell Auditorium - Session MBE-MoA Novel Materials and Oxides/2D Materials and Characterization Moderators: Joshua Zide, University of Delaware, Geoffrey Gardner, Microsoft Research</p> | |
| 1:30pm | MBE-MoA-1 Epitaxial Stabilization of Monoclinic Fe ₂ O ₃ on β-Ga ₂ O ₃ , <i>John Jamison, B May, R Myers</i> , The Ohio State University |
| 1:45pm | MBE-MoA-2 Homo- and Hetero-epitaxial Growth of β -Ga ₂ O ₃ Thin Films by Molecular Beam Epitaxy, <i>Neeraj Nepal, D Katzer, B Downey, V Wheeler, M Hardy, D Storm, D Meyer</i> , U.S. Naval Research Laboratory |
| 2:00pm | MBE-MoA-3 Epitaxial Growth and Electronic Structure of Semiconducting Half-Heusler FeVSb, <i>Estiaque Haidar Shourov, P Strohbeen, D Du</i> , University of Wisconsin Madison; <i>J McChesney</i> , Argonne National Laboratory; <i>A Janotti</i> , University of Delaware; <i>J Kawasaki</i> , University of Wisconsin Madison |
| 2:15pm | MBE-MoA-4 Growth of Candidate Polar Metal Hexagonal Half Heuslers, <i>Dongxue Du, J Kawasaki</i> , University of Wisconsin Madison |
| 2:30pm | MBE-MoA-5 Optimizing Cesium Antimonide Photocathode Performance Using Real-time <i>In-situ</i> Monitoring of Photoemissive Properties, <i>Mark Hoffbauer</i> , Los Alamos National Laboratory; <i>S Celestin</i> , Northeastern University; <i>V Pavlenko, F Liu, N Moody</i> , Los Alamos National Laboratory |
| 2:45pm | MBE-MoA-6 Optically Triggered Semiconductor Hyperbolic Metamaterial for Controlled Single Photon Emission, <i>Kurt Eyink, H Haugan, V Pustovit, A Urbas</i> , Air Force Research Laboratory |
| 3:00pm | Break & Exhibit |
| 3:15pm | Break & Exhibit |
| 3:30pm | MBE-MoA-9 Epitaxy of <i>M/graphene/Ge</i> (<i>M</i> = Fe, Sb) Heterostructures: Testing the Limits of Remote Heteroepitaxy, <i>Patrick J. Strohbeen, E Shourov, V Saraswat, D Du, M Arnold, J Kawasaki</i> , University of Wisconsin Madison |
| 3:45pm | MBE-MoA-10 Molecular Beam Epitaxy of MoSe ₂ Directly on Si, <i>Elline Hettiarachy, B May, R Myers</i> , The Ohio State University |
| 4:00pm | MBE-MoA-11 Atomic Scale Characterization Showing Kinetic Compositional Instability and Phase Separation in MBE-grown InGaAs, <i>Michael Yakes, M Twigg, N Kotulak, N Mahadik, S Tomasulo</i> , U.S. Naval Research Laboratory |
| 4:15pm | MBE-MoA-12 Investigation of Gallium-related Defects in III/V Epitaxial Layers, <i>Yossi Cohen, O Klin, I Grimberg, N Yaron, E Weiss</i> , Semiconductor Devices Company, Israel |
| 4:30pm | MBE-MoA-13 Acoustic Nanostructures for Charge Carrier Confinement in GaAs/Al _x Ga _{1-x} As Multiple Quantum Wells, <i>Kevin Vallejo, C Schuck, T Garrett</i> , Boise State University; <i>Z Hua, D Hurley</i> , Idaho National Laboratory; <i>P Simmonds</i> , Boise State University |

MBE

Room Elder Tom Crane Bear - Session MBE-MoP

MBE-Poster Session

4:45pm

MBE-MoP-1 Hydrogen Permeation Behavior of BN film, *Motonori Tamura*, The University of Electro-Communications, Japan

MBE-MoP-3 Growth of Pure Wurtzite InGaAs Nanowires for Photovoltaic and Energy Harvesting Applications, *Hangkyu Kang*, *M Baik*, Yonsei University, Republic of Korea; *B Yoo*, Hanyang University, Republic of Korea; *J Song*, Korea Institute of Science and Technology, Republic of Korea; *M Cho*, Yonsei University, Republic of Korea

MBE-MoP-4 Effect of ex-situ Passivation of the GaAsSb Nanowires, *M Sharma*, *J Li*, *S Iyer*, *Rabin Pokharel*, North Carolina A&T State University

MBE-MoP-5 Study of As-rich Interfaces with Exponentially Decaying As Content within InAs/AlSb Superlattices, *Yunong Hu*, *M Tam*, *Z Wasilewski*, University of Waterloo, Canada

MBE-MoP-7 The Characteristics of Phototransistor based on the Grown MoSe₂ by Molecular Beam Epitaxy, *Yoon-Ho Choi*, *J Jeong*, *G Kwon*, *H Kim*, Yonsei University, Republic of Korea; *H Kim*, Sungkyunkwan University, Republic of Korea; *M Cho*, Yonsei University, Republic of Korea

