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Final Report: 2018 Defects in Semiconductors Gordon Research Conference & Gordon Research Seminar Research Program 1.3 Physical Properties of Materials, Materials Science Division

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W911NF-18-1-0283

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER
611102

6. AUTHORS

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAMES AND ADDRESSES
Gordon Research Conferences, Inc.
512 Liberty Lane

West Kingston, RI 02892 -1502

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS (ES)
U.S. Army Research Office
P.O. Box 12211
Research Triangle Park, NC 27709-2211

10. SPONSOR/MONITOR'S ACRONYM(S)
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11. SPONSOR/MONITOR'S REPORT NUMBER(S)
73047-MS-CF.1

12. DISTRIBUTION AVAILIBILITY STATEMENT
Approved for public release; distribution is unlimited.

13. SUPPLEMENTARY NOTES
The views, opinions and/or findings contained in this report are those of the author(s) and should not contrued as an official Department of the Army position, policy or decision, unless so designated by other documentation.

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	15. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Mary Ellen Zvanut
UU	UU	UU	UU		19b. TELEPHONE NUMBER 205-934-6661

RPPR Final Report
as of 01-Mar-2019

Agency Code:

Proposal Number: 73047MSCF **Agreement Number: W911NF-18-1-0283**
INVESTIGATOR(S):

Name: Mary Ellen Zvanut
Email: mezvanut@uab.edu
Phone Number: 2059346661
Principal: Y

Organization: **Gordon Research Conferences, Inc.**
Address: 512 Liberty Lane, West Kingston, RI 028921502
Country: USA
DUNS Number: 075712877 EIN: 050300482

Report Date: 14-Feb-2019 Date Received: 14-Feb-2019
Final Report for Period Beginning 19-Jul-2018 and Ending 14-Nov-2018
Title: 2018 Defects in Semiconductors Gordon Research Conference & Gordon Research Seminar Research Program 1.3 Physical Properties of Materials, Materials Science Division
Begin Performance Period: 19-Jul-2018 **End Performance Period:** 14-Nov-2018
Report Term: 0-Other

Submitted By: Nancy Ryan Gray Email: grants@grc.org
Phone: (401) 360-1505

STEM Degrees: **STEM Participants:**

Major Goals: Organizing a Gordon Research Conference involves extensive communication with the research community to identify important issues at the frontiers of the field, and solicit suggestions for speakers and discussion leaders to participate in the conference. The Chair then contacts prospective participants to invite them to talk and discuss the nature of their contributions. The Chair then communicates the topics and aims of the conference through web pages, contact with relevant international professional bodies and email to members of the research community around the world to encourage applications for participation in the conference. The Chair is then responsible for assessing and accepting the applications and fielding a host of questions both concerning the technical content and practical aspects of conference participation.

Accomplishments: Semiconductor devices, from the earliest transistors to the projected spin-ristors, depend critically on defects. Methods to controllably add and minimize defects are essential for the success of optical, electronic, and spintronic based technologies, therefore, developing a detailed understanding of their fundamental physics and chemistry is mandatory for the creation of new game-changing devices.

This Gordon Research Conference is a unique biannual opportunity to discuss defects across all semiconductor materials and applications in an off-the-record format. By blending lecture hall discourse and social gatherings, young scientists and experienced professionals will learn the latest concerns and advances in semiconductors while enjoying the conference-friendly facilities and relaxing atmosphere of Colby-Sawyer College. The meeting addressed the theoretical basics as well as the characterization and utility of point, line and extended defects in a broad range of topical materials. This includes defects in novel two-dimensional materials such as transition metal dichalcogenides and other graphene analogues along with semiconductors relevant to quantum emission processes. We also expect sessions to address wide bandgap nitride, oxide, and carbide semiconductors with evolving applications in electronics for power generation and lighting.

The Gordon Research Seminar on Defects in Semiconductors focused on identifying, understanding, and then controlling defects in order to use their properties to engineer new semiconductor materials and devices. The role of defects in electronic and optoelectronic devices, quantum information and metrology, and photocatalysis was explored.

Training Opportunities: Speakers, discussion leaders, poster presenters and attendees simultaneously contributed to and benefited from the collective skills and experience shared throughout the conference. The funding provided by was invaluable to the success of the Conference.

RPPR Final Report
as of 01-Mar-2019

Results Dissemination: The final program has been posted on the GRC website.

