Giti A. Khodaparast
May 2025

Department of Physics, Virginia Tech, Blacksburg, VA, 24061
Tel: 540-231-8729,
Fax: 540-231-7511
Email: khoda@vt.edu
Website: http://www.phys.vt.edu/people/khodaparast.shtml

PROFESSIONAL EXPERIENCE:

- 2019-Present: Professor of Physics, Virginia Tech, Blacksburg, Virginia
- 2009-2019: Associate Professor of Physics, Virginia Tech, Blacksburg, Virginia
- 2004-2009: Assistant Professor of Physics, Virginia Tech, Blacksburg, Virginia
- 2001-2004: Postdoctoral Research Associate, Department of Electrical and Computer Engineering, Rice University, Houston, Texas
- 2001 Ph.D., Physics, University of Oklahoma, Norman, Oklahoma
- 2007-2008: User of the High Magnetic Field Laboratories, Dresden, Germany
- 2001-2004: User, Stanford Picosecond Free Electron Laser Center, Stanford University, Stanford, California
- 2001-Present: User, Megagauss Laboratory, Institute for Solid State Physics, University of Tokyo, Kashiwa, Chiba, Japan
- 2002-Present: User, National High Magnetic Field Laboratory, Tallahassee, Florida
- 2011-2019, Visiting Faculty at the École Polytechnique, France
- 2001-Present, Collaborations with Tokyo Institute of Technology
- 2023-Present, Collaborations with Paul Scherrer Institute (PSI) in Switzerland

PROFESSIONAL ACTIVITIES & MEMBERSHIPS:

- Member of the American Physical Society, 1994-Present,
- Member of the Optical Society of America, 2002-Present,
- Member of SPIE Society: 2017-Present,
- Referee for Physical Review B, Applied Physics Letters, Journal of Applied Physics, Semiconductor, and Science Technology, Physical Review Materials, Journal of Physics D: Applied Physics, Journal of Physics: Condensed Matter, Journal of Luminescence, Nanomaterials, ACS Nano, Nature Communication,
- Reviewer for NSF, DOE, AFOSR, NASA, the Defense Threat Reduction Agency, and the Helmholtz Young Investigators Program,
- Member of the organizing committee for CLEO (Optical Interactions with Condensed Matter and Ultrafast Phenomena), 2012 and 2013,
- Member of the National Research Council Review Panel for the Research Associate Program 2014-2024,
- Member of the SPIE-OPTICS, Spintronics subcommittee since 2012,
- Member of the Photonics West subcommittee, "Quantum Sensing and Nano Electronics and Photonics" in 2017, and I co-chaired the same subcommittee from 2018-2022, and currently am one of the three chairs,
- Organizer of the 15th International Conference on Narrow Gap Systems at Virginia Tech in August 2011, attended by more than 90 people from 9 different countries. I continued

to serve on the organizing committee of this conference series since then which is now combined with New Trends in Topological Insulators,
- Reviewer of a graduate program in France in 2017,
- Chair of the organizing committee to host the American Physical Society Conference for Undergraduate Women in Physics (CUWiP) in 2017 at Virginia Tech. More than 130 female undergraduate students attended the conference,
- Reviewer of science books to be implemented in the State of Virginia from elementary to middle school,
- Guest Editor, Journal of Physics: Photonics (Quantum Sensing Focus),
- Editor of Physica E: Low-dimensional systems and nanostructures, 2024-present.

AWARDS and RECOGNITIONS:

- Award for the Best Ph.D. Dissertation, Department of Physics and Astronomy, University of Oklahoma, 2001.
- Air Force Office of Scientific Research, Young Investigator Award 2007.
- Scholar of the Week at Virginia Tech: Nov. 26, 2007 - Dec. 2, 2007.
- National Science Foundation CAREER Award, 2009.
- Named "Woman Physicist of the Month" by the APS Committee on the Status of Women in Physics, March 2016.
- L.C. Hassinger Faculty Fellow in Nanoscience at Virginia Tech Since 2019.
- Virginia Tech, College of Science Diversity and Inclusion Award, 2021.
- Elected Fellow of OPTICA, formerly the Optical Society of America, 2024.
- Elected Fellow of SPIE, 2025.
- Quantum Sensing Achievement Award, Part of SPIE 2025.

EXTERNAL FUNDING:

- **National Science Foundation:** "Collaborative Research: GCR: Mineral Detection of Dark Matter", **PI: Patric Huber, Co-PIs: Vsevolod Ivanov, Brenden Magill, Giti Khodaparast**, and Senior Personnel; Thomas O'Donnell, Virginia Tech, **Starting date 10/01/2024** (60 months with initial review after 24 months, my internal credit 15%), **$2,277,791**
  Several other universities are involved, including the University of Michigan, Stanford, and the University of North Florida

- **Air Force Office of Scientific Research (AFOSR):** "Probe and Control of Coherent States toward Phononics, Magnonics, and Photonics Applications" **PI: Giti Khodaparast, $660,000 Award Period: 5/1/2024-4/30/2027,** 290,0000 of this funding goes to Subcontract, C. J. Stanton (U. Florida). Senior Personnel, Virginia Tech, Brenden Magill (5% internal credit).

- **Air Force Office of Scientific Research (AFOSR):** "Nonlinear and Terahertz Studies of Electro-Optic and Magneto-Electric Materials", **PI: Giti Khodaparast**, $1,200,000 Award Period: 9/15/2017-9/14/2021. No Cost extension to 2022 due COVID.
  Subcontractors: S. Priya (Penn State), C. J. Stanton (U. Florida), A. Belyanin (Texas A&M), M. Raschke (U. Colorado Boulder), PI's share ~$301,000.

- **Air Force Office of Scientific Research (AFOSR): "**Acquisition of a Femtosecond Laser for Fundamental Research and Education on Multifunctional Materials", **PI: Giti Khodaparast $**172,500 DURIP. Award period: 2016-2017.

- **APS Conference for Undergraduate Women in Physics: PI: Giti Khodaparast,** $40,000, Award period: 2016-2017.

- **NSF: Proposed Industry/University Cooperative Research Center (I/UCRC) for Next Generation Nanomaterial and Device Engineering (NGeNE).**
  PI: Prof. Avik Gosh at the University of Virginia. Virginia Tech's share to be prepared for the planning meeting was $11,500. PIs at Virginia Tech: Mantu Hudait, Co-PIs: Luke Lester, Jean Heremans, Scott Huxtable, Giti Khodaparast (all VT), with equal distribution of the funds. Award period: 04/15/2015 - 03/31/2017.

- **Air Force Office of Scientific Research (AFOSR): "**Nonlinear and Terahertz Studies of Electro-Optic and Magneto-Electric Materials", **PI: Giti Khodaparast**, $1,199,998. Award period: 9/30/2014-9/29/2017.
  Subcontractors: S. Priya (Virginia Tech), C. J. Stanton (U. Florida), A. Belyanin (Texas A&M), M. Raschke (U. Colorado Boulder). PI's share $289,467.

- **CAREER AWARD, National Science Foundation:** "Integrated Research and Education to Probe Coherent and Quantum States in the Presence of Strong Spin-Orbit Coupling" **PI: Giti Khodaparast**, $550.000. Award period: 2009-2015, with a one-year no-cost extension. REU supplement was included.

- **AFOSR YOUNG INVESTIGATOR:** "Probing and Manipulation of Coherent States in Ferromagnetic Narrow Gap Semiconductors with an Eye Towards Developing Concepts for New Device", **PI: Giti Khodaparast**, $329,831, Award period: 2007-2010.

- **National Science Foundation**: "Carrier and Spin Dynamics in InSb- and InMnSb-Based Heterostructures", **PI: Giti Khodaparast**, $328,000, Award period: 2005-2008. The REU-supplement was included.

- **Jeffress Memorial Trust:** "Terahertz Emission from Parabolic Semiconductor Heterostructures" **PI: Giti Khodaparast**, $50,000, Award period: 2005-2008.

- **Subcontract a NASA project with LUNA**: "Active all-Fiber-Optic Acoustic Airframe Structural Health Monitoring System ", **PI: Giti Khodaparast**, $9,900, Award period: 2008.

