

Stanford



Michael Schueler

Postdoctoral Research Fellow, Photon Science, SLAC

Bio

BIO

I received my doctoral title from the Martin-Luther University Halle-Wittenberg (Germany) in December 2016 and joined the group of Prof. Philipp Werner at the University of Fribourg (Switzerland) shortly after. After receiving a Feodor-Lynen fellowship from the Alexander-von-Humboldt Foundation, I joined Prof. Thomas Devereaux's group at Stanford University in February 2019, where I am currently conducting independent research.

HONORS AND AWARDS

- Ambizione Grant, Swiss National Science Foundation (August 2020)
- Feodor Lynen postdoctoral fellowship, Alexander-von-Humboldt foundation (2017)
- Luther Award for outstanding PhD thesis, Martin-Luther University Halle-Wittenberg (2016)
- Anton-Wilhelm-Amo Award (outstanding master thesis), Martin-Luther-University Halle-Wittenberg (2014)
- Scholarship by federal state Sachsen-Anhalt, Government of Sachsen-Anhalt (Germany) (2010-2012)
- Gustav-Mie Award for an outstanding Bachelor's degree, Martin-Luther-University Halle-Wittenberg (2010)

PROFESSIONAL EDUCATION

- Master of Science, MartinLutherUniversitat (2010)
- Bachelor of Science, MartinLutherUniversitat (2010)
- Doctor of Science, MartinLutherUniversitat (2016)

Research & Scholarship

PROJECTS

- Chiral light shows Berry curvature in 2D materials - Stanford University
- Topological states caught in the act - Stanford University

Publications

PUBLICATIONS

- **Spectral properties and enhanced superconductivity in renormalized Migdal-Eliashberg theory** *PHYSICAL REVIEW B*
Nosarzewski, B., Schuler, M., Devereaux, T. P.
2021; 103 (2)
- **Correlation-Assisted Quantized Charge Pumping** *Physical Review B*
Marks, J., Schüler, M., Budich, J. C., Devereaux, T. P.

2021; 103 (3): 035112

- **Gauge invariance of light-matter interactions in first-principle tight-binding models** *Physical Review B*
Schuler, M., Marks, J. A., Murakami, Y., Jia, C., Devereaux, T. P.
2021; 103 (15)
- **Dynamical signatures of symmetry protected topology following symmetry breaking** *ArXiv*
Marks, J. A., Schuler, M., Devereaux, T. P.
2021
- **NESSi: The Non-Equilibrium Systems Simulation package** *COMPUTER PHYSICS COMMUNICATIONS*
Schuler, M., Golez, D., Murakami, Y., Bittner, N., Herrmann, A., Strand, H. R., Werner, P., Eckstein, M.
2020; 257
- **Revealing Hidden Orbital Pseudospin Texture with Time-Reversal Dichroism in Photoelectron Angular Distributions** *PHYSICAL REVIEW LETTERS*
Beaulieu, S., Schusser, J., Dong, S., Schuler, M., Pincelli, T., Dendzik, M., Maklar, J., Neef, A., Ebert, H., Hricovini, K., Wolf, M., Braun, J., Rettig, et al
2020; 125 (21): 216404
- **How Circular Dichroism in Time- and Angle-Resolved Photoemission Can Be Used to Spectroscopically Detect Transient Topological States in Graphene** *PHYSICAL REVIEW X*
Schuler, M., De Giovannini, U., Huebener, H., Rubio, A., Sentef, M. A., Devereaux, T. P., Werner, P.
2020; 10 (4)
- **High-harmonic generation in spin-orbit coupled systems** *PHYSICAL REVIEW B*
Lysne, M., Murakami, Y., Schuler, M., Werner, P.
2020; 102 (8)
- **Local Berry curvature signatures in dichroic angle-resolved photoelectron spectroscopy from two-dimensional materials** *SCIENCE ADVANCES*
Schueler, M., De Giovannini, U., Huebener, H., Rubio, A., Sentef, M. A., Werner, P.
2020; 6 (9): eaay2730
- **Ultrafast nonequilibrium evolution of excitonic modes in semiconductors** *PHYSICAL REVIEW B*
Murakami, Y., Schueler, M., Takayoshi, S., Werner, P.
2020; 101 (3)
- **Quench dynamics and Hall response of interacting Chern insulators** *PHYSICAL REVIEW B*
Schueler, M., Budich, J., Werner, P.
2019; 100 (4)
- **Adiabatic Preparation of a Correlated Symmetry-Broken Initial State with the Generalized Kadanoff-Baym Ansatz** *PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS*
Tuovinen, R., Golez, D., Schuler, M., Werner, P., Eckstein, M., Sentef, M. A.
2019; 256 (7)
- **Truncating the memory time in nonequilibrium dynamical mean field theory calculations** *PHYSICAL REVIEW B*
Schueler, M., Eckstein, M., Werner, P.
2018; 97 (24)
- **Nonthermal switching of charge order: Dynamical slowing down and optimal control** *PHYSICAL REVIEW B*
Schuler, M., Murakami, Y., Werner, P.
2018; 97 (15)
- **Spectral properties from Matsubara Green's function approach: Application to molecules** *PHYSICAL REVIEW B*
Schuler, M., Pavlyukh, Y.
2018; 97 (11)
- **Tracing the nonequilibrium topological state of Chern insulators** *PHYSICAL REVIEW B*
Schuler, M., Werner, P.
2017; 96 (15)
- **Many-body localization phase in a spin-driven chiral multiferroic chain** *PHYSICAL REVIEW B*