Honors and Awards: Nothing to Report

Protocol Activity Status:

Technology Transfer: Nothing to Report

PARTICIPANTS:

Participant Type: PD/PI
Participant: Deborah Jones
Person Months Worked: 1.00
Project Contribution:
International Collaboration:
International Travel:
National Academy Member: N
Other Collaborators:

Funding Support:

GORDON RESEARCH CONFERENCES

FINAL PROGRESS REPORT
Army Research Office
Defects in Semiconductors GRC/GRS

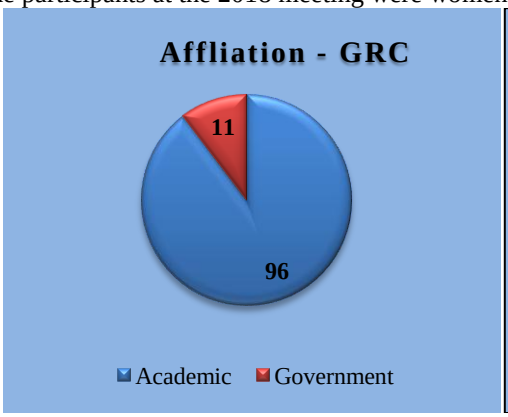
Grant Number W911NF-18-1-0283

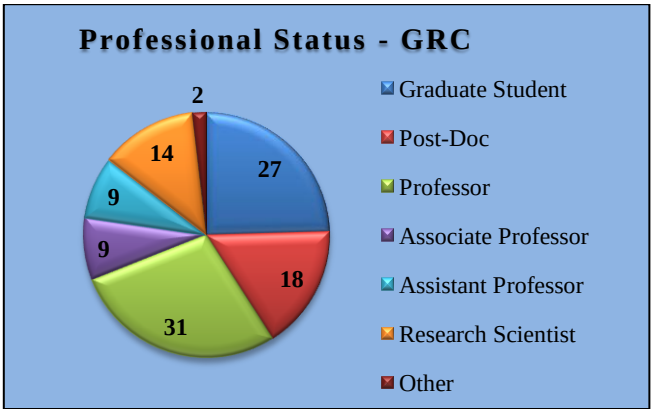
Operational Summary

The Gordon Research Conference (GRC) and Gordon Research Seminar (GRS) on Defects in Semiconductors were held at the Colby Sawyer College in New Hampshire from August 18-23, 2018. The meeting covered a variety of scientific topics and the content presented was highly rated by participants.

Conference Participants

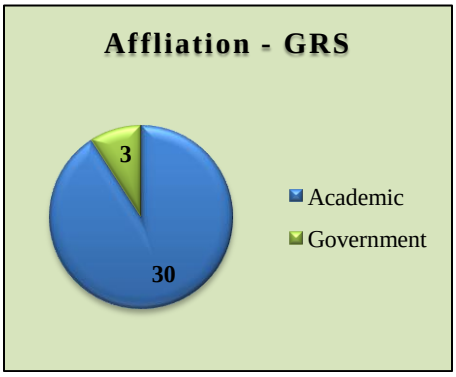
The Conference was well-attended with 110 participants. Scientists from academia represented 87% of the participants while attendees from government accounted for 10%. The meeting also attracted a strong mix of young investigators and senior scientists. Students and post-docs accounted for 41% of all attendees. Approximately 20% of the participants at the 2018 meeting were women.

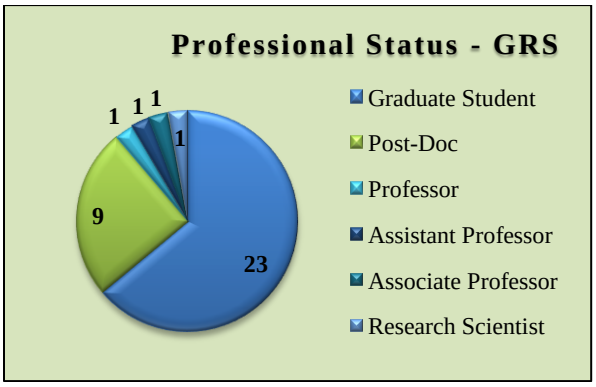




Seminar Participants

The Conference was well-attended with 36 participants. Scientists from academia represented 84% of the participants while attendees from government accounted for 9% and those from industry totaled 0%. Students and post docs combined accounted for 89% of all attendees. Approximately 30% of the participants at the 2018 seminar were women.