- **Subcontract a DARPA project with LUNA** "An extended duration arbitrary wavefront generation with large time bandwidth product", **PI: Giti Khodaparast**, $19,469, Award period: 2009.

INTERNAL GRANTS:

- **ADVANCE VT**: "Spin Dependent Phenomena in Narrow Gap Semiconductors" **PI: Giti Khodaparast**, $37,982 (2005-2006).

- **Virginia Tech Institute for Critical Technology and Applied Sciences (ICTAS)** "Micro Injection of Nanoparticles and Real-time Spectroscopy in Biological Systems" **PI: Giti Khodaparast**, $30,000 (2006-2007).

- **Virginia Tech ICTAS:** "Delivery of Nanoparticles" PI: Prof. Jill Sible, **Co-PI Giti Khodaparast,** $48,000 (50% effort each) (2008-2009).

- **Virginia Tech ICTAS: "**Using Nanomaterials to Track Messenger RNA in Plants": PI: Jim Westwood, **Co-PI: Giti Khodaparast** $90,975 (50% effort) (2010-2012). An additional $25,000 was added: (2011-2012).

- **Virginia Tech ICTAS:** PI: Hans Robinson, **Co-PI Giti Khodaparast**, $120,000 (50% effort) (2012-2014).

- **Virginia Tech ICTAS: "**High Intensity Nano-Optics and Fabrication" **PI: Giti Khodaparast** $12,500 (2013-2015) (This was a collaboration with Hans Robinson but the budget was separated).

- **Virginia Tech Sigma Xi PhD Research Award:** $1000, for Michael Meeker in my group (2015-2016).

- **Virginia Tech ICTAS** (Diversity Grant):" New Mexico State Univ. Collaborative Efforts", $10,000 (2016-2017).

- **Hamlett Undergrad Research Fund**, $6,000 (2017-2018).

- **L. C. Hassinger Fellowship**, $26,000 per year (2019-2025).

- **Hamlett Undergrad Research Fund**, $2,000 (2024).

- **Virginia Tech ICTAS:** Single-photon Emitters and Detectors Based on Ge-Quantum Dots for Quantum Device Applications
  PI: Prof. Mantu Hudait (ECE) and **Co-PI: Giti Khodaparast**. Total $10,000. $ 5,000 each.

PATENT:

Storage medium for recording information comprises ferromagnetic semiconductor comprising group III element, Group V element, and dopant
Patent Number(s): US2004258935-A1
Inventor(s): KONO J, WANG J, KHODAPARAST G A, MUNEKATA H
Patent Assignee Name(s) and Code(s): UNIV RICE WILLIAM MARSH (RICV-C)

CURRENT COLLABORATORS:

Prof. Javad Shabani: New York University
Prof. Yasuhiro Matsuda: The Megagauss Laboratory in Kashiwa, University of Tokyo
Dr. Joe Tischler: The University of Oklahoma
Dr. Steve McGill: National High Magnetic Field in Tallahassee (NHMFL)
Prof. Chris Palmstrøm: Univ. of California, Santa Barbara
Prof. Chris Stanton: University of Florida
Prof. Hiro Munekata: Tokyo Institute of Technology
Prof. Russ Bowers: University of Florida
Prof. Shashank Priya: Penn State/University of Minnesota
Prof. Oana Malis: Purdue University
Prof. Bharat Jalan: University of Minnesota

Dr. Mathias Sander: Paul Scherrer Institute
Prof. Mantu Hudait: Electrical Engineering, Virginia Tech
Prof. Wei Zhou: Electrical Engineering, Virginia Tech
Prof. Li Na Quan: Chemistry, Virginia Tech
Prof. Vinh Nguyen: Physics, Virginia Tech
Prof. Patrick Huber: Physics, Virginia Tech

STUDENT ADVISING:

Graduate:

Aliya Gifford (Master's Degree: 2007, PhD Vanderbilt University. Currently Data Scientist at the Department of Biomedical Informatics, Vanderbilt University),
Kanokwan Nontapot (PhD Degree: 2008, Positions: National Institute of Standards, Maryland, and currently at the National Institute of Metrology, Thailand),
Matthew Frazier (PhD Degree: 2010, Positions: Post-doctoral research scientist at the University of Maryland and currently a Physics Teacher at the Governor's School in Virginia),
Mithun Bhowmick (PhD Degree: 2012, Positions: research scientist at the University of Illinois Urbana-Champaign, Assistant Professor since Fall 2019, University of Miami, OH),
Travis Merritt (PhD Degree: 2013, currently at Virginia Tech as Collegiate Assistant Professor in Physics),
Megan LeBlanc (co-advised in the group of Prof. Westwood in the Department of Plant Pathology, Physiology, and Weed Science as part of an IGERT activity. Position: Reporting Manager at Pacific Ag Group, CA),
Michael Meeker (PhD Degree: 2016, Positions: The Naval Research Laboratory, research scientist at the Graduate Center in New York City, and currently in the AI Industry),
John Burton **(**Master's Degree: 2017, Position: Researcher at Army Laser Research Lab).
Joseph Spencer (Master's Degree: 2020, Pursued his PhD at the Naval Research Laboratory, and is currently at Night Vision)
Rathsara Herath (PhD in physics, May 2021, currently at Intel, Portland, OR)
Nick Smith (Graduated Dec. 2023, currently at the Laboratory for Physical Science, MD)
Vipin Yadav (Current)
Michael Meeker, Nick Smith, and Joseph Spencer received the National Research Council Postdoctoral Fellowship after their PhD.

Undergraduate in Physics:

Undergraduate students in the past 20 years:
Mr. Brett Spencer, Ms. Emily Wade, Mr. Jonathan Cates, Mr. Justin Waugh, Mr. Jose Umanzor-Alvarez, Ms. Ariana Reese, Mr. Thomas Howe, Mr. Bryan Byners, Ms. Sara Case, Mr. Armando Garcia, Mr. Youssef Khamsi, Mr. Jameel McMillan, Mr. Doug Wilson, Mr. Roy Bishwamoy Sinha, Ms. Amnah Eltahir, Mr. Alex Winemiller, Ms. Rochelle Silverman, Ms. Meagan Alexis – Croninma, Mr. Alejandro Sosa, Ms. Grace Mulholland, Mr. Ralph Romero, Mr. Jessi Barber, Ms. Moira Miller, Ms. Kiara McMillan, Ms. Ada Morral, Ms. Gabi Gagliano, Mr. Yannick Pleimling, Mr. Graham Lang, Ms. Mya Shekitka.
Major undergraduate research projects with the following undergraduate students resulted in co-authorships in publications: Jonathan Cates, Justin Waugh, Jose Umanzor-Alvarez, Emily Wade, Ariana Cruz-Reese, Jameel McMillan, Amnah Eltahir, Grace Mulholland, Pamella Moore, Yussef Khamsi, Moira Miller, Kiara McMillan, Ada Morral, Gabi Gagliano, Yannick Pleimling (the recipient of the Goldwater award, 2023).

Undergraduates in Nanoscience Research and Lab Rotations:

Steven Dail
Nathan Garg
Richard Abrahamson
Joseph Spencer
Kevin Tranhuu
Alex Shenenberger (Co-advised with Brenden Magill)
Ruoshui Ma (Co-advised with Brenden Magill)
Eleni Ziu

International Exchange Trainees:

Adriane Messager (Ecole Polytechnique, France)
Benjamin Madon (Ecole Polytechnique, France)

POST DOCTORAL ADVISING:

Dr. Rajeev Kini: Employed: 2005-2007, Employment after leaving postdoctoral position: National Renewal Energy Laboratory, Golden, Colorado. Currently a faculty member in India (IISER-TVM).
Dr. Brenden Magill: Employed: Shared with Prof. Hans Robinson, 2012-2014, and fully employed in my group 2014-2016. In 2016, he was promoted to a research scientist at Virginia Tech as a member of my group. Employment after leaving a postdoctoral position: In 2018, he was hired as a collegiate assistant professor for the nanoscience program at Virginia Tech.
Dr. Rathsara Herath: Post-COVID short appointment in my group; May 2021-March 2022. She is currently at Intel).