MBE-MoP-8 Experimental Determination of Band Overlap in Type II InAs/GaSb Superlattice based on Temperature Dependent Photoluminescence Signal, *J Huang*, *Y Zhang*, *Y Cao*, *K Liu*, *W Huang*, *S Luo*, *H Ji*, *T Yang*, *Wenquan Ma*, Institute of Semiconductors, Chinese Academy of Sciences, China

MBE-MoP-10 Significantly Enhanced Performances of 1.3 μm InAs/GaAs Quantum Dot Lasers by Direct Si-doping, *Z Lv*, *Z Zhang*, *Tao Yang*, Institute of Semiconductors, Chinese Academy of Sciences, China

MBE-MoP-11 Effect of in-situ Annealing on the GaAsSb Nanowire-based Photodetector, *M Sharma*, *E Ahmad*, *M Parakh*, *Rabin Pokharel*, *S Iyer*, North Carolina A&T State University

MBE-MoP-12 Reduced Heating Effects in MBE Grown Nanowire Array LEDs, *S Yang*, McGill University, Canada; *A Tian*, St. Maximilian Kolbe CHS, Canada; *Yongyuan Zang*, McGill University, Canada

MBE-MoP-13 Effect of Column Diameter and Height on Optical Properties of Regularly Arranged GaN Nanocolumn Grown by rf-MBE, *Hiroto Sekiguchi*, *Y Higashi*, *K Yamane*, *H Okada*, *A Wakahara*, Toyohashi University of Technology, Japan; *K Kishino*, Sophia University, Japan

Special Events Tuesday

Special Events Tuesday

7:00 AM Continental Breakfast/Vistas Dining Room
10:00 AM Coffee Break & Exhibits/Max Bell Centre
12:00 PM Lunch & Exhibits/Vistas Dining Room
3:00 PM Coffee Break & Exhibits/Max Bell Centre
5:30 PM Conference Banquet Dinner/Mount View Barbecue

Tuesday Morning, October 2, 2018

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| MBE Room Max Bell Auditorium - Session MBE-TuM Bismuth Alloys/Antimonides Moderators: Richard Mirin, National Institute of Standards and Technology, James Gupta, NRC | |
| 8:30am | INVITED: MBE-TuM-1 MBE Young Investigator Award Talk: Tensile-strained Self-assembly of Quantum Dots for Entangled Photon Sources and Band Structure Engineering, <i>Paul Simmonds</i> , Boise State University |
| 8:45am | Invited talk continues. |
| 9:00am | MBE-TuM-3 Mechanisms of Compositional Inhomogeneities in Bismide Films, <i>C Tait, B Carter, V Caro, Joanna Millunchick</i> , University of Michigan |
| 9:15am | MBE-TuM-4 In-situ UV Irradiation on the Uniformity and Optical Properties of GaAsBi Epi-layers Grown by MBE, <i>Daniel Beaton</i> , ScientaOmicron |
| 9:30am | MBE-TuM-5 Manipulating Film and Underlayer Strain to Understand Composition Modulation in GaAsBi, <i>Margaret Stevens, K Grossklous, J McElearney, T Vandervelde</i> , Tufts University |
| 9:45am | MBE-TuM-6 Long-Wavelength InAs-based Interband Cascade Lasers Grown by MBE, <i>James Gupta, X Wu, G Aers</i> , National Research Council of Canada, Canada; <i>Y Li, L Li, W Huang, R Yang</i> , University of Oklahoma |
| 10:00am | Break & Exhibits |
| 10:15am | Break & Exhibits |
| 10:30am | MBE-TuM-9 Atomically Smooth InSb Quantum Wells on GaAs Substrates, <i>Yinqiu Shi, E Bergeron, F Sfigakis, J Baugh, Z Wasilewski</i> , University of Waterloo, Canada |
| 10:45am | MBE-TuM-10 Narrow Bandgap InAsSb Detector on Digital Alloy AlInSb Metamorphic Buffer, <i>Vinita Dahiya, A Kazemi</i> , The Ohio State University; <i>E Fraser</i> , Intelligent Epitaxy Technology, Inc.; <i>J Deitz, J Boyer, S Lee</i> , The Ohio State University; <i>P Pinsukanjana</i> , Intelligent Epitaxy Technology, Inc.; <i>T Grassman, S Krishna</i> , The Ohio State University |
| 11:00am | MBE-TuM-11 Molecular Beam Epitaxy of Wide-Bandgap InAlAsSb, <i>Stephanie Tomasulo</i> , U.S. Naval Research Laboratory; <i>M Gonzalez</i> , Sotera Defense Solutions; <i>M Lumb</i> , The George Washington University; <i>M Twigg, I Vurgaftman, J Meyer, R Walters, M Yakes</i> , U.S. Naval Research Laboratory |
| 11:15am | MBE-TuM-12 Minority Carrier Lifetime and Recombination Dynamics in Strain-Balanced GaInAs/InAsSb Superlattices, <i>Preston T. Webster, E Steenbergen, G Ariyawansa, C Reyner</i> , Air Force Research Laboratory; <i>J Kim</i> , Sandia National Laboratories |
| 11:30am | MBE-TuM-13 Inhibited Hot-Carrier Cooling in InAs/AlAs _{1-x} Sb _x Quantum Wells, <i>H Esmailpour, V Whiteside</i> , University of Oklahoma; <i>H Piyathilaka</i> , West Virginia University; <i>S Vijayaragunathan, B Wang</i> , University of Oklahoma; <i>E Adcock-Smith, K Roberts</i> , University of Tulsa; <i>T Mishima, Michael Santos</i> , University of Oklahoma; <i>A Bristow</i> , West Virginia University; <i>I Sellers</i> , University of Oklahoma |
| 11:45am | MBE-TuM-14 Observation of Interface Electronic States from InAs/GaSb Multi Quantum Wells Grown by Molecular Beam Epitaxy, <i>S Alyamani, Jong Su Kim, J Shin</i> , Yeungnam University, Korea; <i>S Lee, J Kim</i> , Korea Research Institute of Standards and Science, Korea; <i>S Lee, V Dahiya, S Krishna</i> , The Ohio State University |