Conference Program

Semiconductor devices, from the earliest transistors to the projected spin-ristors, depend critically on defects. Methods to controllably add and minimize defects are essential for the success of optical, electronic, and spintronic

based technologies, therefore, developing a detailed understanding of their fundamental physics and chemistry is mandatory for the creation of new game-changing devices.

This Gordon Research Conference is a unique biannual opportunity to discuss defects across all semiconductor materials and applications in an off-the-record format. By blending lecture hall discourse and social gatherings, young scientists and experienced professionals will learn the latest concerns and advances in semiconductors while enjoying the conference-friendly facilities and relaxing atmosphere of Colby-Sawyer College. The meeting addressed the theoretical basics as well as the characterization and utility of point, line and extended defects in a broad range of topical materials. This includes defects in novel two-dimensional materials such as transition metal dichalcogenides and other graphene analogues along with semiconductors relevant to quantum emission processes. We also expect sessions to address wide bandgap nitride, oxide, and carbide semiconductors with evolving applications in electronics for power generation and lighting.

The Gordon Research Seminar on Defects in Semiconductors focused on identifying, understanding, and then controlling defects in order to use their properties to engineer new semiconductor materials and devices. The role of defects in electronic and optoelectronic devices, quantum information and metrology, and photocatalysis was explored.

Conference Budget

Funding provided by the Army Research Office supported partial registration for 7 professors, 1 assistant professor, 2 research scientists 2 post docs and 2 graduate students at the GRC and partial registration for 1 postdoc, 2 graduate students and 1 associate professor at the GRS.

Conference Feedback

Participants had an opportunity to provide feedback at the end of the Conference. The feedback collected from the meeting was extremely positive. Evaluations included numerous positive remarks regarding the great informal discussions, the poster sessions and stimulating speakers. Evaluations from the GRS included positive comments regarding the poster presentations, discussions between students and the number of women who spoke during the GRS.

GRC would like to thank the Army Research Office for its continued support of the meetings. The contributions received have been critical to the success of the conferences and are having a measurable impact in advancing the frontiers of science worldwide.

Dr. Mary Ellen Zvanut, GRC Chair
University of Alabama at Birmingham

Dr. Cyrus E. Dreyer, GRS Chair
Stony Brook University

Dr. Courtney Au-Yeung, GRS Co-Chair
Lehigh University

Dr. Nancy Ryan Gray
President and Chief Executive Officer
Gordon Research Conferences

Defects in Semiconductors

Gordon Research Conference

Insight, Characterization, and Control of Defects in Advanced Materials

August 19 - 24, 2018

Chair- Mary Ellen Zvanut

Vice Chair- Jeffrey C. McCallum

Conference Program

Sunday

2:00 pm - 9:00 pm	Arrival and Check-in
6:00 pm - 7:00 pm	Dinner
7:30 pm - 7:40 pm	Introductory Comments by GRC Site Staff / Welcome from the GRC Chair
7:40 pm - 9:30 pm	Dealing with Dopants Discussion Leader: Stephan Lany (National Renewable Energy Laboratory, USA)
7:40 pm - 7:50 pm	Introduction by Discussion Leader
7:50 pm - 8:25 pm	Klaus Irmscher (Leibniz-Institut für Kristallzüchtung, Germany) "Doping and Defects in β-Ga2O3"
8:25 pm - 8:40 pm	Discussion
8:40 pm - 9:15 pm	Alfredo Pasquarello (École Polytechnique Fédérale de Lausanne, Switzerland) "Defect Levels, Polaronic Distortions and Band Gaps"
9:15 pm - 9:30 pm	Discussion

Monday

7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	Detecting Defects Discussion Leaders: Gregory Fuchs (Cornell University, USA) and Cory Cress (U.S. Naval Research Laboratory, USA)
9:00 am - 9:10 am	Introduction by Discussion Leader
9:10 am - 9:45 am	Martin Brandt (Technische Universität München, Germany) "Spin-Dependent Recombination: How It Works and What We Learn"
9:45 am - 10:00 am	Discussion
10:00 am - 10:30 am	Coffee Break
10:30 am - 10:40 am	Introduction by Discussion Leader
10:40 am - 11:15 am	Michio Tajima (Meiji University, Japan) "Liquid-Nitrogen-Temperature Photoluminescence Due to Radiation-Induced Defects for Quantification of Low-Level Carbon in Si"
11:15 am - 11:35 am	Discussion
11:35 am - 12:10 pm	Jay Gupta (Ohio State University, USA) "Scanning Tunneling Microscopy Characterization and Manipulation of Individual Defects in Semiconductors"
12:10 pm - 12:30 pm	Discussion
12:30 pm - 1:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
3:00 pm - 4:00 pm	Power Hour The GRC Power Hour is an optional informal gathering open to all meeting participants.