TEACHING:

In the last 20 years, I have developed and taught several classes at the undergraduate and graduate levels. One of the undergraduate-level courses that I developed, the Quantum Physics of Nanostructures course, is now part of a new nanoscience undergraduate major at Virginia Tech. The other courses I taught at Virginia Tech include:
Solid State Physics (both graduate and undergraduate level),
The sophomore-level Modern Physics course,
Highlights of Contemporary Physics for physics and non-physics majors,
The junior level Intermediate Electricity and Magnetism,
The freshman course: Foundations of Physics,
The combined senior and graduate level courses in Nanotechnology,
The graduate and undergraduate levels of Classical Mechanics.

Department/College/University Service

- I collaborate with the Multicultural Academic Opportunities Program (MAOP) at Virginia Tech, whose central goal is the promotion of diversity within the student body of Virginia Tech. As part of this program, four African American students performed summer research in my group.
- I have participated in nano-science public lectures for youth and their parents.
- I established collaborations with Prof. Jill Sible at Virginia Tech on an NSF STEP grant to increase student retention in physical and quantitative science majors. I served as an adviser of the program, which has the following main goals: promote academic success

and engagement, provide interdisciplinary undergraduate training for science and engineering students, and promote retention and diversity in STEM majors.

- I collaborated with the Advance Program at Virginia Tech to increase the visibility of female faculty members by inviting keynote speakers such as Prof. Mildred Dresselhaus (MIT). These events have provided opportunities for our female students and faculty to learn about the successful stories of female researchers and to establish networks.
- I served on the graduate, undergraduate, building, and shop committees in the physics department.
- I served on various departmental search committees and chaired 3 search committees.
- I served on the electrical engineering and computational neuroscience search committees.
- I served as the condensed matter seminar organizer.
- I served on the Physics Committee, 2005.
- I served on the search committee for the Dean of the College of Science in 2006.
- I was a member of the College of Science cluster hiring committee, 2008-2011.
- I served on the Institute for Critical Technology and Applied Sciences (ICTAS) advisory board and doctoral scholar program at Virginia Tech since 2008.
- I served on the nano-science new degree committee to develop the new curriculum and the degree requirements.
- I served on the departmental long-range planning committee.
- I mentored several assistant professors.
- I served on the Sowers Distinguished Lecture Series Committee and invited three speakers, Dave Reitze and Naomi Halas, and Donna Strickland (Nobel Laureate).
- I served on the departmental executive and promotion/tenure committees and chaired the committee in 2019.
- I served on the physics qualifying committee.

DIVERSITY INITIATIVES OR CONTRIBUTIONS:

- Training underrepresented groups in science in my research group. Ariana Reese, from Norfolk State, two students (Armando Garcia, Youssef Al Khamsi) from the University of Texas El Paso, and three African American students from Virginia Tech (Amnah Eltahir earned her PhD in 2020, Jameel McMillan employed in an engineering discipline, Kiara McMillan; currently in industry) contributed to research activities in my group.

- Adviser of the STEM programs at VT, promoting diversity and retention of science majors. Collaborations with the Multicultural Academic Opportunities Program (MAOP) to mentor minority students.

- To reach a broader group of high school students, I provided regular lectures for 7 years at the Roanoke Valley Governor's School on modern topics, including nanoscale science. Hosted high school students in my group: Summer 2006 (Mr. Philip McElmurray), Summer 2007 (Ms. Ashley Aissi), January 2009 (Ms. Hannah Aly), Summer 2011 (Mr. Jameel McMillan, continued the activities at VT), Spring 2016 (Ms. Kiara McMillan).

- Presented talks for the VT summer nano-camp, the NSF-STEM CURIE, and several open-house events.

- Advisor of Ladies of Robeson (a woman social club in the physics group) at the Department of Physics.

PUBLICATIONS:

1- Yixuan Dou, Xiaoming Wang, Nicholas W. G. Smith, Piush Behera, Rathsara Herath Mudiyanselage, Burak Guzelturk, Donald A. Walko, Yannick Pleimling, Sunhao Liu, Nicholas Nici, Carla Slebodnick, Bogdan Dryzhakov, Bin Hu, Archana Raja, Ramamoorthy Ramesh, Giti A. Khodaparast, Yanfa Yan, Lina Quan "Hidden polar states in copper halide perovskites" (Accepted in the Nature Communications).

2- Mithun Bhowmick, Dhanalakshmi Sellan, Kade Johnson, Kenneth Mikolaichik, Xuan Zhou, Amlan Das, Chari Ramkumar, Brenden A. Magill, Nicholas W. G. Smith, and Giti A. Khodaparast "Probing structural alterations in shock compressed GaAs", AIP Advances 15, 035203 (2025). **Editor's Pick**

3- Jiyoon Kim, Soumyadeep Ghosh, Nicholas W. G. Smith, Sunhao Liu, Yixuan Dou, Carla Slebodnick, Giti A. Khodaparast, Jin Qian, Lina Quan "Synthetic Control of Water-Stable Hybrid Perovskitoid Semiconductors", Adv. Mater. 2406274 (2024).

4- Mantu K. Hudait, S. Bhattacharya, S. Karthikeyan, J. Zhao, R. J. Bodnar, B. A. Magill, and G. A. Khodaparast "Mapping the Ge/InAl(Ga)As Interfacial Electronic Structure and Strain Relief Mechanism in Germanium Quantum Dots", J. Mater. Chem. C, **12**, 14062 (2024).

5- Proceedings of Quantum Sensing and Nano Electronics and Photonics XX
M Razeghi, GA Khodaparast, MS Vitiello - Proc. of SPIE Vol 12895, 2024.

6- Sunil K. Thapa, Rathsara R. H. H. Mudiyanselage, Thalya Paleologu, Sukgeun Choi, Zhuo Yang, Y. Kohama, Y. H. Matsuda, Joseph Spencer, Brenden A. Magill, Chris J. Palmstrøm, Christopher J. Stanton, and Giti A. Khodaparast "Band structure, g-factor, and spin relaxation in -type InAsP alloys", Phys. Rev. B **108**, 115202, (2023).

7- Seied Ali Safiabadi Tali, Rathsara R. H. H. Mudiyanselage, Yizhou Qian, Nicholas William Gary Smith, Yuming Zhao, Ada Morral, Junyeob Song, Meitong Nie, Brenden A. Magill, Giti A. Khodaparast, and Wei Zhou, "Dual-Modal Nanoplasmonic Light Upconversion through Anti-Stokes Photoluminescence and Second-Harmonic Generation from Broadband Multiresonant Metal Nanocavities" ACS Nano 2023, **17**, 12, 11362 (2023).

8- Sengunthar Karthikeyan, Rutwik Joshi, Jing Zhao, Robert J Bodnar, Brenden A Magill, Yannick Pleimling, Giti A Khodaparast, Mantu K Hudait, "Lattice matched GeSn/InAlAs heterostructure: role of Sn in energy band alignment, atomic layer diffusion and photoluminescence", Journal of Materials Chemistry C, **11**, 9472 (2023).

9- Proceeding of Quantum Sensing and Nano Electronics and Photonics XIX
M Razeghi, GA Khodaparast, MS Vitiello - Proc. of SPIE Vol 12430, 2023

10- Nicholas W. G. Smith, Yannick Pleimling, Brenden A. Magill, Rathsara R. H. H. Mudiyanselage, Alex Shenenberger, Shunta Ogawa, Nozomi Nishizawa, Hiro Munekata, and Giti A. Khodaparast "Probe and control of photo-excited magnetization precession in Co/Pd multilayer films at low laser fluence regime" J. Appl. Phys. **132**, 243902 (2022).

11- M.B. Clavel, Murphy-Armando, Y. Xie, K.T. Henry, M. Kuhn, R.J. Bodnar, G.A. Khodaparast, D. Smirnov, J.J. Heremans, and M.K. Hudait "Multivalley Electron Conduction at the Indirect-Direct Crossover Point in Highly Tensile-Strained Germanium" Phys. Rev. Appl. **18**, 064083 (2022). **Editor's Suggestion**

12- Mantu K. Hudait, Steven W. Johnston, Michael Meeker, and Giti A. Khodaparast " Carrier recombination dynamics and temperature dependent optical properties of InAs–GaSb heterostructures" J. Mater. Chem. C, **10**, 17994–18003 (2022).

