



Basic Research Innovation Collaboration Center (BRICC)
4100 North Fairfax Drive, Suite 450
Arlington, VA 22203

Time	Topic	Speaker
8:15-8:30	Check-in	
8:30-8:40	Opening Remark	Michael Yakes, AFOSR
8:40-8:50	ReDesign MURI Overview	Rongming Chu, Penn State Univ.
Defect Formation, Modertor: Mia Jin		
9:00-9:20	Understanding Radiation-induced Lattice Defects near AlGaIn/GaN Interfaces	Mia Jin, Penn State Univ.
9:20-9:40	Investigation of Defect Energetics in AlGaIn alloys Using Molecular Dynamics	Farshid Reza, Penn State Univ.
9:40-10:00	Investigating Mechanisms for Cavity Formation in GaN Using Advanced Electron Microscopy	Xing Wang & Mahjabin Mahfuz, Penn State Univ.
10:00-10:20	High Resolution X-Ray Analysis for Determining the Atomic Structure of Irradiated GaN	Reeja Jayan & Renuka Hyderkhan, Carnegie Mellon Univ.
10:20-10:40	BREAK	
Defect Structure, Moderator: Michael Flatte		
10:40-11:00	Assessment of Defects in AlGaIn Induced by High Electronic Excitations Using Ionoluminescence and RBS Channeling	Savannah Watson, Univ. of Tennessee
11:00-11:20	Nonradiative Carrier Capture Rates for GaN Defects	Alex Hauck & Blair Tuttle, Penn State Univ.
11:20-11:40	EDMR and NZFMR Spectroscopy Studies of Defect Centers in Wide band Gap Semiconductor Devices, Primarily GaN	Michael Elko, Penn State Univ.
11:40-12:00	Theory of Spin Coherent Electrical Signatures of Radiation Damage in GaN Devices	Michael Flatte, Univ. of Iowa
12:00-13:30	LUNCH	
Device Radiation Effects, Moderator: Rongming Chu		
13:30-13:50	Analysis of Leakage Current in GaN JFETs under Heavy Ion Irradiation	Jianan Song, Penn State Univ.
13:50-14:10	Swift Heavy Ion Irradiation and in situ Testing of Devices at The GSI Helmholtz Centre	Cale Overstreet, Univ. of Tennessee

14:10-14:30	Impact of Heavy Ions on GaN Surface and Electrical Characteristics	Yuxin Du, Penn State Univ.
14:30-14:50	AC Transconductance Method for Trap Characterization on Irradiated GaN MESFETs	Bingyu Zhang, Duke Univ.
14:50-15:10	Modeling Nicollian and Brews' Conductance Method to Characterize Bulk Traps in Irradiated GaN MESFETs	Jerry Zhao, Duke Univ.
15:10-15:20	BREAK	
15:20-16:30	POSTER SESSION	
	Investigation of Defect Energetics in AlGaIn Alloys Using Molecular Dynamics	Farshid Reza, Penn State Univ.
	Nonradiative Carrier Capture Rates for GaN Defects	Alex Hauck, Penn State Univ.
	Characterizing multi-layered AlxGaIn samples using EDS and EELS in STEM	Mahjabin Mahfuz, Penn State Univ.
	High Resolution X-Ray Analysis for Determining the Atomic Structure of Irradiated GaN	Renuka Hyderkhan, Carnegie Mellon Univ.
	EDMR and NZFMR Spectroscopy Studies of Defect Centers in Wide band Gap Semiconductor Devices, Primarily GaN	Michael Elko, Penn State Univ.
	In-Situ Near Zero Field Magnetoresistance Spectroscopy of Proton Irradiated Wide Band Gap Semiconductor Devices	Dustin Hassenmayer, Penn State Univ.
	Theory of Spin Coherent Electrical Signatures of Radiation Damage in GaN Devices	David Fehr, Univ. of Iowa
	Assessment of Defects in AlGaIn Induced by High Electronic Excitations Using Ionoluminescence and RBS Channeling	Savannah Watson, Univ. of Tennessee
	Analysis of Leakage Current in GaN JFETs under Heavy Ion Irradiation	Jianan Song, Penn State Univ.
	Impact of Heavy Ions on GaN Surface and Electrical Characteristics	Yuxin Du, Penn State Univ.
	Fabrication of Field-Plate and Super-heterojunction GaN HEMTs for Radiation Study	Yi-Shuo Huang, Penn State Univ.
	AC Transconductance Method for Trap Characterization on Irradiated GaN MESFETs	Bingyu Zhang, Duke Univ.
	Modeling Nicollian and Brews' Conductance Method to Characterize Bulk Traps in Irradiated GaN MESFETs	Jerry Zhao, Duke Univ.
16:30-16:45	Closing Remark	Michael Yakes & Art Edwards, AFOSR & AFRL
17:00	REVIEW ADJOURNED	