	It is designed to help address the challenges women face in science and support the professional growth of women in our communities by providing an open forum for discussion and mentoring. Organizer: Courtney Au-Yeung (Lehigh University, USA)
4:00 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Dealing with Complexity Discussion Leader: Oliver Bierwagen (Paul Drude Institute for Solid State Electronics, Germany)
7:30 pm - 7:45 pm	Introduction by Discussion Leader
7:45 pm - 8:20 pm	Larry Halliburton (West Virginia University, USA) "Using Electron Paramagnetic Resonance to Identify and Characterize Native Defects and Impurities in β-Ga2O3 Crystals"
8:20 pm - 8:35 pm	Discussion
8:35 pm - 9:10 pm	Lasse Vines (University of Oslo, Norway) "Electrically Active Defects in β-Ga2O3"
9:10 pm - 9:30 pm	Discussion
Tuesday	
7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	Extracting and Emitting Light Discussion Leader: Mete Atature (University of Cambridge, United Kingdom)
9:00 am - 9:10 am	Introduction by Discussion Leader
9:10 am - 9:45 am	Lee Basset (University of Pennsylvania, USA) "Defective Quantum Engineering"
9:45 am - 10:05 am	Discussion
10:05 am - 10:35 am	Group Photo / Coffee Break
10:35 am - 10:45 am	Introduction by Discussion Leader
10:45 am - 11:20 am	Igor Aharonovich (School of Mathematical and Physical Sciences, University of Technology Sydney, Australia) "Quantum Emitters in Atomically Thin Materials"
11:20 am - 11:35 am	Discussion
11:35 am - 12:10 pm	Audrius Alkauskas (Center for Physical Sciences and Technology (FTMC), Lithuania) "Vibrational Properties of Isolated Color Centers in Diamond"
12:10 pm - 12:30 pm	Discussion
12:30 pm - 1:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Theory of Complexity Discussion Leader: Chris Van de Walle (University of California, Santa Barbara, USA)
7:30 pm - 7:45 pm	Introduction by Discussion Leader
7:45 pm - 8:20 pm	Joel Varley (Materials Science Division, Lawrence Livermore National Laboratory, USA)

	"Elucidating the Role of Point Defects in the Performance of Thin-Film Solar Cells Through First-Principles Calculations"
8:20 pm - 8:40 pm	Discussion
8:40 pm - 9:15 pm	Beall Fowler (Lehigh University, USA) "Structure and Vibrational Properties of Hydrogen-Related Native Defect Complexes in β-Ga2O3"
9:15 pm - 9:30 pm	Discussion
Wednesday	
7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	In-Grown Defects, Thin Films Discussion Leader: Matt McCluskey (Washington State University, USA)
9:00 am - 9:10 am	Introduction by Discussion Leader
9:10 am - 9:45 am	Ryan Comes (Auburn University, USA) "Surface and Interfacial Defects in SrTiO3 Polar/Non-Polar Heterostructures"
9:45 am - 10:05 am	Discussion
10:05 am - 10:35 am	Coffee Break
10:35 am - 10:45 am	Introduction by Discussion Leader
10:45 am - 11:20 am	Rachel Goldman (University of Michigan, USA) "Influence of Solute Incorporation Mechanisms in Highly Mismatched Alloys"
11:20 am - 11:40 am	Discussion
11:40 am - 12:15 pm	Carol Trager-Cowan (University of Strathclyde, United Kingdom) "Investigating the Structural and Luminescence Properties of Semiconductors in the Scanning Electron Microscope"
12:15 pm - 12:30 pm	Discussion
12:30 pm - 1:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:00 pm - 7:30 pm	Business Meeting Nominations for the Next Vice Chair; Fill in Conference Evaluation Forms; Discuss Future Site and Scheduling Preferences; Election of the Next Vice Chair
7:30 pm - 9:30 pm	Making Spins Work for You Discussion Leader: Carlos Meriles (City College of New York, CUNY, USA)
7:30 pm - 7:50 pm	Introduction by Discussion Leader
7:50 pm - 8:25 pm	Kai-Mei Fu (University of Washington, USA) "Donor Electron Spin Qubits in ZnO"
8:25 pm - 8:40 pm	Discussion
8:40 pm - 9:15 pm	Nick Vamivakas (University of Rochester, USA) "3D Localized Excitons in Van der Waals Heterstructures"
9:15 pm - 9:30 pm	Discussion
Thursday	
7:30 am - 8:30 am	Breakfast
9:00 am - 12:30 pm	The Role of Defects in Energy Efficiency