13- Mantu K Hudait, Michael Meeker, Jheng-Sin Liu, Michael B Clavel, Shuvodip Bhattacharya, Giti A Khodaparast "Temperature and doping-dependent interplay between the direct and indirect optical response in buffer-mediated epitaxial germanium", Optical Materials, **131**,112633 (2022).

14- Brenden A. Magill, Kai Wang, Stephen McGill, Christopher J. Stanton, Shashank Priya, and Giti A. Khodaparast "Probe of the excitonic transitions and lifetimes in quasi-2D organic–inorganic halide perovskites" AIP Advances **12**, 015114 (2022).

15- Yang Cao, Brandon Dzuba, Brenden A Magill, Alexander Senichev, Trang Nguyen, Rosa E Diaz, Michael J Manfra, Stephen McGill, Carlos Garcia, Giti A Khodaparast, Oana Malis "Photoluminescence study of carrier localization and recombination in nearly strain-balanced non-polar InGaN/AlGaN quantum wells" Phys. Status Solidi B, 2100569 (2022).

16- Invited Paper: Rathsara R. H. H. Mudiyanselage, Nicholas W. G. Smith, Brenden A. Magill, Min Gyu Kang, Shashank Priya, and Giti A. Khodaparast "Second Harmonic Generation in Multiferroic BaTiO3-BiFeO3 Film and Nanorod Arrays Grown on Si Substrate" Proc. SPIE 12002, Oxide-based Materials and Devices XIII,120020L (2022).

17- Invited Paper: Oana Malis, Trang Nguyen, Yang Cao,1 Brenden A. Magill, Brandon Dzuba, Stephen McGill, Carlos Garcia, Giti A. Khodaparast, Michael J. Manfra, "Novel nitride quantum structures for infrared sensing" Proc. of SPIE Vol. 12009, 120090B (2022) SPIE · 0277-786X.

18- Co-Editor: PROCEEDINGS VOLUME 12009, SPIE OPTO | 22 JANUARY - 28 FEBRUARY 2022 Quantum Sensing and Nano Electronics and Photonics XVIII, Editor(s): Manijeh Razeghi, Giti A. Khodaparast, Miriam S. Vitiello

19- Rathsara R. H. H. Mudiyanselage, John Burton, Brenden A. Magill, Kiara McMillan, Gabi Gagliano, Ada J. Morral, Min Gyu Kang, Han-Byul Kang, Shashank Priya, Christopher J. Stanton, Giti A. Khodaparast "Optical properties of $Pb_{0.52}Zr_{0.48}TiO_3$ nanorod arrays: second harmonic generation and multiphoton carrier dynamics", Journal of Physics: Photonics **3** (3), 034012 (2021).

20- Tao Ye, Ke Wang, Yuchen Hou, Dong Yang, Nicholas Smith, Brenden Magill, Jungjin Yoon, Rathsara R. H. H. Mudiyanselage, Giti A. Khodaparast, Kai Wang, Priya Shashank**,** "Ambient-air-stable lead-free CsSnI3 solar cells with >7.5% efficiency": J. Am. Chem. Soc. **143**, 11, 4319 (2021).

21- Brenden A. Magill, Sunil Thapa, Jade Holleman, Stephen McGill, Hiro Munekata, Christopher J. Stanton, and Giti A. Khodaparast "Magnetic field enhanced detection of coherent phonons in a GaMnAs/GaAs film" Phys. Rev. B **102**, 045306 (2020).

22- Joseph Yuan, Mehdi Hatefipour, Brenden A. Magill, William Mayer, Matthieu C. Dartiailh, Kasra Sardashti, Kaushini S. Wickramasinghe, Giti A. Khodaparast, Yasuhiro H. Matsuda, Yoshimitsu Kohama, Zhuo Yang, Sunil Thapa, Christopher J. Stanton, and Javad Shabani, "Experimental measurements of effective mass in near-surface InAs quantum wells", Phys. Rev. B **101**, 205310 (2020).

23- Yang Cao, Brandon Dzuba, Brenden A Magill, Alexander Senichev, Trang Nguyen, Rosa E Diaz, Michael J Manfra, Stephen McGill, Carlos Garcia, Giti A Khodaparast, Oana Malis "Photoluminescence study of non-polar m-plane InGaN and nearly strain-balanced InGaN/AlGaN superlattices" Journal of Applied Physics **127**, 185702 (2020).

24- Co-Editor of the Quantum Sensing and Nano Electronics and Photonics XVII Proceedings**:** Quantum Sensing and Nano Electronics and Photonics XVII, M. Razeghi, J. S. Lewis, G. A. Khodaparast, P. Khalili, Proc. of SPIE Vol 11288, 1128801-1 (2020).

25- Michael B Clavel, Jheng-Sin Liu, Michael A Meeker, Giti A Khodaparast, Yuantao Xie, Jean J Heremans, Shuvodip Bhattacharya, Mantu K Hudait, "Electronic and optical properties of highly boron-doped epitaxial Ge/AlAs (001) heterostructures" Journal of Applied Physics **127**, 075702 (2020).

26- Rathsara R. H. H. Mudiyanselage, Brenden A. Magill, John Burton, Moira Miller, Joseph Spencer, Kiara McMillan, Giti A. Khodaparast, Han Byul Kang Min Gyu Kang, Deepam Maurya, Shashank Priya, Jade Holleman, Steve McGill, and Christopher J. Stanton,"Coherent acoustic phonons and ultrafast carrier dynamics in hetero-epitaxial BaTiO3–BiFeO3 films and nanorods", J. Mater. Chem. C, **7**, 14212-14222 (2019).

27- Co-Editor of the Quantum Sensing and Nano Electronics and Photonics XVI Proceedings: Quantum Sensing and Nano Electronics and Photonics XVII Manijeh Razeghi, Jay S Lewis, Eric Tournié, Giti A Khodaparast, Volume**:**10926, (2019).

28- Jonathan S Metzman, Assad Ullah Khan, Brenden Magill, Giti A Khodaparast, James R Heflin, Guoliang Liu "Critical Role of Polystyrene Layer on Plasmonic Silver Nanoplates in Organic Photovoltaics", ACS Appl. Energy Mater, **2** (4), pp 2475–2485 (2019).

29- V. Whiteside, B. Magill, M. Lumb, H. Esmaielpour, M. Meeker, R. Mudiyanselage, A. Messager, S. Vijeyaragunathan, T. Mishima, M. Santos, I. Vurgaftman, G. A. Khodaparast, I. Sellers, "Valence band states in an InAs/AlAsSb multi-quantum well hot carrier absorber", Semicond. Sci. Technol., **34** 025005 (2019).

30- M. K. Hudait, M. B. Clavel, S. Saluru, J-S Liu , M. A. Meeker , G. A. Khodaparast, R. Bodnar "Vibrational, Optical and Metal-oxide-semiconductor Characteristics of Sulfur Passivated Step-graded $GaAs_{1-y}Sb_y$ Materials with Tunable Antimony Compositions", AIP Advances **8** (11), 115119 (2018).

31- B. Madon, H. Byul Kang, M. Gyu Kang, D. Maurya, B. Magill, M. Alves, J.-E. Wegrowe, H.-J. Drouhin, S. Priya, and G. A. khodaparast "Room Temperature Ferromagnetic Resonance in Hetero-Epitaxial BTO-BFO/LSMO Magnetoelectric Composite", AIP Advances **8** (10), 105034 (2018). **Editor's Pick.**

32- S. Myung-Eun, H. Lee, M.-G Kang, W. Li, D. Maurya, B. Poudel, J. Wang, M. A. Meeke*r*, G. A Khodaparast, S. T Huxtable, and S. Priya, "Nanoscale Texturing and Interfaces in Compositionally Modified $Ca_3Co_4O_9$ with Enhanced Thermoelectric Performance," ACS Omega **3**, 10798 (2018).

