

Curriculum Vitae – Prof. Michael N. Leuenberger

Professional Preparation

Undergraduate Institution

University of Basel, Switzerland *Theoretical Physics* BS – 1996

Graduate Institutions

University of Basel, Switzerland *Theoretical Physics* MS – 1998

University of Basel, Switzerland *Theoretical Condensed Matter Physics* PhD – 2002

Appointments

University of Central Florida

August 2017 – Current

Professor of Theoretical Condensed Matter Physics

at the NanoScience Technology Center (NSTC), Dept. of Physics, and College of Optics and Photonics

University of Central Florida

August 2011 – July 2017

Associate Professor of Theoretical Condensed Matter Physics

at NSTC, Dept. of Physics, and College of Optics and Photonics

University of Central Florida

August 2005 – August 2011

Assistant Professor of Theoretical Condensed Matter Physics

at NSTC and Dept. of Physics

University of California San Diego

August 2004 – July 2005

Postdoctoral researcher in the group of Prof. Dr. Lu J. Sham

University of Iowa

November 2002 – July 2004

Postdoctoral researcher in the group of Prof. Dr. Michael E. Flatte

University of Basel, Switzerland

May 2002 – October 2002

Postdoctoral researcher in the group of Prof. Dr. Daniel Loss

Selected Publications

Five products most current

1. Jayden Craft, Muhammad Waqas Shabbir, Dirk R. Englund, Richard M. Osgood III, and Michael N. Leuenberger, *Spectrally Selective Thermal Emission from Graphene Decorated with Metallic Nanoparticles*, J. Phys. Chem. C **127**, 8186 (2023). PMID: N/A
2. Muhammad Waqas Shabbir, Michael N. Leuenberger, *Theoretical Model of a Plasmonically Enhanced Tunable Spectrally Selective Infrared Photodetector Based on Intercalation-Doped Nanopatterned Multilayer Graphene*, ACS Nano **16**, 5529 (2022). PMID: 35316039.
3. Alireza Safaei, Sayan Chandra, Muhammad Waqas Shabbir, Michael N. Leuenberger, Debashis Chanda, *Dirac plasmon-assisted asymmetric hot carrier generation for room-temperature infrared detection*, Nature Comm. **10**, 3498 (2019). PMID: 31375687; PMCID: PMC6677812.
4. Mahtab A. Khan, Michael N. Leuenberger, *First-principles study of the electronic and optical properties of H_{0W} impurities in tungsten disulfide*, Scientific Reports **12**, 11437 (2022). PMID: 35794152; PMCID: PMC9259704.
5. Mahtab A. Khan, Michael N. Leuenberger, *Ab initio calculations for electronic and optical properties of Er_W defects in single-layer tungsten disulfide*, J. Appl. Phys. **130**, 115104 (2021). PMID: 24313031.

Five other significant products

1. Mahtab A. Khan, Michael N. Leuenberger, *Room-temperature superparamagnetism due to giant magnetic anisotropy in MoS₂ defected single-layer MoS₂*, J. Phys.: Condens. Matter **30**, 155802 (2018). PMID: 29465042.
2. Mahtab A. Khan, Mikhail Erementchouk, Joshua Hendrickson, Michael N. Leuenberger, *Electronic and optical properties of vacancy defects in single-layer transition metal dichalcogenides*, Phys. Rev. B **95**, 245435 (2017). PMID: 29465042.
3. M. N. Leuenberger, M. E. Flatté, D. D. Awschalom, *Teleportation of electronic many-qubit states via single photons*, Phys. Rev. Lett. **94**, 107401 (2005). PMID: 15783519.
4. M. N. Leuenberger, D. Loss, M. Poggio, D. D. Awschalom, *Quantum information processing with large nuclear spins in GaAs semiconductors*, Phys. Rev. Lett. **89**, 207601 (2002). PMID: 12443506.
5. M. N. Leuenberger, D. Loss, *Quantum Computing in Molecular Magnets*, Nature **410**, 789-793 (2001). PMID: 11298441.

Graduate Teaching Experience

Spring 2023	PHY6624 Quantum Mechanics II
Fall 2022	PHY5606 Quantum Mechanics I and PHZ6426 Condensed Matter Physics I
Fall 2021	PHY2048C Honors General Physics using Calculus I
Spring 2021	PHY2048C Honors General Physics using Calculus I
Fall 2020	PHY2048C Honors General Physics using Calculus I
Spring 2020	PHZ6428 Condensed Matter Physics II
Fall 2019	PHZ6426 Condensed Matter Physics I
Fall 2018	PHY5346 Electrodynamics I
Spring 2018	PHZ6428 Condensed Matter Physics II
Fall 2017	PHZ6426 Condensed Matter Physics I
Spring 2017	PHZ6428 Condensed Matter Physics II

Graduate Students Mentored

Chair of thesis/dissertation committees (all PhD in Physics):

Jayden Craft (PhD), Muhammad Waqas Shabbir (PhD in 2021), Alireza Safaei (PhD in 2019), Mahtab Khan (PhD in 2018), Hari P. Paudel (PhD in 2014).

Member of thesis/dissertation committees (all PhD in Physics):

Tianyi Guo, Suman Mandal, Ruqayyah Shouk (PhD in 2022), Molla Manjurul Islam (PhD in 2022), Sayandip Dhara (PhD in 2022).

Total number of graduate students mentored in thesis/dissertation committees:

18

Synergistic Activities

03-05/2006	Visiting professor, Kavli Institute of Theoretical Physics (UCSB).
05-08/2016	Air Force Research Lab Summer Faculty Fellowship
05-08/2021	Air Force Research Lab Summer Faculty Fellowship
05-08/2022	ONR Summer Faculty Fellowship
03/2022-current	ORISE Faculty Research Fellowship