	Discussion Leader: John Murphy (University of Warwick, United Kingdom)
9:00 am - 9:10 am	Introduction by Discussion Leader
9:10 am - 9:45 am	Samuel Stranks (Cavendish Laboratory, University of Cambridge, United Kingdom) "Defects in Metal Halide Perovskites"
9:45 am - 10:05 am	Discussion
10:05 am - 10:35 am	Coffee Break
10:35 am - 10:45 am	Introduction by Discussion Leader
10:45 am - 11:20 am	Leigh Weston (Lawrence Berkeley National Laboratory, USA) "Origins of n-Type Doping Difficulties in Perovskite Stannates"
11:20 am - 11:35 am	Discussion
11:35 am - 12:10 pm	David Scanlon (University College London, United Kingdom) "Defect Engineering in Emerging Thermoelectric Materials"
12:10 pm - 12:30 pm	Discussion
12:30 pm - 1:30 pm	Lunch
1:30 pm - 4:00 pm	Free Time
4:00 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Keynote Session: Defects: Past, Present and Future Discussion Leader: Mary Ellen Zvanut (University of Alabama at Birmingham, USA)
7:30 pm - 7:45 pm	Introduction by Discussion Leader
7:45 pm - 8:35 pm	Joerg Weber (TU Dresden, Germany) "Defects in Si: What Is New?"
8:35 pm - 8:55 pm	Discussion
8:55 pm - 9:15 pm	General Discussion
9:15 pm - 9:30 pm	Closing Remarks
Friday	
7:30 am - 8:30 am	Breakfast
9:00 am	Departure

Contributors

Gordon Research Conferences
Frontiers of Science

Office of Naval Research
ONR
Science & Technology

MATERIALS CHEMISTRY
FRONTIERS

BRUKER

Defects in Semiconductors (GRS)
Gordon Research Seminar
Utilizing and Mitigating Defects in Emerging Functional Materials
August 18 - 19, 2018
Chairs- Cyrus E. Dreyer and Courtney Au-Yeung

Conference Program
Saturday

2:00 pm - 5:00 pm	Arrival and Check-in
3:30 pm - 3:45 pm	Introductory Comments by GRC Site Staff / Welcome from the GRS Chair
3:45 pm - 4:30 pm	Defects for Quantum Technologies *The possibility of quantum applications in computing, metrology, and communication have rejuvenated the interest in detailed study of point defects. This session with focus on theoretical and experimental aspects of quantum defects for such applications.* Discussion Leader: Marina Radulaski (Stanford University, USA)
3:45 pm - 4:00 pm	Robin Löfgren (Luleå University of Technology, Sweden) "Charging of Defects in Neutral Supercells: Nitrogen Donor Charging of the NV-Center in Diamond"
4:00 pm - 4:10 pm	Discussion
4:10 pm - 4:25 pm	Hannah Stern (University of Cambridge, United Kingdom) "Photodynamics of Single Visible Emitters in hBN Monolayers"
4:25 pm - 4:30 pm	Discussion
4:30 pm - 6:00 pm	Poster Session
6:00 pm - 7:00 pm	Dinner
7:30 pm - 9:30 pm	Defects in Energy Materials *This session will involve the role of defects in materials for energy efficiency (light emitting diodes, power electronics, etc.), generation (photovoltaics, fuel cells, etc.), and storage (batteries, pseudo capacitors, etc.).* Discussion Leader: Christian Zimmermann (University of Oslo, Norway)
7:30 pm - 7:50 pm	Rachel Kurchin (Massachusetts Institute of Technology, USA) "Computational Screening for Defect-Tolerant Semiconductors"
7:50 pm - 8:00 pm	Discussion
8:00 pm - 8:20 pm	Andrew Rowberg (University of California, Santa Barbara, USA) "Ion-Transport Engineering of Alkaline-Earth Hydrides for Hydride Transport Applications"
8:20 pm - 8:30 pm	Discussion
8:30 pm - 8:50 pm	Muhammad Zakria (University of Technology Sydney, Australia) "Hydrogenation Effect on the Luminescnce of MgZnO/ZnO Multiple Quantum Wells (MQWs)"
8:50 pm - 9:00 pm	Discussion
9:00 pm - 9:20 pm	Lucy Whalley (Imperial College London, United Kingdom) "H-Centre and V-Centre Defects in Hybrid Halide Perovskites"
9:20 pm - 9:30 pm	Discussion