33- C. Wu, H. Li, Y. Yan, Bo Chi, K. M. Felice, R. B. Moore, B. A. Magill, R. R. H. H. Mudiyanselage, G. A. Khodaparast, M. Sanghadasa, and S. Priya" Highly-Stable Organo-Lead Halide Perovskites Synthesized through Green Self-Assembly Process," Advanced Science News: Solar RRL **2**, 1800052 (2018), **Selected for cover page**

34- Invited Review Article: J-H Park, R. McClintock, D. Pavlidis, F. H. Teherani, D. J. Rogers, B. A. Magill, G. A. Khodaparast, Y. Xu, J. Wu, V. P. Dravid, and M. Razeghi " Functional Ga_2O_3 Metal Oxide thin films on c-sapphire (0001)", Oxide-based Materials and Devices IX; 105330R (2018).

35- A. Ghosh, M. B. Clavel, P. D Nguyen, M. A. Meeker, G. A. Khodaparast, R. Bodnar, and M. K. Hudait, "Growth, Structural, and Electrical Properties of Germanium-on-Silicon Heterostructure by Molecular Beam Epitaxy," AIP Advances **7**, 095214 (2017).

36- M. A. Meeker, S. Kundu, D. Maurya, M-G Kang, A. Sosa, R. R. H. H. Mudiyanselage, M. Clavel, S. Gollapudi, M. K. Hudait, S. Priya, and G. A. Khodaparast, "The Permittivity and Refractive Index Measurements of Doped Barium Titanate (BT-BCN)," Optical Materials **73**, 793 (2017).

37- D. Maurya, A. Charkhesht, S. K. Nayak, F-C Sun, D. George, A. Pramanick, M.-G Kang, H-C Song, M. M. Alexander, D. Lou, G. A. Khodaparast, S. P. Alpay, N. Q. Vinh, and S. Priya, "Soft Phonon Mode Dynamics in Aurivillius Type Structures," Phys. Rev. B **96**, 134114 (2017).

38- J. Gan, M. G. Kang, M. A. Meeker, G. A. Khodaparast, R. J. Bodnar, J. E Mahaney, D. Maurya, and S. Priya, "Enhanced piezoluminescence in non-stoichiometric ZnS:Cu microparticle based light emitting elastomers," Journal of Materials Chemistry C **5**, 5387 (2017).

39- M. Bhowmick, G. A. Khodaparast, T. D. Mishima, M.B. Santos, D. Saha, G. D. Sanders, and C. J. Stanton, "Interband and Intraband Relaxation Dynamics in InSb Based Quantum Wells," J. App. Phys. **120**, 235702 (2016).

40- J-S Liu, M. B. Clavel, R. Pandey, S. Datta, *M. A. Meeker*, G. A. Khodaparast, and M. K. Hudait, "Growth and characterization of metamorphic InAs/GaSb tunnel heterojunction on GaAs by molecular beam epitaxy," J. Appl. Phys. **119**, 244308 (2016).

41- B. A. Magill, K-D Park, Y. Zhou, A. Chopra, Maurya, S. Priya, M. B. Raschke, A. Belyanin, C. J. Stanton, G. A. Khodaparast, "Ultrafast Anisotropic Optical Response and Coherent Acoustic Phonon Generation in Polycrystalline $BaTiO_3$-$BiFeO_3$," Energy Harvesting and Systems **3**, 229 (2016).

42- G. Mulholland, P. Moore, Y. Khamsi, J. McMillan, J. Sible, and G. A. Khodaparast, "Near-infrared Laser Cellular Ablation and Development in Xenopus laevis Embryos," Journal of Laser Applications **28**, 012009 (2016).

43- B. Madon, J.-E. Wegrowe, H.-J. Drouhin, X. Liu, J. Furdyna, and G. A. Khodaparast, "Infuence of the carrier mobility distribution on the Hall and Nernst effect measurements in n-type InSb," J. Appl. Phys. **119**, 025701 (2016).

44- M. A. Meeker, B. A. Magill, G. A. Khodaparast, D. Saha, C. J. Stanton S. McGill, and B. W. Wessels, "High Field Magnetic Circular Dichroism in Ferromagnetic InMnSb and InMnAs: Spin-Orbit-Split Hole Bands and g-Factors," Phys. Rev. B **92**, 125203 (2015).

45- Y. Zhao, J. Wang, S. Huxtable, G. A. Khodaparast, and S. Priya," Role of sintering atmosphere and synthesis parameters on electrical conductivity of ZnO," Journal of Energy Harvesting and Systems, **2,** 73 (2015).

46- Y. Zhao, D. Maurya, A. Miner, G. A. Khodaparast, and S. Priya, "Enhanced thermoelectric performance in PbTe-PbS nanocomposites," Journal of Energy Harvesting and Systems **2,** 55 (2015).

47- D. Inglefield, T. R. Merritt, B. A. Magill, T. Long, and G. A. Khodaparast, "Upconverting Nanocomposites Dispersed in Urea-Containing Acrylics," J. Mater. Chem. C **3**, 5556 (2015).

48- Y. Sun, F. V. Kyrychenko, G. D. Sanders, C. J. Stanton, G. A. Khodaparast, J. Kono, Y. H. Matsuda, and H. Munekata, "Probe of the Band Structure of MBE Grown p-type InMnAs at Ultrahigh Magnetic Fields," Journal of Spin Vol. **5**, No. 1, 1550002 (2015).

49- Invited Paper: B. A. Magill, M. Bishop, S. A. McGill, Y. Zhou, A. Chopra, H.-C Song, C. J. Stanton, S. Priya, G. A. Khodaparast "Ultrafast Magneto-Optical Spectroscopy of $BiFeO_3$-$BaTiO_3$ Based Structures", Proc. Of SPIE, Vol. **955**1, 95510T (2015).

50- G. A. Khodaparast, M. Bhowmick, C. Feeser, B. W. Wessels, D. Saha , G. D. Sanders, and C. J. Stanton, "Time Resolved Spectroscopy in Narrow Gap MOVPE Grown Ferromagnetic Semiconductors," Proceeding of the first Ultrafast Conference in Strasbourg, France. Published by Springer Verlag, Pages 8-10 (2015).

51- T. R. Merritt, M. A. Meeker, B. A. Magill, G. A. Khodaparast, S. McGill, J. G. Tischler, S. G. Choi, and C. J. Palmstrøm," Photoluminescence line shape and dynamics of localized excitonic transitions in InAsP epitaxial layers," J. Appl. Phys. **115**, 193503 (2014).

52- Y. Zhao, A. Kumar, G. A. Khodaparast, A. Eltahir, H. Wang, and S. Priya "Sintering Temperature-Dependent Chemical Defects and the Effect on the Electrical Resistivity of Thermoelectric ZnO," Journal of Energy Harvesting and Systems **1**, 113 (2014).

53- Invited Paper: B. A. Magill, M. A. Meeker, T. R. Merritt, G. A. Khodaparast, S. McGill, and C. J. Palmstrøm, "Time Resolved Magneto-Optical Studies of InAsP Ternary alloys," Proceedings of SPIE, Volume **9167**, 916718-5 (2014).

54- M. A. Meeker, B. A. Magill, T. R. Merritt, M. Bhowmick, K. McCutcheon, G. A. Khodaparast, J. G. Tischler, S. McGill, S. G. Choi, and C. J. Palmstrom, "Dynamics of photoexcited carriers and spins in InAsP ternary alloys," App. Phys. Lett. **102**, 222102 (2013).

55- G. A. Khodaparast, Y. H. Matsuda, D. Saha, G. D. Sanders, C. J. Stanton, H. Saito, S. Takeyama, T. R. Merritt, C. Feeser, B. W. Wessels, X. Liu, and J. Furdyna, "Cyclotron resonance in ferromagnetic InMnAs and InMnSb," Phys Rev. B **88**, 235204 (2013). **Editor's Selection**

56- M. L. LeBlanc, *T. R. Merritt*, J. McMillan, J. H. Westwood, and G. A. Khodaparast, "Optoperforation of single, intact Arabidopsis cells for uptake of extracellular dye-

conjugated dextran," Optics Express, **21**, 14622 (2013). *Selected by the editors for appearance in the Virtual Journal for Biomedical Optics (VJBO), which is a special feature of OSA's Optics InfoBase*

57- M. K. Hudait, Y. Zhu, N. Jain, S. Vijayaraghavan, A. Saha, *T. R. Merritt*, and G. A. Khodaparast, "In situ grown Ge in an arsenic-free environment for GaAs/Ge/GaAs heterostructures on off-oriented (100) GaAs substrates using molecular beam epitaxy," J. Vac. Sci. Technol. B **30**, 051205 (2012).