Tuesday Afternoon, October 2, 2018

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| MBE Room Max Bell Auditorium - Session MBE-TuA Solar Cells Moderator: Paul Simmonds, Boise State University | |
| 1:30pm | MBE-TuA-1 Smart Stacked InGaP/GaAs/GaAs//Si Quadruple-Junction Solar Cells Grown using Molecular Beam Epitaxy, <i>Takeyoshi Sugaya</i> , National Institute of Advanced Industrial Science and Technology (AIST), Japan |
| 1:45pm | MBE-TuA-2 2.0 – 2.2 eV AlGaInP Solar Cells Grown by MBE, <i>Yukun Sun</i> , Yale University; <i>S Fan</i> , University of Illinois Urbana-Champaign; <i>J Faucher</i> , Yale University; <i>B Li</i> , <i>M Lee</i> , University of Illinois Urbana-Champaign |
| 2:00pm | MBE-TuA-3 Optoelectronic Analysis of MBE Grown Symmetric and Asymmetric 1 eV Dilute Nitride Quantum Well Solar Cells, <i>Khim Kharel</i> , <i>M Fitchette</i> , University of Houston; <i>K Shervin</i> , Alta Device; <i>W Wang</i> , First Solar Cell; <i>A Freundlich</i> , University of Houston |
| 2:15pm | INVITED: MBE-TuA-4 Reflections on NAMBE and MBE, <i>Charles Tu</i> , University of California - San Diego |
| 2:30pm | Invited talk continues. |

Special Events Wednesday

Special Events Wednesday

7:00 AM Continental Breakfast/Vistas Dining Room
10:00 AM Coffee Break & Exhibits/Max Bell Centre
12:00 PM Lunch/Vistas Dining Room
3:00 PM Coffee Break/Max Bell Foyer
4:45 PM Closing Remarks and Announcement of Student Awards/Max Bell Auditorium

Wednesday Morning, October 3, 2018

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| MBE Room Max Bell Auditorium - Session MBE-WeM II-VI Materials and Heterovalent Growth/Topological Insulators and Quantum Computing Moderators: Philip Poole, NRC, Michael Santos, University of Oklahoma | |
| 8:30am | MBE-WeM-1 High-Reflectivity Heterovalent Distributed Bragg Reflectors for Infrared Resonant Cavity Applications, <i>Maxwell Lassise, B Tracy, D Smith, Y Zhang</i> , Arizona State University |
| 8:45am | MBE-WeM-2 Photoluminescence Characterization of a 1 ML CdSe Fully-Strained Ultra-Thin Quantum Well with very Thin ZnSe Barriers, <i>A Alfaro-Martínez, D NyN, CINVESTAV, Mexico; F Sutara, Isaac Hernández-Calderón, CINVESTAV, Mexico</i> |
| 9:00am | MBE-WeM-3 Hybrid II-VI/III-V Infrared Photodetectors, <i>Marcel Claro</i> , City College of New York, City University of New York; <i>Y Kaya</i> , Princeton University; <i>T Garcia, C Forrester, V Deligiannakis</i> , City College of New York, City University of New York; <i>C Gmachl</i> , Princeton University; <i>M Tamargo</i> , City College of New York, City University of New York |
| 9:15am | MBE-WeM-4 Cd ₃ As ₂ /II-VI Heterostructures on (111) GaAs, <i>Anthony Rice, K Park, K Alberi</i> , National Renewable Energy Laboratory |
| 9:30am | MBE-WeM-5 Demonstration of the Growth of ZnCdTe/ZnTe Quantum Wells with Variable Composition by Submonolayer Pulsed Beam Epitaxy (SPBE), <i>F Sutara, Isaac Hernández-Calderón, CINVESTAV, Mexico</i> |
| 9:45am | MBE-WeM-6 Interface Modification in Type-II ZnCdSe/Zn(Cd)Te QDs, <i>Vasilios Deligiannakis, S Dhomkar, M Claro</i> , City College of New York, City University of New York; <i>I Kuskovsky</i> , Queens College; <i>M Tamargo</i> , City College of New York, City University of New York |
| 10:00am | Break & Exhibits |
| 10:15am | Break & Exhibits |
| 10:30am | MBE-WeM-9 Molecular Beam Epitaxy Growth of Near Surface InAs Two-dimensional Electron Gas for Topological Quantum Computation, <i>Candice Thomas, A Hatke, M Capano, T Wang, R Diaz, S Gronin, G Gardner, M MANFRA</i> , Purdue University |
| 10:45am | MBE-WeM-10 InAs Surface 2DEG and Interface Characterization of InAs/Al Structures Using Josephson Junctions, <i>Kaushini Wickramasinghe, W Mayer, J Yuan, K Sardashti, J Shabani</i> , New York University |
| 11:00am | MBE-WeM-11 Epitaxial Growth of Superconducting Thin Aluminum Films on InAs for Topological Quantum Computing, <i>Geoffrey Gardner</i> , Microsoft Research; <i>C Thomas, T Wang</i> , Purdue University; <i>S Gronin</i> , Microsoft Research; <i>M Capano, M MANFRA</i> , Purdue University |
| 11:15am | MBE-WeM-12 Morphological Control Over (Bi _x In _{1-x}) ₂ Se ₃ Grown on GaAs, <i>Theresa Ginley, S Law</i> , University of Delaware |
| 11:30am | MBE-WeM-13 Dielectric Functions of MBE-grown Bi ₂ (Te _{1-x} Se _x) ₃ Thin Films, <i>E Holmgren, J Lyons, Frank Peiris</i> , Kenyon College; <i>X Li, X Liu, M Dobrowolska, J Furdyna</i> , University of Notre Dame |
| 11:45am | MBE-WeM-14 MBE Growth and Properties of Bi ₂ Se ₃ /Sb ₂ Te ₃ p-n-p-n Short-period Superlattices, <i>Ido Levy, T Garcia, H Deng, S Alsheimer, L Krusin-Elbaum, M Tamargo</i> , City College of New York, City University of New York |