Sunday

7:30 am - 8:30 am	Breakfast

9:00 am - 11:00 am	Theoretical and Experimental Methods for Defect Identification *One of the key challenges in order to mitigate or exploit their properties is identifying the microscopic chemical nature of the point defects that exist in a material. This session will focus on experimental and theoretical efforts to address this problem.* Discussion Leader: Philip Weiser (University of Oslo, Norway)
9:00 am - 9:20 am	Nicholas Adamski (University of California, Santa Barbara, USA) "Defects and Doping in $ZnGeN_2$"
9:20 am - 9:30 am	Discussion
9:30 am - 9:50 am	Ezekiel Omotoso (University of Pretoria, South Africa) "Deep Level Transient Spectroscopy Characterization of 107 MeV Kr^(2+) Irradiated N-Doped 4H-SiC"
9:50 am - 10:00 am	Discussion
10:00 am - 10:20 am	Christopher Malmberg (Oregon State University, USA) "Trends in the Atomic Structure and Density of States of Amorphous $InGaZnO_4$"
10:20 am - 10:30 am	Discussion
10:30 am - 10:50 am	Marianne Bathen (University of Oslo, Norway) "Charge State Transitions of the Silicon Vacancy in 4H-SiC: Combined DLTS, PL and DFT Study"
10:50 am - 11:00 am	Discussion
11:00 am - 12:30 pm	Poster Session *Coffee will be served in the poster area from 11:00 am - 11:30 am*
12:30 pm - 1:30 pm	Lunch
1:30 pm - 2:30 pm	Mentorship Component: Finding a Job in Academia or Beyond *This session will consist of a panel of more senior scientists/engineers who will give a short talk on their career path, followed by a question-and-answer session about the various career options.* Discussion Leaders: Cyrus Dreyer (Stony Brook University, USA) and Courtney Au-Yeung (Lehigh University, USA)
1:30 pm - 2:30 pm	Panel Discussion *Finding a Job in Academia or Beyond* Cory Cress (U.S. Naval Research Laboratory, USA) Elif Ertekin (University of Illinois at Urbana-Champaign, USA) Rachel Goldman (University of Michigan, USA)
2:30 pm - 3:00 pm	Evaluation Period *Fill in GRS Evaluation Forms*
3:00 pm	Seminar Concludes

Contributors

Gordon Research Conferences
Frontiers of Science

Office of Naval Research
ONR
Science & Technology

BRUKER

Defects in Semiconductors GRC Registration List

Name	Organization	Participation
Adamski, Nicholas L	University of California, Santa Barbara	Poster Presenter
Agiorgousis, Michael	Rensselaer Polytechnic Institute	Poster Presenter
Aharonovich, Igor	School of Mathematical and Physical Sciences, University of Technology Sydney	Speaker
Alkauskas, Audrius	Center for Physical Sciences and Technology	Speaker
Ambal, Kapildeb	National Institute of Science and Technology & University of Maryland	Poster Presenter
Atature, Mete	University of Cambridge	Discussion Leader
Au-Yeung, Courtney	Lehigh University	Poster Presenter
Barnard, Abraham W	University of Pretoria	Poster Presenter
Basset, Lee	University of Pennsylvania	Speaker
Bathen, Marianne E	University of Oslo	Poster Presenter
Bhandari, Suman	The University of Alabama at Birmingham, USA	Poster Presenter
Bierwagen, Oliver	Paul Drude Institute for Solid State Electronics	Discussion Leader
Bockstedte, Michel	University of Salzburg	Poster Presenter
Brandt, Martin S	Technische Universität München	Speaker
Broberg, Danny	University of California, Berkeley	Poster Presenter
Caldas, Marilia J	Instituto de Física da Universidade de São Paulo	Poster Presenter
Carvalho Gomes, Lidia	University of Illinois at Urbana-Champaign / National Center for Supercomputing Applications	Poster Presenter
Chakravarthi Vardaraj, S	University of Washington	Poster Presenter
Choe, Dukhyun	RPI	Poster Presenter
Comes, Ryan	Auburn University	Speaker
Cress, Cory D	U.S. Naval Research Laboratory	Discussion Leader
Daveau, Raphael	Cornell University	Attendee
Dierolf, Volkmar	Lehigh University	Poster Presenter
Dreyer, Cyrus E	Stony Brook University	Attendee
Dwaraknath, Shyam	Lawrence Berkeley National Laboratory	Attendee
Ertekin, Elif	University of Illinois at Urbana-Champaign	Poster Presenter
Fowler, Beall	Lehigh University	Speaker
Frodason, Ymir Kalmann	University of Oslo	Poster Presenter
Fu, Kai-Mei C	University of Washington	Speaker
Fuchs, Gregory D	Cornell University	Discussion Leader
Fujiwara, Yasufumi	Osaka University	Attendee
Ganose, Alex	University College London	Poster Presenter
Giles, Nancy C	Air Force Institute of Technology	Attendee
Glaser, Evan R	U.S. Naval Research Laboratory	Poster Presenter
Goldman, Rachel S	University of Michigan	Speaker
Goyal, Anuj	Colorado School of Mines	Poster Presenter
Gupta, Jay A	Ohio State University	Speaker
Guthrey, Harvey L	National Renewable Energy Laboratory	Attendee
Halliburton, Larry E	West Virginia University	Speaker
Hegazy, Ahmed R	Kuwait University	Poster Presenter
Hourahine, Benjamin	University of Strathclyde	Poster Presenter

