

ROLAND K. KAWAKAMI

Professional Preparation

- University of Pennsylvania, Philadelphia, PA, USA B.A. in Physics, B.S. in Elec. Eng., 1992
- University of California, Berkeley, CA, USA Ph.D. in Physics, 1999
- University of California, Santa Barbara, CA, USA Postdoctoral Research, 1999- 2002

Appointments

- Professor of Physics, The Ohio State University 2013- present
- Research Physicist, University of California, Riverside 2013- present
- Professor of Physics & Astronomy, University of California, Riverside 2011- 2013
- Associate Professor of Physics & Astronomy, University of California, Riverside 2009- 2011
- Assistant Professor of Physics at the University of California, Riverside 2002- 2009
- Postdoctoral Researcher at University of California, Santa Barbara 1999- 2002
- Thesis Research/Teaching Assistant at University of California, Berkeley 1992- 1999
- Undergraduate Researcher at University of Pennsylvania 1991- 1992

Products

Most Closely Related to Proposed Topic

1. “Giant Spin-Splitting and Gap Renormalization Driven by Trions in Single-Layer WS₂/h-BN Heterostructures,” Jyoti Katoch, Søren Ulstrup, Roland J. Koch, Simon Moser, Kathleen M. McCreary, Simranjeet Singh, Jinsong Xu, Berend T. Jonker, Roland K. Kawakami, Aaron Bostwick, Eli Rotenberg, and Chris Jozwiak, *Nature Physics* **14**, 355-359 (2018).
2. “Opto-Valleytronic Spin Injection in Monolayer MoS₂/Few-Layer Graphene Hybrid Spin Valves,” Yunqiu K. Luo, Jinsong Xu, Tiancong Zhu, Guanzhong Wu, Elizabeth J. McCormick, Mahesh R. Neupane, and Roland K. Kawakami, *Nano Lett.* **17**, 3877-3883 (2017).
3. “Imaging Spin Dynamics in Monolayer WS₂ by Time-Resolved Kerr Rotation Microscopy,” Elizabeth J. McCormick, Michael J. Newburger, Yunqiu K. Luo, Kathleen M. McCreary, Simranjeet Singh, Iwan B. Martin, Ed J. Cichewicz Jr, Berend T. Jonker, and Roland K. Kawakami, *2D Mater.* **5**, 011010 (2018).
4. Room Temperature Intrinsic Ferromagnetism in Epitaxial Manganese Selenide Films in the Monolayer Limit,” Dante J. O’Hara, Tiancong Zhu, Amanda H. Trout, Adam S. Ahmed, Yunqiu (Kelly) Luo, Choong Hee Lee, Mark R. Brenner, Siddharth Rajan, Jay A. Gupta, David W. McComb, and Roland K. Kawakami, *Nano Letters* **18**, 3125-3131 (2018).
5. “Graphene Spintronics,” Wei Han, Roland K. Kawakami, Martin Gmitra, and Jaroslav Fabian, *Nature Nano.* **9**, 794-807 (2014).

Other Significant Products

1. “Chiral Bobbers and Skyrmions in Epitaxial FeGe/Si(111) Films,” Adam S. Ahmed, James Rowland, Bryan D. Esser, Sarah Dunsiger, David W. McComb, Mohit Randeria, and Roland K. Kawakami, *Phys. Rev. Materials* **2**, 041401(R) (2018).
2. “Strong and Tunable Spin Lifetime Anisotropy in Dual-Gated Bilayer Graphene,” Jinsong Xu, Tiancong Zhu, Yunqiu K. Luo, Yuan-Ming Lu, and Roland K. Kawakami, *Phys. Rev. Lett.* **121**, 127703 (2018).
3. “Strong Modulation of Spin Currents in Bilayer Graphene by Static and Fluctuating Proximity Exchange Fields,” Simranjeet Singh, Jyoti Katoch, Tiancong Zhu, Keng-Yuan Meng, Tianyu Liu,

- Jack T. Brangham, Fengyaun Yang, Michael E. Flatté and Roland K. Kawakami, *Phys. Rev. Lett.* **118**, 187201 (2017).
4. “Spatially Resolved Electronic Properties of Single-Layer WS₂ on Transition Metal Oxides,” Søren Ulstrup, Jyoti Katoch, Roland J. Koch, Daniel Schwarz, Simranjeet Singh, Kathleen M. McCreary, Hyang Keun Yoo, Jinsong Xu, Berend T. Jonker, Roland K. Kawakami, Aaron Bostwick, Eli Rotenberg, and Chris Jozwiak, *ACS Nano* **10**, 10058-10067 (2016).
 5. “Topological Dirac Semimetal Na₃Bi Films in the Ultrathin Limit via Alternating Layer Molecular Beam Epitaxy,” Igor V. Pinchuk, Thaddeus J. Asel, Andrew Franson, Tiancong Zhu, Yuan-Ming Lu, Leonard J. Brillson, Ezekiel Johnston-Halperin, Jay A. Gupta, and Roland K. Kawakami, *APL Materials* **6**, 086103 (2018).

Synergistic Activities

1. Lead organizer of 2017 Workshop on Spins, Valleys, and Topological States in 2D and Layered Materials, Columbus OH. This five day workshop had 21 invited speakers, a tutorial session for students, and was attended by ~150 participants. 50% of the participant were students from various campuses.
2. Summer Lab Experience for High School Teachers (Dave Susaras, Trey Petruzillo, Dolumar Bergen, Alan Pennington, Brent Haloviak)
3. Summer Internships for High School Students (Maddie DeVoe, Alexandra Paramo, Laurel Fisher, Samuel Chang, Melanie Dirks, Jacob Destefano, Alexander Speirs, Kyle Leverett, Serena Master, Alice Nguyen)
4. Development and updating of Special Topics graduate course “Introduction to Spintronics and Nanoscale Magnetism”, taught biannually.
5. General program chair for the 2014 Physics and Chemistry of Surfaces and Interfaces (PCSI) conference.