Wednesday Afternoon, October 3, 2018

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| MBE Room Max Bell Auditorium - Session MBE-WeA Quantum Dots/Growth and Heterogeneous Integration on Si, Ge Moderators: Shanthi Iyer, North Carolina A&T State University, Preston T. Webster, Air Force Research Laboratory | |
| 1:30pm | MBE-WeA-1 96 GHz Colliding Pulse Mode-locked Quantum Dot Lasers Grown on Silicon, <i>Justin Norman, S Liu, D Jung, M Kennedy, A Gossard, J Bowers</i> , University of California, Santa Barbara |
| 1:45pm | MBE-WeA-2 InAs/GaAs Submonolayer (SML) Quantum Dot-based Semiconductor Saturable Absorber Mirrors (SESAMs), <i>Sadhvikas Addamane</i> , University of New Mexico; <i>A Laurain, J Moloney</i> , University of Arizona; <i>G Balakrishnan</i> , University of New Mexico |
| 2:00pm | MBE-WeA-3 Strain-Compensated Quantum Dot Cascade Lasers, <i>Feng-Qi Liu</i> , Institute of Semiconductors, Chinese Academy of Sciences, China |
| 2:15pm | MBE-WeA-4 (111)-oriented Stranski-Krastanov Quantum Dots Optimized for Entangled Photon Emission, <i>Christopher Schuck, K Vallejo, S Roy, T Garrett, K Sautter</i> , Boise State University; <i>B Liang, D Huffaker</i> , University of California, Los Angeles; <i>C Palmstøm</i> , University of California, Santa Barbara; <i>P Simmonds</i> , Boise State University |
| 2:30pm | MBE-WeA-5 Optimization of InAs Quantum Dots for Scintillation Applications, <i>Michael Yakimov, V Tokranov, K Dropiewski, A Minns</i> , SUNY Polytechnic Institute; <i>P Murat</i> , Fermi National Accelerator Laboratory; <i>S Oktyabrsky</i> , SUNY Polytechnic Institute |
| 2:45pm | MBE-WeA-6 Tensile-Strained Ge Quantum Dots on (111)A Surfaces, <i>Kathryn Sautter, C Schuck, T Garrett, A Weltner, K Vallejo, P Simmonds</i> , Boise State University |
| 3:00pm | Break |
| 3:15pm | Break |
| 3:30pm | MBE-WeA-9 Relaxed GaP on Si with Low Threading Dislocation Density, <i>Ryan Hool, Y Chai, P Dhingra, B Eng</i> , University of Illinois Urbana-Champaign; <i>Y Sun</i> , Yale University; <i>S Fan</i> , University of Illinois Urbana-Champaign; <i>K Young</i> , Yale University; <i>M Lee</i> , University of Illinois Urbana-Champaign |
| 3:45pm | MBE-WeA-10 Development of Hybrid Gas-source MBE to make Thin Films of Sulfide Perovskites and Related Complex Chalcogenides, <i>S Filippone, Y Li, Rafael Jaramillo</i> , Massachusetts Institute of Technology |
| 4:00pm | MBE-WeA-11 Epitaxial III-V Growths on 0.1-mm Grain-size Polycrystalline Germanium Thin-films, <i>Abhinav Chikhalkar, C Zhang, N Faleev</i> , Arizona State University; <i>E McClure, S Hubbard</i> , Rochester Institute of Technology; <i>C Honsberg, R King</i> , Arizona State University |
| 4:15pm | MBE-WeA-12 Grating Coupled Quantum Well Infrared Photodetector on a Si Substrate, <i>HoSung Kim</i> , University of Waterloo, Canada; <i>G Ryu, S Ahn</i> , Korea Institute of Science and Technology, Korea; <i>Z Wasilewski</i> , University of Waterloo, Canada; <i>W Choi</i> , Korea Institute of Science and Technology, Korea |
| 4:30pm | MBE-WeA-13 Direct MBE Growth of Metamorphic nBn Infrared Photodetectors on 150 mm Ge-Si Substrates for Heterogeneous Integration, <i>Joel Fastenau, D Lubyshev, S Nelson</i> , IQE Inc.; <i>A Morgan, S Edwards</i> , IQE Silicon, UK; <i>M Fetters, H Krysiak, J Zeng, M Kattner, P Frey, A Liu</i> , IQE Inc. |