Howell-Clark, Jennifer	Rensselaer Polytechnic Institute	Poster Presenter
Inzani, Katherine	NTNU Norwegian University of Science and Technology	Poster Presenter
Irmscher, Klaus	Leibniz-Institut für Kristallzüchtung	Speaker
Jackson, Adam J	University College London	Poster Presenter
Jones, Kenneth A	Army Research Lab - Sedd	Attendee
Kim, Sunghyun	Imperial College London	Poster Presenter
Koenraad, Paul M	Eindhoven University of Technology	Poster Presenter
Konthasinghe, Kumarasiri	University of Rochester	Poster Presenter
Lany, Stephan	National Renewable Energy Laboratory	Discussion Leader
Lee, Jong-Sook	Chonnam National University	Poster Presenter
Lewis, David K	Boston University	Poster Presenter
Lichti, Roger L	Texas Tech University	Poster Presenter
Löfgren, Robin	Luleå University of Technology	Attendee
Lu, Hongling	University of Michigan	Poster Presenter
Malmberg, Christopher E	Oregon State University	Poster Presenter
Mathur, Nikhil	Cornell University	Poster Presenter
McCallum, Jeffrey C	University of Melbourne	Vice Chair
McCluskey, Matt	Washington State University	Discussion Leader
Medvedev, Oleg	St. Petersburg State University	Poster Presenter
Mengyan, Patrick W	Northern Michigan University	Poster Presenter
Meriles, Carlos A	City College of New York, CUNY	Discussion Leader
Meyer, Walter E	University of Pretoria	Poster Presenter
Mitchell, Brandon	West Chester University/Physics	Poster Presenter
Monahan, Daniele M	The Aerospace Corporation	Poster Presenter
Mukherjee, Kunal	University of California Santa Barbara	Poster Presenter
Mukherjee, Arunabh S	Institute of Optics, University of Rochester	Poster Presenter
Murphy, John D	University of Warwick	Discussion Leader
Nickel, Norbert H	Helmholtz-Zentrum Berlin für Materialien und Energie	Attendee
Omotoso, Ezekiel	University of Pretoria	Poster Presenter
Pan, Jie	National Renewable Energy Laboratory	Poster Presenter
Pansegrau, Christopher P	Washington State University	Poster Presenter
Pasquarello, Alfredo	École Polytechnique Fédérale de Lausanne	Speaker
Ping, Yuan	University of California Santa Cruz	Poster Presenter
Radulaski, Marina	Stanford University	Poster Presenter
Raebiger, Hannes	Yokohama National University	Poster Presenter
Ramanathan, Chandrasekhar	Dartmouth College	Poster Presenter
Ray, Debmalya	University of Minnesota	Poster Presenter
Rowberg, Andrew	University of California, Santa Barbara	Poster Presenter
Savory, Christopher	University College London	Poster Presenter
Scanlon, David O	University College London	Speaker
Sher, Meng-Ju	Wesleyan University	Poster Presenter
Smith, Rebekah	The Ohio State University	Poster Presenter
Stavola, Michael J	Lehigh University	Poster Presenter
Stern, Hannah L	University of Cambridge	Poster Presenter
Stranks, Samuel D	Cavendish Laboratory, University of Cambridge	Speaker