58- M. Bhowmick, T. R. Merritt, G. A. Khodaparast, B. W. Wessels S. A. McGill, D. Saha, X. Pan, G. D. Sanders, and C. J. Stanton, "Time-resolved differential transmission in MOVPE-grown ferromagnetic InMnAs," Phys. Rev. B **85**, 125313 (2012).

59- Invited paper: Giti A. Khodaparast, M. Bhowmick, C. Feeser, B. W. Wessels, D. Saha, Gary. D. Sanders, C. J. Stanton "Time-resolved Spectroscopy of MOVPE-grown III-Mn-V Ferromagnetic Semiconductors", Proceedings of SPIE, Volume **8461**, 84611O-1 (2012).

60- Invited Paper: X. Pan, Y. Sun, D. Saha, G. Sanders, M. B. Santos, R.E Doezema, S. E. Hayes, G. A. Khodaparast, H. Munekata, Y. H. Matsuda, J. Kono, C. J. Stanton, "Optically detecting spin-split bands in semiconductors in magnetic fields", Proceedings of SPIE, Volume **8461**, 84611P-1 (2012).

61- Y. Matsuda, G. A. Khodaparast, R. Shen, S. Takeyama, X. Liu, J. Furdyna, and B. W. Wessels, "Cyclotron resonance in InMnAs and InMnSb ferromagnetic films," Journal of Physics: Conference Series **334**, 012056 (2011).

62- Editor of the 15th International Conference on Narrow Gap Systems Proceeding, Giti Khodaparast (Co-Editors Michael Santos and Chris Stanton). AIP Conference Series, Volume (**1416**), Pages 1-200, (2011).

63- M. Bhowmick, T. Merritt, G. A. Khodaparast, C. Feeser, B. W. Wessels, S. McGill, D. Saha, X. Pan, G. D. Sanders, and C. J. Stanton, "Time Resolved Spectroscopy of MOVPE Grown Narrow Gap Ferromagnetic Semiconductors," AIP Conf. Proc. **1416**, 188191 (2011).

64- M. Bhowmick, T. Merritt, K. Nontapot, G. A. Khodaparast, T. D. Mishima, and M. B. Santos, "Carrier Dynamics in Parabolic InSb Based Multi Quantum Wells," AIP Conf. Proc. **1416**, 192 (2011).

65- J. Umanzor-Alvarez, E. C. Wade, A. Gifford, K. Nontapot, A. Cruz-Reese, T. Gotoh, J. C. Sible, and G. A. Khodaparast, "Near-Infrared Laser Delivery of Nanoparticles to Developing Embryos: A Study of Efficacy and Viability," Biotechnology Journal **6**, 519, May (2011). **Selected for the cover page of the journa**l.

66- Invited Paper: G. A. Khodaparast, M. Bhowmick, T. D. Mishima, M. Santos, C. Feaser, B. W. Wessels, "Probe of Coherent and Quantum States in Narrow-Gap Based Semiconductors with strong Spin-Orbit Coupling", Spintronics III, Proc. of SPIE Vol. **77600x-1** (2010).

67- Invited Paper: G. A. Khodaparast, M. Bhowmick M. Frazier, R. N. Kini, K. Nontapot, T. D. Mishima, M. Santos, B. W. Wessels, "Probe of Coherent and Quantum States in Narrow-Gap Semiconductors in the presence of strong Spin-Orbit Coupling", Proc. of SPIE: Vol. **7608** 76080O-1 (2010).

68- M. Bhowmick, R. N. Kini, K. Nontapot, N. Goel, S. J. Chung, T. D. Mishima, M. B. Santos, G. A. Khodaparast, "Probe of Interband Relaxations of Photo-excited and Carriers and Spins in InSb Based Quantum Wells", Physics Procedia **(3)** 1161 (2010).

69- M. Bhowmick, T. R. Merritt, K. Nontapot, B. W. Wessels, O. Drachenko, G. A. Khodaparast, "Time Resolved Spectroscopy of InMnAs Using Differential Transmission Technique in Mid-Infrared", Physics Procedia, **(3)** 1167 (2010).

70- M. Frazier, J. G. Cates, J. A. Waugh, J. J. Heremans, M. B. Santos, X. Liu, and G. A. Khodaparast, Photoinduced Spin-polarized Current in InSb–Based Structures," J. App. Phys. **106**, 103513 (2009).

71- R. N. Kini, K. Nontapot, G. A. Khodaparast, L. J. Guido, R.E. Welser "Time Resolved Measurements of Spin and Carrier Dynamics in InAs Films", J. App. Phys. **103**, 064318 (2008).

72- M. Frazier, K. Nontapot, R. Kini, G. A. Khodaparast, T. Wojtowicz, X. Liu , J. K. Furdyna "Time Resolved Magneto-Optical Studies of Ferromagnetic InMnSb Films", Appl. Phys. Lett., **92**, 061911 (2008).

73- G. A. Khodaparast, R. N. Kini, K. Nontapot, M. Frazier, E. C. Wade, J. J. Heremans, S. J. Chung, N. Goel, M. B. Santos, T. Wojtowicz, X. Liu, J. K. Furdyna "Control and Probe of Carrier and Spin Relaxations in InSb-Based Structures", Springer Proc. Phys. Series, 13th Intern. Conf. of NGS. P15-18 (2008).

74- K. Nontapot, R. N. Kini, A. Gifford, T. R. Merritt, G. A. Khodaparast, T. Wojtowicz, X. Liu, J. K. Furdyna , "Relaxation of Photoinduced Spins and Carriers in Ferromagnetic InMnSb Films", Appl. Phys. Lett. **90**, 143109, (2007).

75- J. Wang, C. Sun, Y. Hashimoto, J. Kono, G. A. Khodaparast, L. Cywinski, L. J Sham, G. D. Sanders, C. J. Stanton, and H. Munekata," Ultrafast magneto-optics in ferromagnetic III–V semiconductors", J. Phys.: Condens. Matter 18 R501 (2006). **Selected as Top Papers 2006 Showcase by Institute of Physics, Journal of Physics.**

76- T. Kasturiarachchi, F. Brown, N. Dai, G. A. Khodaparast, R. E. Doezema, S. J. Chung, M. B. Santos "Determination of deformation potentials in strained InSb quantum wells", Appl. Phys. Lett. **88,** 17 (2006).

77- T. Kasturiarachchi, F. Brown, N. Dai, G. A. Khodaparast, R. E. Doezema, S. J. Chung, M. B. Santos" Exciton determination of strain parameters in InSb/$Al_xIn1_{-x}Sb$ quantum wells", J. of Vacuum Science & Technology B 24 (**5**): 2429-2431 (2006).

78- G. A. Khodaparast, K. Nontapot, A. Gifford, S. J. Chung, N. Goel, M. B. Santos, T. Wojtowicz, X. Liu, J. K. Furdyna "Time Resolved Studies of Magnetic and Nonmagnetic Narrow-gap Semiconductors", Institute of Physics Conference Proceeding, **187**, 517 (2006).

79- J. Wang, G. A. Khodaparast, J. Kono, A. Oiwa, and H. Munekata "Ultrafast Optical and Magneto-Optical Studies of III-V Ferromagnetic Semiconductors", Journal of Modern Optics **51** pp. 2771 (2004).

80- Y. H. Matsuda, G. A. Khodaparast, M. A. Zudov, J. Kono, Y. Sun, F. V. Kyrychenko, G. D. Sanders, C. J. Stanton, N. Miura, S. Ikeda, Y. Hashimoto, S. Katsumoto, and H. Munekata "Ultrahigh-Field Hole Cyclotron Resonance Absorption in InMnAs Films", Physical Review B **70**, 195211 (2004).