Author Index

Bold page numbers indicate presenter

— A —

Adcock-Smith, E: MBE-TuM-13, 10
Addamane, S: MBE-WeA-2, **14**
Aers, G: MBE-TuM-6, 10
Ahmad, E: MBE-MoP-11, 8
Ahn, S: MBE-WeA-12, 14
Alberi, K: MBE-WeM-4, 13
Alfaro-Martínez, A: MBE-WeM-2, 13
Alzheimer, S: MBE-WeM-14, 13
Alyamani, S: MBE-TuM-14, 10
Ares, R: MBE-SuM-11, 4
Arès, R: MBE-SuM-9, 4
Ariyawansa, G: MBE-TuM-12, 10
Arnold, M: MBE-MoA-9, 7
— B —
Baik, M: MBE-MoP-3, 8
Balakrishnan, G: MBE-WeA-2, 14
Baugh, J: MBE-TuM-9, 10
Beaton, D: MBE-TuM-4, **10**
Berger, P: MBE-MoM-12, 6
Bergeron, E: MBE-TuM-9, 10
Bhattacharya, P: MBE-MoM-1, **6**; MBE-MoM-11, 6
Boucherif, A: MBE-SuM-11, 4; MBE-SuM-9, 4
Bowers, J: MBE-WeA-1, 14
Boyer, J: MBE-TuM-10, 10
Bristow, A: MBE-TuM-13, 10
Brown, E: MBE-MoM-12, 6
— C —
Cao, Y: MBE-MoP-8, 8
Capano, M: MBE-WeM-11, 13; MBE-WeM-9, 13
Caro, V: MBE-TuM-3, 10
Carter, B: MBE-TuM-3, 10
Celestin, S: MBE-MoA-5, 7
Chai, Y: MBE-WeA-9, 14
Chikhalkar, A: MBE-WeA-11, **14**
Cho, M: MBE-MoP-3, 8; MBE-MoP-7, 8
Choi, W: MBE-WeA-12, 14
Choi, Y: MBE-MoP-7, **8**
Chowdhury, F: MBE-MoM-14, **6**; MBE-SuM-1, 4
Claro, M: MBE-WeM-3, **13**; MBE-WeM-6, 13
Clinton, E: MBE-MoM-13, **6**; MBE-MoM-4, **6**
Cohen, Y: MBE-MoA-12, **7**
Couillard, M: MBE-SuM-5, 4
— D —
Dahiya, V: MBE-TuM-10, **10**; MBE-TuM-14, 10
Dalacu, D: MBE-SuM-5, 4
Deimert, C: MBE-SuM-8, **4**
Deitz, J: MBE-TuM-10, 10
Deligiannakis, V: MBE-WeM-3, 13; MBE-WeM-6, **13**
Deng, H: MBE-WeM-14, 13
Deshmukh, P: MBE-SuM-2, **4**; MBE-SuM-3, **4**
Dhingra, P: MBE-WeA-9, 14
Dhomkar, S: MBE-WeM-6, 13
Diallo, T: MBE-SuM-11, 4; MBE-SuM-9, **4**
Diaz, R: MBE-WeM-9, 13
Dobrowolska, M: MBE-WeM-13, 13
Doolittle, W: MBE-MoM-13, 6; MBE-MoM-4, 6
Downey, B: MBE-MoA-2, 7; MBE-MoM-10, 6; MBE-MoM-6, 6
Dropiewski, K: MBE-WeA-5, 14
Du, D: MBE-MoA-3, 7; MBE-MoA-4, **7**; MBE-MoA-9, 7
— E —
Edwards, S: MBE-WeA-13, 14
El-Gahouchi, M: MBE-SuM-11, 4; MBE-SuM-9, 4
Eng, B: MBE-WeA-9, 14
Esmailpour, H: MBE-TuM-13, 10