Sunay, Ustun R	University of Alabama at Birmingham	Poster Presenter
Tajima, Michio	Meiji University	Speaker
Thonke, Klaus	Universitat Ulm	Poster Presenter
Trager-Cowan, Carol	University of Strathclyde	Speaker
Tuomisto, Filip	Aalto University	Poster Presenter
Turiansky, Mark	University of California, Santa Barbara	Poster Presenter
Van de Walle, Chris G	University of California, Santa Barbara	Discussion Leader
Varley, Joel B	Materials Science Division, Lawrence Livermore National Laboratory	Speaker
Vines, Lasse	University of Oslo	Speaker
Weber, Joerg	TU Dresden	Speaker
Wei, Su-Huai	Beijing Computational Science Research Center	Attendee
Wei, Ruoqiao	Lehigh university, department of physics	Poster Presenter
Weiser, Philip M	University of Oslo	Poster Presenter
West, Damien J	Rensselaer Polytechnic Institute	Poster Presenter
Weston, Leigh	Lawrence Berkeley National Laboratory	Speaker
Wetzel, Christian	Rensselaer Polytechnic Institute	Attendee
Whalley, Lucy D	Imperial College London	Poster Presenter
Williamson, Benjamin A. D.	University College London	Poster Presenter
Xiao, Chuanxiao	National Renewable Energy Laboratory	Poster Presenter
Yamada-Kaneta, Hiroshi	Kyushu Institute of Technology	Attendee
Yokoyama, Koji	ISIS Neutron and Muon Source	Poster Presenter
Zhang, Shengbai	Rensselaer Polytechnic Institute	Attendee
Zimmermann, Christian	University of Oslo	Poster Presenter
Zvanut, Mary Ellen	University of Alabama at Birmingham	Chair

Defects in Semiconductors GRS Registration List

Name	Organization	Participation
Adamski, Nicholas L	University of California, Santa Barbara	Speaker
Au-Yeung, Courtney	Lehigh University	Chair
Bathen, Marianne E	University of Oslo	Speaker
Bhandari, Suman	The University of Alabama at Birmingham	Poster Presenter
Chakravarthi Vardaraj, Srivatsa	University of Washington	Poster Presenter
Cress, Cory D	U.S. Naval Research Laboratory	Speaker
Dreyer, Cyrus E	Stony Brook University	Chair
Ertekin, Elif	University of Illinois at Urbana-Champaign	Speaker
Frodason, Ymir Kalmann	University of Oslo	Poster Presenter
Goldman, Rachel S	University of Michigan	Speaker
Goyal, Anuj	Colorado School of Mines	Poster Presenter
Hegazy, Ahmed R	Kuwait University	Poster Presenter
Kim, Sunghyun	Imperial College London	Poster Presenter
Konthasinghe, Kumarasiri	University of Rochester	Poster Presenter
Kurchin, Rachel C	Massachusetts Institute of Technology	Speaker
Lewis, David K	Boston University	Poster Presenter
Löfgren, Robin	Luleå University of Technology	Speaker
Lu, Hongling	University of Michigan	Poster Presenter
Malmberg, Christopher E	Oregon State University	Speaker
Mathur, Nikhil	Cornell University	Speaker
Mukherjee, Arunabh S	Institute of Optics, University of Rochester	Poster Presenter
Omotoso, Ezekiel	University of Pretoria	Speaker
Pan, Jie	National Renewable Energy Laboratory	Poster Presenter
Pansegrau, Christopher P	Washington State University	Poster Presenter
Radulaski, Marina	Stanford University	Discussion Leader
Ray, Debmalya	University of Minnesota	Poster Presenter
Rowberg, Andrew	University of California, Santa Barbara	Speaker
Smith, Rebekah	The Ohio State University	Poster Presenter
Stern, Hannah L	University of Cambridge	Speaker
Sunay, Ustun R	University of Alabama at Birmingham	Poster Presenter
Turiansky, Mark	University of California, Santa Barbara	Poster Presenter
Wei, Ruoqiao	Lehigh University, Department of Physics	Poster Presenter
Weiser, Philip M	University of Oslo	Discussion Leader
Whalley, Lucy D	Imperial College London	Speaker
Xiao, Chuanxiao	National Renewable Energy Laboratory	Poster Presenter
Zimmermann, Christian	University of Oslo	Discussion Leader