81- G. A. Khodaparast, R. E. Doezema, S. J. Chung, K. Goldammer, and M. B. Santos "Spectroscopy of Rashba spin splitting in InSb quantum wells", Phys. Rev. B **70**, 155322 (2004).

82- D. C. Larrabee, G. A. Khodaparast, F. K. Tittel, J. Kono, M. Rochat, L. Ajili, J. Faist, H. Beere, E. Linfield, Y. Nakajima, M. Nakai, S. Sasa, M. Inoue, S. J. Chung, and M. B. Santos "Application of Terahertz Quantum Cascade Lasers to Semiconductor Cyclotron Resonance", Optics Letters, **29**, 122 (2004).

83- Invited paper: G. A. Khodaparast, R.C. Meyer, X.H. Zhang, T. Kasturiarachchi, R. E. Doezema, S.J Chung, N. Goel, and M. B. Santos "Spin effects in InSb quantum wells", Physica E **20**,386 (2004).

84- Invited paper: J. Wang, G. A. Khodaparast, J. Kono, T. Slupinski, A. Oiwa, and H. Munekata "Ultrafast Softening in InMnAs", Physica E **20**,412 (2004).

85- Y. Sun, G. D. Sanders, F. V. Kyrychenko, C. J. Stanton, G A. Khodaparast, J. Kono, Y. H. Matsuda, N. Miura, and H. Munekata "Electron-active Cyclotron Resonance in p-type InMnAs in High Magnetic Fields", Physica E **20**, 374 (2004).

86- G. D. Sanders, Y. Sun, C. J. Stanton, G. A. Khodaparast, J. Kono, D. S. King, Y. H. Matsuda, S. Ikeda, N. Miura, A. Oiwa, and H. Munekata "Determining Carrier Densities in InMnAs by Cyclotron Resonance", Physica E **20**, 378 (2004).

87- G. A. Khodaparast, J. Kono, Y. H. Matsuda, S. Ikeda, N. Miura, Y. J. Wang, T. Slupinski, A. Oiwa, H. Munekata, Y. Sun, F. V. Kyrychenko, G. D. Sanders, and C. J. Stanton, "High-Field Cyclotron Resonance Studies of InMnAs-Based Ferromagnetic Semiconductor Heterostructures", Physica E **21**, 978 (2004).

88- J. Li, K. I. Kolokolov, C. Z. Ning, D. C. Larrabee, G. A. Khodaparast, J. Kono, K. Ueda, Y. Nakajima, S. Sasa, and M. Inoue "Microscopic Modeling of Intersubband Resonances in InAs/AlSb Quantum Wells", Physica E **20**, 268 (2004).

89- G. A. Khodaparast, D. C. Larrabee, J. Kono, D. S. King, J. Kato, T. Slupinski, A. Oiwa, H. Munekata, G. D. Sanders, and C. J. Stanton "Terahertz dynamics of photo-generated carriers in ferromagnetic InGaMnAs", Journal of Applied Physics **93**, 8286 (2003).

90- G. A. Khodaparast, M. A. Zudov, J. Kono, Y. H. Matsuda, T. Ikaida, S. Ikeda, N. Miura, T. Slupinski, A. Oiwa, H. Munekata, G. D. Sanders, Y. Sun, and C. J. Stanton "Cyclotron resonance of electrons and holes in paramagnetic and ferromagnetic InMnAs-based films and heterostructures", Journal of Superconductivity: Incorporating Novel magnetism **16** (1), 107 (2003).

91- J. Wang, G. A. Khodaparast, J. Kono, T. Slupinski, A. Oiwa, and H. Munekata "Ultrafast optical manipulation of ferromagnetic order in InMnAs/GaSb", Journal of Superconductivity: Incorporating Novel magnetism **16** (2), 373 (2003).

92- D. C. Larrabee, G. A. Khodaparast, J. Kono, K. Ueda, Y. Nakajima, M. Nakai, S. Sasa, M. Inoue, K. I. Kolokolov, J. Li, and C. Z. Ning "Temperature Dependence of Intersubband Transitions in InAs/AlSb Quantum Wells", Appl. Phys. Lett. **83**, 3936 (2003).

93- G. D. Sanders, Y. Sun, F. V. Kyrychenko, C. J. Stanton, G. A. Khodaparast, M. A. Zudov, J. Kono, Y. H. Matsuda, N. Miura, and H. Munekata "Electronic States and Cyclotron Resonance in n-type InMnAs", Phys. Rev. B **68**, 165205 (2003).

94- G. A. Khodaparast, D. C. Larrabee, J. Kono, D. S. King, S. J. Chung, and M. B. Santos "Relaxation of quasi-2D electrons in a quantizing magnetic field probed by time-resolved cyclotron resonance", Phys. Rev. B **67**, 035307 (2003).

95- G. D. Sanders, Y. Sun, C. J. Stanton, G. A. Khodaparast, J. Kono, Y. H. Matsuda, N. Miura, T. Slupinski, A. Oiwa, and H. Munekata "Theoretical and experimental studies of cyclotron resonance in p-type InAs and InMnAs at ultrahigh magnetic fields", Journal of Applied Physics **93**, 6897 (2003).

96- G. D. Sanders, Y. Sun, C. J. Stanton, G. A. Khodaparast, J. Kono, Y. H. Matsuda, N. Miura, T. Slupinski, A. Oiwa, and H. Munekata "Theory of cyclotron resonance and magneto-optics in n-and p-type InMnAs in ultrahigh magnetic fields", Journal of Superconductivity: Incorporating Novel magnetism **16** (2), 449 (2003).

97- J. Wang, G. A. Khodaparast, J. Kono, T. Slupinski, A. Oiwa, and H. Munekata, "Ultrafast Photoinduced Softening in a Ferromagnetic Semiconductor", Quantum Electronics and Laser Science Conference, OSA Technical Digest (Optical Society of America, Washington DC, 2003), QThB6.

98- G. A. Khodaparast, J. Kono, Y. H. Matsuda, T. Ikaida, S. Ikeda, N. Miura, T. Slupinski, A. Oiwa, and H. Munekata, "Cyclotron resonance of itinerant holes in ferromagnetic InMnAs/GaSb heterostructures", Proceedings of the 26th International Conference on the Physics of Semiconductors. Edited by A. R. Long and J. H. Davies (Institute of Physics Publishing, Bristol, 2003), P320.

99- Invited Paper: G. A. Khodaparast, G. N. Ostojic, A. Srivastava, J. Wang, and J. Kono, "Mid-infrared ultrafast and nonlinear spectroscopy of semiconductors", The Proceedings of the 2002 Annual Meeting of the IEEE Lasers and Electro-Optics Society.

100- D. C. Larrabee, J. Tang, M. Liang, G. A. Khodaparast, J. Kono, K. Ueda, Y. Nakajima, O. Suekane, S. Sasa, M. Inoue, K. I. Kolokolov, J. Li, and C. Z. Ning "Intersubband transitions in narrow InAs/AlSb quantum wells", Published in Proceedings of the 26th International Conference on the Physics of Semiconductors. Edited by A. R. Long and J. H. Davies (Institute of Physics Publishing, Bristol, 2003), P129.

101- J. Li, K. I. Kolokolov, C. Z. Ning, D. C. Larrabee, G. A. Khodaparast, J. Kono, K. Ueda, Y. Nakajima, S. Sasa, and M. Inoue, "Intersubband Transitions in InAs/AlSb Quantum Wells", MRS Proceedings Volume 744, Progress in Semiconductors II – Electronics and Optoelectronic Applications, edited by B. D. Weaver, M. O. Manasreh, C. C. Jagadish, and S. Zollner (Materials Research Society, 2003), pp. M9.2.1-M9.2.12.

102- D.C. Larrabee, G. A. Khodaparast, J. Kono, D.S King, S.J. Chune, S. J., M. B. Santos "Picosecond time-resolved cyclotron resonance study of InSb quantum wells in a quantizing magnetic field," High Performance Devices, Proceedings, IEEE Lester Eastman Conference on High Performance Devices **228**, 2002.