Eyink, K: MBE-MoA-6, 7
— F —
Fafard, S: MBE-SuM-11, 4; MBE-SuM-9, 4
Faleev, N: MBE-WeA-11, 14
Fan, S: MBE-TuA-2, 11; MBE-WeA-9, 14
Fastenau, J: MBE-WeA-13, **14**
Faucher, J: MBE-TuA-2, 11
Fetters, M: MBE-WeA-13, 14
Filippone, S: MBE-WeA-10, 14
Fitchette, M: MBE-TuA-3, 11
Forrester, C: MBE-WeM-3, 13
Fraser, E: MBE-TuM-10, 10
Freundlich, A: MBE-TuA-3, 11
Frey, P: MBE-WeA-13, 14
Furdyna, J: MBE-WeM-13, 13
— G —
Ganguly, J: MBE-SuM-13, 4
Garcia, T: MBE-WeM-14, 13; MBE-WeM-3, 13
Gardner, G: MBE-WeM-11, **13**; MBE-WeM-9, 13
Garrett, T: MBE-MoA-13, 7; MBE-WeA-4, 14; MBE-WeA-6, 14
Ginley, T: MBE-WeM-12, **13**
Gmachl, C: MBE-WeM-3, 13
Gomme, G: MBE-SuM-11, 4
Gonzalez, M: MBE-TuM-11, 10
Gossard, A: MBE-WeA-1, 14
Grassman, T: MBE-TuM-10, 10
Grimberg, I: MBE-MoA-12, 7
Gronin, S: MBE-WeM-11, 13; MBE-WeM-9, 13
Grosser, A: MBE-MoM-9, 6
Grossklaus, K: MBE-SuM-13, **4**; MBE-TuM-5, 10
Growden, T: MBE-MoM-12, 6
Guo, H: MBE-MoM-14, 6; MBE-SuM-1, 4
Gupta, J: MBE-TuM-6, **10**
— H —
Haffouz, S: MBE-SuM-5, 4
Hardy, M: MBE-MoA-2, 7; MBE-MoM-10, **6**; MBE-MoM-12, 6; MBE-MoM-6, 6
Hatke, A: MBE-WeM-9, 13
Haugan, H: MBE-MoA-6, 7
Hernández-Calderón, I: MBE-WeM-2, **13**; MBE-WeM-5, **13**
Hettiaratchy, E: MBE-MoA-10, **7**; MBE-MoM-5, 6
Higashi, Y: MBE-MoP-13, 8
Hoffbauer, M: MBE-MoA-5, **7**
Holmgren, E: MBE-WeM-13, 13
Honsberg, C: MBE-WeA-11, 14
Hool, R: MBE-WeA-9, **14**
Hu, Y: MBE-MoP-5, **8**
Hua, Z: MBE-MoA-13, 7
Huang, J: MBE-MoP-8, 8
Huang, W: MBE-MoP-8, 8; MBE-TuM-6, 10
Hubbard, S: MBE-WeA-11, 14
Huffaker, D: MBE-WeA-4, 14
Hurley, D: MBE-MoA-13, 7
— I —
Iyer, S: MBE-MoP-11, 8; MBE-MoP-4, 8; MBE-SuM-2, 4; MBE-SuM-3, 4
— J —
Jamison, J: MBE-MoA-1, **7**
Janotti, A: MBE-MoA-3, 7
Jaramillo, R: MBE-WeA-10, **14**
Jellite, M: MBE-SuM-11, 4; MBE-SuM-9, 4
Jeong, J: MBE-MoP-7, 8
Ji, H: MBE-MoP-8, 8
Jons, K: MBE-SuM-5, 4
Jung, D: MBE-WeA-1, 14
— K —
Kaleta, A: MBE-SuM-4, 4