- Stagraczynski, S., Chotorlishvili, L., Schueler, M., Mierzejewski, M., Berakdar, J.
2017; 96 (5)
- **Functionalizing Fe adatoms on Cu(001) as a nanoelectromechanical system** *NEW JOURNAL OF PHYSICS*
Schueler, M., Chotorlishvili, L., Melz, M., Saletsky, A., Klavysyuk, A., Toklikishvili, Z., Berakdar, J.
2017; 19
 - **Entanglement dynamics of two nitrogen vacancy centers coupled by a nanomechanical resonator** *JOURNAL OF PHYSICS B-ATOMIC MOLECULAR AND OPTICAL PHYSICS*
Toklikishvili, Z., Chotorlishvili, L., Mishra, S. K., Stagraczynski, S., Schueler, M., Rau, A. P., Berakdar, J.
2017; 50 (5)
 - **Energy-loss spectroscopy of C-60 fullerenes with twisted electrons: Influence of orbital-angular-momentum transfer on plasmon generation** *PHYSICAL REVIEW A*
Schueler, M., Berakdar, J.
2016; 94 (5)
 - **Femtosecond dynamics of correlated many-body states in C-60 fullerenes** *NEW JOURNAL OF PHYSICS*
Usenko, S., Schuler, M., Azima, A., Jakob, M., Lazzarino, L. L., Pavlyukh, Y., Przystawik, A., Drescher, M., Laarmann, T., Berakdar, J.
2016; 18
 - **Superadiabatic quantum heat engine with a multiferroic working medium** *PHYSICAL REVIEW E*
Chotorlishvili, L., Azimi, M., Stagraczynski, S., Toklikishvili, Z., Schueler, M., Berakdar, J.
2016; 94 (3): 032116
 - **Electron pair escape from fullerene cage via collective modes** *SCIENTIFIC REPORTS*
Schueler, M., Pavlyukh, Y., Bolognesi, P., Avaldi, L., Berakdar, J.
2016; 6: 24396
 - **Time-dependent many-body treatment of electron-boson dynamics: Application to plasmon-accompanied photoemission** *PHYSICAL REVIEW B*
Schueler, M., Berakdar, J., Pavlyukh, Y.
2016; 93 (5)
 - **Second-order bosonic Kadanoff-Baym equations for plasmon-accompanied optical absorption**
Schueler, M., Pavlyukh, Y., IOP
IOP PUBLISHING LTD.2016
 - **Disentangling multipole contributions to collective excitations in fullerenes** *PHYSICAL REVIEW A*
Schueler, M., Berakdar, J., Pavlyukh, Y.
2015; 92 (2)
 - **Single-or double-electron emission within the Keldysh nonequilibrium Green's function and Feshbach projection operator techniques** *PHYSICAL REVIEW B*
Pavlyukh, Y., Schueler, M., Berakdar, J.
2015; 91 (15)
 - **Nuclear-wave-packet dynamics mapped out by two-center interference in the HeH₂⁺ molecule** *PHYSICAL REVIEW A*
Schueler, M., Pavlyukh, Y., Berakdar, J.
2014; 89 (6)
 - **Generation and coherent control of pure spin currents via terahertz pulses** *APPLIED PHYSICS LETTERS*
Schueler, M., Berakdar, J.
2014; 104 (16)
 - **(e,2e) and (gamma,2e) experiments on C-60**
Bolognesi, P., Pavlyukh, Y., Schueler, M., Berakdar, J., Avaldi, L., IOP
IOP PUBLISHING LTD.2014
 - **Local Ionization Dynamics Traced by Photoassisted Scanning Tunneling Microscopy: A Theoretical Approach** *JOURNAL OF PHYSICAL CHEMISTRY LETTERS*
Schueler, M., Pavlyukh, Y., Berakdar, J.

2013; 4 (7): 1131–35

- **A theoretical analysis of the spin dynamics of magnetic adatoms traced by time-resolved scanning tunneling spectroscopy** *NEW JOURNAL OF PHYSICS*
Schueler, M., Pavlyukh, Y., Berakdar, J.
2012; 14
- **Ultrafast control of inelastic tunneling in a double semiconductor quantum well** *APPLIED PHYSICS LETTERS*
Schueler, M., Pavlyukh, Y., Berakdar, J.
2010; 97 (17)