103- G. A. Khodaparast, R. E. Doezema, S.J. Chung, K.J. Goldammer, and M. B. Santos, "Spin resonance probe of zero-field spin splitting in InSb quantum wells", Proceedings of the 10th International Conference on Narrow Gap Semiconductors, 2000, ed. N. Miura, S. Yamada, and S. Takeyama (Institute of Pure and Applied Physics, Tokyo, 2001), pp. 245-247.

104- N. Dai, F. Brown, G. A. Khodaparast, R. E. Doezema, S. J. Chung, and M. B. Santos "Excitons in InSb Quantum Wells: a Multi-use Tool," Proceedings of the Fourth International Conference on Thin Film Physics & Applications, (2001).

105- S. J. Chung, N. Dai, G. A. Khodaparast, J. L. Hicks, K. J. Goldammer, F. Brown, W. K. Liu, R. E. Doezema, S. Q. Murphy, and M. B. Santos "Electronic Characterization of InSb Quantum Wells", Physica E **7**, 809 (2000).

106- N. Dai, G. A. Khodaparast, F. Brown, S. J. Chung, R. E. Doezema, K. J. Goldammer, and M. B. Santos "Determination of band offset in strained InSb/AlInSb layer" Appl. Phys. Lett. **76**, 3905 (2000).

107- K. J. Goldammer, W. K. Liu, G. A. Khodaparast, S. C. Lindstrom, M. B. Johnson, R. E. Doezema, and M. B. Santos, "Electrical Properties of InSb Quantum Wells Remotely-Doped with Si", J. Vac. Sci. Technol. B **16**, 1367 (1998).

108- N. Dai, F. Brown, P. Barsic, G. A. Khodaparast, R. E. Doezema, S. J. Chung, K. J. Goldammer, and M. B. Santos, "Observation of excitonic transition in InSb quantum wells", Appl. Phys. Lett. **73**, 1101 (1998).

109- Z. Hasan, L. Biyikli, M. J. Sellers, G. A. Khodaparast, F. S. Richardson, and J. R. Quagliano "Energy Transfer and Up Conversions in Cubic $Cs_2NaYCl_6:Er^{+3}$ and $Cs_2NaErCl_6$" , Phys. Rev. B **56**, 4518 (1997).

SELECTED INVITED LECTURES AND TALKS:

1. Invited Seminar, Rensselaer Polytechnic Institute, March 12, 2025.
2. Invited Talk, Photonics West, San Francisco, January 2025.
3. Colloquium at UMass-Lowell, December 2024.
4. Invited Seminar, University of Toronto, November 2024.
5. Invited Seminar, Cambridge, UK, August 2024.
6. Invited Seminar, Paul Scherrer Institute, August 2024.
7. Invited Talk at Gordon Godfrey Workshop, Sydney, Australia, November 2023.
8. Invited Talk at Nonlinear and Ultrafast Spectroscopy Symposium, NC, October 2023.
9. Invited Seminar, the University of Virginia, October 2023.
10. Invited Seminar, Howard University, DC, March 2023.
11. Invited Talk, Lawrence Livermore National Labs, CA, Feb. 2023.
12. Invited Talk, Photonics West, San Francisco, Jan. 2023
13. Invited Talks at Spintronics Symposium, August 2022.
14. Invited Talk, Photonics West, San Francisco, Jan. 2022.
15. Invited Colloquium, University of Central Florida, 2021
16. Invited Talk, Photonics West, San Francisco, 2020.
17. Invited Seminar, Penn State, Jan. 27th, 2020.
18. Invited Seminar, University of Oklahoma, Jan. 17th, 2020.
19. Invited Seminar, Tohoku University, Japan, January 11th, 2019.

20. Invited Seminar, University of Tokyo, Kashiwa Campus, January 8th, 2019.
21. Invite Talk, Photonics West, February 2019.
22. Invited Seminar, Univ. of Illinois Urbana-Champaign, October 2018.
23. Invited Talk, Materials Science and Engineering Conference, June 11-13, 2018, Barcelona, Spain.
24. Invited Seminar at Drexel as part of the Franklin Award Symposium, April 19th, 2018.
25. Invited Talk, European Advanced Energy Materials and Technology Congress (25 - 28 March 2018), Sweden.
26. Invited Talk, Photonics West, San Francisco, CA, January 27, 2018.
27. Colloquium at Lehigh University, April 20th, 2017.
28. The 83rd Annual Meeting of the Southeastern Section of the American Physical. Society (SESAPS), November 10-12, 2016, in Charlottesville, Virginia.
29. 11th Energy Harvesting Workshop, Alexandria, VA, Sep. 6-7, 2016.
30. SPIE-OPTICS, Spintronics Conference, San Diego, CA, August 28th, 2016.
31. Colloquium at Ecole Polytechnique, France, July 11th, 2016.
32. AFOSR PI-Meeting, Arlington, VA, May 2016.
33. Invited Seminar at the Department of Physics, Purdue University, April 22nd, 2016.
34. Physical Phenomena in High Magnetic Fields (PPHMF-8), Jan 2016.
35. Invited presentation as part of NSF/IUCRC center for Next Generation Nanomaterial and device Engineering (NGeNE), Charlottesville, UVA, October 2015.
36. Colloquium at the Department of Physics, University of Kansas, Sept. 14th, 2015.
37. SPIE-OPTICS, Spintronics Conference, San Diego, CA, Aug. 9, 2015.
38. AFOSR PI-Meeting, Arlington, VA, May 20, 2015.
39. Invited Presentation at the Magneto-Optics Workshop, Winter Park, Colorado, April 11-13, 2015.
40. Invited Seminar at the Korea University and Virginia Tech Collaboration Meeting, VA, Feb. 10, 2015.
41. Colloquium at the Department of Physics, University of Vermont, Oct. 2014.
42. Air Force Young Investigator Reunion Workshop, Arlington, VA, June 2014.
43. SPIE-OPTICS, Spintronics Conference, San Diego, CA, Aug. 2014.
44. Colloquium at the Department of Physics, James Madison University, Virginia, Feb. 2013.
45. Invited Seminar, Naval Research Laboratory, Washington DC, July 15, 2013.
46. Invited Seminar, Institute of Solid-State Physics, Univ. of Tokyo, Kashiwa, Japan. May 21st, 2012.
47. Invited Talk, SPIE-OPTICS, Spintronics, San Diego, CA, August 16th, 2012.
48. Invited Seminar, Terahertz Workshop at the Jefferson Lab, July 11, 2011.
49. Invited Seminar at the École Polytechnique, France, November 15, 2011.
50. Invited Seminar at the University of Exeter, England, November 28th, 2011.
51. Invited Seminar at the University of Surrey, England, November 30th, 2011.
52. Invited Seminar at the Imperial College, England, Dec. 1st, 2011.
53. Invited Talk, SPIE: Optics and Photonics, San Diego, August 2010.
54. Invited Talk, Photonic West Conference, San Francisco, Jan. 2010.
55. Colloquium speaker, University of Nebraska, Nov. 20th, 2008.
56. Invited speaker at the Jefferson Lab Free Electron User meetings, May 16th, 2007.
57. Invited Seminar, Physics Department, Univ. of Virginia, October 11th, 2007.
58. Invited Seminar at the Material Science Department at Virginia Tech, Dec 2006.
59. Invited Seminar at the Physics Department, The University of Florida, October 10th, 2005.
60. Invited speaker at the APS March meeting 2005.
61. Colloquium Speaker at Wayne State University, Detroit, MI, Feb. 10th, 2004.
62. Colloquium Speaker at Washington State University, Pullman, WA, Feb. 12th, 2004.

63. Colloquium Speaker at the College of William & Mary, Williamsburg, VA, Feb. 16th, 2004.
64. Colloquium Speaker at the Rensselaer Polytechnic Institute, Troy, NY, March 5th, 2004.
65. Invited speaker in the 11th Conference on Narrow Gap Semiconductors, Buffalo, NY, June 19th, 2003.
66. Colloquium Speaker at the University of Oklahoma, April 4th, 2002.
67. Colloquium Speaker at JILA, Boulder, Colorado, Jan. 28th, 2003.
68. Invited Speaker of the Optical Society of America Annual Meeting, Orlando, Florida, Oct. 3rd, 2002.