Kang, H: MBE-MoP-3, **8**
Kattner, M: MBE-WeA-13, 14
Katzner, D: MBE-MoA-2, 7; MBE-MoM-10, 6; MBE-MoM-6, **6**
Katzner, S: MBE-MoM-12, 6
Kawasaki, J: MBE-MoA-3, 7; MBE-MoA-4, 7; MBE-MoA-9, 7
Kaya, Y: MBE-WeM-3, 13
Kazemi, A: MBE-TuM-10, 10
Kennedy, M: MBE-WeA-1, 14
Kharel, K: MBE-TuA-3, **11**
Kim, H: MBE-MoP-7, 8; MBE-WeA-12, **14**
Kim, J: MBE-TuM-12, 10; MBE-TuM-14, **10**
King, R: MBE-WeA-11, 14
Kishino, K: MBE-MoP-13, 8
Klin, O: MBE-MoA-12, 7
Korkusinski, M: MBE-SuM-5, 4
Kotulak, N: MBE-MoA-11, 7
Kret, S: MBE-SuM-4, 4
Krishna, S: MBE-TuM-10, 10; MBE-TuM-14, 10
Kronz, J: MBE-SuM-3, 4
Krusin-Elbaum, L: MBE-WeM-14, 13
Krysiak, H: MBE-WeA-13, 14
Kukushkin, I: MBE-MoM-9, 6
Kurowska, B: MBE-SuM-4, 4
Kuskovsky, I: MBE-WeM-6, 13
Kwon, G: MBE-MoP-7, 8
— L —
Laleyan, D: MBE-MoM-11, 6
Lapointe, J: MBE-SuM-5, 4
Lassise, M: MBE-WeM-1, **13**
Laurain, A: MBE-WeA-2, 14
Law, S: MBE-WeM-12, 13
Lee, M: MBE-TuA-2, 11; MBE-WeA-9, 14
Lee, S: MBE-TuM-10, 10; MBE-TuM-14, 10
Levy, I: MBE-WeM-14, **13**
Li, B: MBE-TuA-2, 11
Li, J: MBE-MoP-4, 8
Li, L: MBE-TuM-6, 10
Li, X: MBE-WeM-13, 13
Li, Y: MBE-TuM-6, 10; MBE-WeA-10, 14
Liang, B: MBE-WeA-4, 14
Liu, A: MBE-WeA-13, 14
Liu, F: MBE-MoA-5, 7; MBE-WeA-3, **14**
Liu, K: MBE-MoP-8, 8
Liu, S: MBE-WeA-1, 14
Liu, X: MBE-MoM-11, 6; MBE-WeM-13, 13
Liu, Y: MBE-SuM-2, 4; MBE-SuM-3, 4
Lubyshev, D: MBE-WeA-13, 14
Lumb, M: MBE-TuM-11, 10
Luo, S: MBE-MoP-8, 8
Lv, Z: MBE-MoP-10, 8
Lyons, J: MBE-WeM-13, 13
— M —
Ma, W: MBE-MoP-8, **8**
Mahadik, N: MBE-MoA-11, 7
MANFRA, M: MBE-WeM-11, 13; MBE-WeM-9, 13
Mashooq, K: MBE-MoM-11, 6
May, B: MBE-MoA-1, 7; MBE-MoA-10, 7; MBE-MoM-5, **6**
Mayer, W: MBE-WeM-10, 13
McChesney, J: MBE-MoA-3, 7
McClure, E: MBE-WeA-11, 14
McElearney, J: MBE-SuM-13, 4; MBE-TuM-5, 10
Meyer, D: MBE-MoA-2, 7; MBE-MoM-10, 6; MBE-MoM-12, 6; MBE-MoM-6, 6
Meyer, J: MBE-TuM-11, 10
Mi, Z: MBE-MoM-11, 6; MBE-MoM-14, 6; MBE-SuM-1, 4
Mikolajick, T: MBE-MoM-9, 6

