Wednesday, August 15: Day 1

8:00 AM  Light Breakfast

Opening Session  Chair: Kelson Chabak  Blackwell Ballroom, Sections BC
8:30 AM  Opening Remarks — Kelson Chabak, AFRL
8:45 AM  Masataka Higashiwaki, NICT (invited) — Recent progress in Ga2O3 MOSFETs
9:05 AM  James Speck, UC Santa Barbara (invited) — Ge-doped Ga2O3 by MBE
9:25 AM  Siddharth Rajan, Ohio State (invited) — Ga2O3 Field Effect Transistors: MBE Growth and Device Engineering
9:45 AM  Steve Ringel, Ohio State (invited) — Ga2O3 Electronic Defect Characterization
10:05 AM  Coffee Break

Technical Session 1: Defects and Characterization  Chair: Sriram Krishnamoorthy  Blackwell Ballroom, Sections BC
10:20 AM  Leonard Brillson, Ohio State — Optical Signatures of Deep Level Defects in Ga2O3
10:30 AM  Dmitry Skachkov, Case Western Reserve Univ. — Gallium Vacancy Defects in β-Ga2O3: combined Electron Paramagnetic Resonance and Theory Study
10:40 AM  Jinwoo Hwang, Ohio State — Atomic Scale Characterization of Structure and Defects in Ga2O3
10:50 AM  Farida Selim, Bowling Green — Trapping defects in Ga2O3
11:00 AM  Adam Neal, AFRL — Transport Studies of Unintentionally Doped MOCVD grown β-Ga2O3
11:10 AM  Mary Zvanut, Univ Alabama Birmingham — Charge transfer observed for the Mg and Fe dopants in Ga2O3
11:20 AM  Ribhu Sharma, Florida — Simulating Deuterium diffusion and the extraction of migration energies in Ga2O3
11:30 AM  Box Lunch

Technical Session 2: Modeling  Chair: Andrew Green  Blackwell Ballroom, Sections BC
1:00 PM  H. Peelaers, UC Santa Barbara (invited) — Density functional theory calculations of Ga2O3 alloys
1:20 PM  John Lyons, NRL — Self-trapped holes and acceptor doping in Ga2O3
1:30 PM  Satish Kumar, Georgia Tech — Phonon Mode Contributions to Thermal Conductivity of Pristine and Defective β-Ga2O3
1:40 PM  Marco Santia, Michigan State — Strain-dependent Optical Properties in Monoclinic Ga2O3
1:50 PM  Stefan Badescu, AFRL — Electronic Bandstructures of Ga2O3 and Its Alloys with Al and In
2:00 PM  Rohan Mishra, Wash U. St. Louis — Epitaxial engineering of polar ε-Ga2O3 for tunable two-dimensional electron gas
2:10 PM  Coffee Break

Technical Session 3: Materials and Characterization I  Chair: Uttam Singisetti  Blackwell Ballroom, Sections BC
2:25 PM  A.Popp, IKZ-Berlin (invited) — Influence of the substrate orientation on structural and electrical properties of homoepitaxial β-Ga2O3 layers grown by MOVPE
2:45 PM  Neeraj Nepal, NRL — Homo- and Hetero-epitaxial Growth of β-Ga2O3 Thin Films by Molecular Beam Epitaxy
2:55 PM  S. Pacley, AFRL — High-quality β-(Al,Ga)2O3/β-Ga2O3 (010) and Si-doped β-(Al,Ga)2O3/β-Ga2O3 (010) heterostructures grown by pulsed laser epitaxy for MODFET devices
3:05 PM  Jaime Freitas, NRL — Properties of N-implanted Monoclinic Ga2O3
3:15 PM  Darren Thomson, AFRL — Czochralski growth of β-Ga2O3 crystals
3:25 PM  Coffee Break

Technical Session 4: Materials and Characterization II  Chair: Brandon Howe  Blackwell Ballroom, Sections BC
3:40 PM  H. Zhao, Ohio State (invited) — LPCVD Growth of β-Ga2O3
4:00 PM  Sriram Krishnamoorthy, Utah — Ge-doped LPCVD-grown β-Ga2O3 thin films
4:10 PM  Virginia Wheeler, NRL — Advances in Atomic Layer Epitaxy of Ga2O3 Films
4:20 PM  Hannah Masten, Michigan — Ga2O3 MOSCAPs with low Dit using yttrium-scandium oxide high-k dielectric
4:30 PM  Berardi Sensale Rodriguez, Utah — Incident wavelength and polarization dependence of spectral shifts in β-Ga2O3 UV photoluminescence
4:40 PM  Luke Lyle, Carnegie Mellon Univ. — Growth and characterization of (Al,Ga)2O3-Ga2O3 and (In,Ga)2O3 epitaxial films for UV photodetectors
4:50 PM  Closing Remarks — Gregg Jessen, AFRL
6:00 PM  Social Event
THURSDAY, AUGUST 16: DAY 2

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| 8:40 AM | Technical Session 5: Industry  
A. Kuramata, Tamura Corp. (invited) — Progress on Edge-defined Film-fed Growth of Ga$_2$O$_3$ |
| 9:00 AM | Kevin Stevens, NGC Synoptics — Czochralski growth of bulk Ga$_2$O$_3$ |
| 9:15 AM | Jacob Leach, Kyma — Development of homoepitaxial Ga$_2$O$_3$ Films by HVPE |
| 9:30 AM | Fikadu Alema, Agnitron — Device quality β-(Al,Ga)$_x$O$_{3-y}$/β-Ga$_2$O$_3$ heterostructures grown by MOCVD |
| 9:45 AM | Andrea Arias, Teledyne — Ga$_2$O$_3$ MOSFETs for Next-Generation, High Efficiency and Low Size and Weight Power Converters |
| 10:00 AM | Coffee Break                                                          |
| 10:15 AM | Technical Session 6: Devices  
G. Xing, Cornell (invited) — Ga$_2$O$_3$ vertical high voltage diodes and transistors |
| 10:35 AM | Uttam Singisetti, Univ. of Buffalo — Lateral Ga$_2$O$_3$ MOSFETs with 1.85 kV breakdown |
| 10:45 AM | Ribhu Sharma, Florida — Radiation effects on electrical performance of Nickel β-Ga$_2$O$_3$ schottky rectifiers |
| 10:55 AM | Andy Green, AFRL — RF Performance of Thin-Channel Ga$_2$O$_3$ MOSFETs |
| 11:05 AM | Hsien-Chih Huang, UIUC — Metal-assisted chemical etching of β-Ga$_2$O$_3$ for device applications |
| 11:15 AM | Sukwon Choi, Penn State Univ. — Electro-Thermal Analysis of β-Ga$_2$O$_3$ Electronic Devices |
| 11:25 AM | Chadwin Young, UT-Dallas — Degradation Modeling of MOS β-Ga$_2$O$_3$ Capacitors with an Al$_2$O$_3$ Gate Dielectric |
| 11:35 AM | Anamika Pratiyush, IIS-Bangalore — MBE-grown Self-Powered β-Ga$_2$O$_3$ Schottky Solar Blind UV Detector with rectification $>10^7$ |
| 11:45 AM | Xu-Qian Zheng, Case Western Reserve Univ. — β-Ga$_2$O$_3$ Nanoelectromechanical Systems (NEMS): from Mechanical Properties to Resonant Sensing |
| 11:55 AM | Closing Remarks — Gregg Jessen, AFRL                                |
| 12:10 PM | Depart with Optional Box Lunch                                        |