

2024 MURI Fundamentals of Doping and Defects in b-Ga2O3 for High Breakdown Field

Dr. Ali Sayir | May 13-14, 2024 | Arlington, VA

Basic Research Innovation Collaboration Center (BRICC)
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Project Status: Some of the team has completed the project, a few are still working under a 1-year NCE. Each talk will be planned for ~30 min speaker talking time plus ~15 min for questions during and after.

Time (Eastern)	Topic	Speaker
8:10	Check in	
8:45	Welcome, Highlights of Project	Mike Scarpulla (UU)
9:00	Electron microscopy of defects and gamma phase in Ga2O3	Nasim Alem (PSU)
9:45	Bulk crystal growth with novel impurities	John McCloy (WSU)
10:30	Positron measurements of Ga2O3: absolute calibration and hydrogen	Marc Weber (WSU)
11:15	Optical spectroscopies of defects in Ga2O3	Matt McCluskey (WSU)
12:00-1:30	LUNCH	
1:30	Electron-Phonon Effects on Band Gap, Defect Diffusion Model, and Gamma Phase Transformation in Ga2O3	Elif Ertekin (UIUC)
2:15	OMVPE growth for high-breakdown fields	Sriram Krishnamoorthy (UCSB)
3:00	Fundamental insights from optical characterization of gallium oxide	Berardi Sensale-Rodriguez (UU)
3:45	Vacancy-Mediated Diffusion and Real-World Calculations of Defect Concentrations in Ga2O3	Mike Scarpulla (UU)
4:30-5:00	Accomplishments of MURI, Feedback	All / Discussion
5:00	MEETING ADJOURN	