Author Index

- Millunchick, J: MBE-TuM-3, **10**
Minns, A: MBE-WeA-5, **14**
Mishima, T: MBE-TuM-13, **10**
Mnaymneh, K: MBE-SuM-5, **4**
Moloney, J: MBE-WeA-2, **14**
Moody, N: MBE-MoA-5, **7**
Morgan, A: MBE-WeA-13, **14**
Murat, P: MBE-WeA-5, **14**
Myers, R: MBE-MoA-1, **7**; MBE-MoA-10, **7**;
MBE-MoM-5, **6**
— **N** —
Nalamati, S: MBE-SuM-2, **4**; MBE-SuM-3, **4**
Nelson, S: MBE-WeA-13, **14**
Nepal, N: MBE-MoA-2, **7**; MBE-MoM-10, **6**;
MBE-MoM-6, **6**
Norman, J: MBE-WeA-1, **14**
— **O** —
Okada, H: MBE-MoP-13, **8**
Oktyabrsky, S: MBE-WeA-5, **14**
— **P** —
Palmstøm, C: MBE-WeA-4, **14**
Pandey, A: MBE-MoM-11, **6**
Parakh, M: MBE-MoP-11, **8**
Park, K: MBE-WeM-4, **13**
Pavlenko, V: MBE-MoA-5, **7**
Peiris, F: MBE-WeM-13, **13**
Pinsukanjana, P: MBE-TuM-10, **10**
Piyathilaka, H: MBE-TuM-13, **10**
Poitras, D: MBE-SuM-5, **4**
Pokharel, R: MBE-MoP-11, **8**; MBE-MoP-4, **8**
Poole, P: MBE-SuM-5, **4**
Poungoue Mbeunmi, A: MBE-SuM-11, **4**;
MBE-SuM-9, **4**
Pustovit, V: MBE-MoA-6, **7**
— **R** —
Reid, E: MBE-MoM-11, **6**
Reyner, C: MBE-TuM-12, **10**
Reynolds, C: MBE-SuM-2, **4**
Reynolds, L: MBE-SuM-3, **4**
Rice, A: MBE-WeM-4, **13**
Roberts, K: MBE-TuM-13, **10**
Roy, S: MBE-WeA-4, **14**
Ryu, G: MBE-WeA-12, **14**
— **S** —
Sadeghi, I: MBE-SuM-10, **4**
Sadowski, J: MBE-SuM-4, **4**
Santos, M: MBE-TuM-13, **10**
Saraswat, V: MBE-MoA-9, **7**
Sardashti, K: MBE-WeM-10, **13**
Sautter, K: MBE-WeA-4, **14**; MBE-WeA-6, **14**
Sawicki, M: MBE-SuM-4, **4**
Schmult, S: MBE-MoM-9, **6**
Scholl, E: MBE-SuM-5, **4**
Schuck, C: MBE-MoA-13, **7**; MBE-WeA-4, **14**;
MBE-WeA-6, **14**
Sekiguchi, H: MBE-MoP-13, **8**
Sellers, I: MBE-TuM-13, **10**
Sfigakis, F: MBE-TuM-9, **10**
Shabani, J: MBE-WeM-10, **13**
Sharma, M: MBE-MoP-11, **8**; MBE-MoP-4, **8**;
MBE-SuM-2, **4**; MBE-SuM-3, **4**
Shervin, K: MBE-TuA-3, **11**
Shi, Q: MBE-SuM-1, **4**
Shi, Y: MBE-TuM-9, **10**
Shin, J: MBE-TuM-14, **10**
Shin, W: MBE-MoM-11, **6**
Shourov, E: MBE-MoA-3, **7**; MBE-MoA-9, **7**
Simmonds, P: MBE-MoA-13, **7**; MBE-TuM-1,
10; MBE-WeA-4, **14**; MBE-WeA-6, **14**
Smith, D: MBE-WeM-1, **13**
Snyder, D: MBE-SuM-3, **4**
Solovyev, V: MBE-MoM-9, **6**
Song, J: MBE-MoP-3, **8**
Steenbergen, E: MBE-TuM-12, **10**
Stevens, M: MBE-SuM-13, **4**; MBE-TuM-5, **10**
Storm, D: MBE-MoA-2, **7**; MBE-MoM-10, **6**;
MBE-MoM-12, **6**; MBE-MoM-6, **6**
Strohbeen, P: MBE-MoA-3, **7**; MBE-MoA-9, **7**
Sugaya, T: MBE-TuA-1, **11**
Sun, Y: MBE-TuA-2, **11**; MBE-WeA-9, **14**
Sutara, F: MBE-WeM-2, **13**; MBE-WeM-5, **13**
— **T** —
Tait, C: MBE-TuM-3, **10**
Tam, M: MBE-MoP-5, **8**; MBE-SuM-10, **4**
Tamargo, M: MBE-WeM-14, **13**; MBE-WeM-
3, **13**; MBE-WeM-6, **13**
Tamura, M: MBE-MoP-1, **8**
Thomas, C: MBE-WeM-11, **13**; MBE-WeM-9,
13
Tian, A: MBE-MoP-12, **8**
Tiedje, T: MBE-SuM-12, **4**
Tokranov, V: MBE-WeA-5, **14**
Tomasulo, S: MBE-MoA-11, **7**; MBE-TuM-11,
10
Tracy, B: MBE-WeM-1, **13**
Tran, H: MBE-MoM-14, **6**
Tu, C: MBE-TuA-4, **11**
Twigg, M: MBE-MoA-11, **7**; MBE-TuM-11, **10**
— **U** —
Urbas, A: MBE-MoA-6, **7**
— **V** —
Vadiee, E: MBE-MoM-13, **6**; MBE-MoM-4, **6**
Vallejo, K: MBE-MoA-13, **7**; MBE-WeA-4, **14**;
MBE-WeA-6, **14**
Vandervelde, T: MBE-SuM-13, **4**; MBE-TuM-5,
10
Vijayaragunathan, S: MBE-TuM-13, **10**
Vurgaftman, I: MBE-TuM-11, **10**
— **W** —
Wakahara, A: MBE-MoP-13, **8**
Walters, R: MBE-TuM-11, **10**
Wang, B: MBE-TuM-13, **10**
Wang, T: MBE-WeM-11, **13**; MBE-WeM-9, **13**
Wang, W: MBE-TuA-3, **11**
Wasilewski, Z: MBE-MoP-5, **8**; MBE-SuM-10,
4; MBE-SuM-8, **4**; MBE-TuM-9, **10**; MBE-
WeA-12, **14**
Webster, P: MBE-TuM-12, **10**
Weiss, E: MBE-MoA-12, **7**
Weltner, A: MBE-WeA-6, **14**
Wheeler, V: MBE-MoA-2, **7**
Whiteside, V: MBE-TuM-13, **10**
Wickramasinghe, K: MBE-WeM-10, **13**
Williams, R: MBE-SuM-5, **4**
Wirth, S: MBE-MoM-9, **6**
Wu, P: MBE-SuM-12, **4**
Wu, X: MBE-SuM-5, **4**; MBE-TuM-6, **10**
— **Y** —
Yakes, M: MBE-MoA-11, **7**; MBE-TuM-11, **10**
Yakimov, M: MBE-WeA-5, **14**
Yamane, K: MBE-MoP-13, **8**
Yang, R: MBE-TuM-6, **10**
Yang, S: MBE-MoP-12, **8**
Yang, T: MBE-MoP-10, **8**; MBE-MoP-8, **8**
Yaron, N: MBE-MoA-12, **7**
Yaung, K: MBE-WeA-9, **14**
Yoo, B: MBE-MoP-3, **8**
Yuan, J: MBE-WeM-10, **13**
— **Z** —
Zang, Y: MBE-MoP-12, **8**
Zeng, J: MBE-WeA-13, **14**
Zeuner, K: MBE-SuM-5, **4**
Zhang, C: MBE-WeA-11, **14**
Zhang, W: MBE-MoM-12, **6**
Zhang, Y: MBE-MoP-8, **8**; MBE-WeM-1, **13**
Zhang, Z: MBE-MoP-10, **8**
Zugger, M: MBE-SuM-3, **4**
Zwiller, V: MBE-SuM-5, **4**