

Vladislav Pokorný

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Scientific identifiers:

- ResearcherID: G-5750-2014 • ORCID: 0000-0002-8944-6417
- Google Scholar: scholar.google.com/citations?user=hsOQvEYAAAAJ

Research interests:

- **Nanoscopic superconductivity** - Nanoscopic systems consisting of a set of active elements (magnetic molecules, quantum dots, semiconducting nanowires) connected to superconducting electrodes. Methods: Green function techniques, exactly solvable effective models, quantum Monte Carlo.
- **Strongly correlated electrons** - Strongly correlated materials with strong effects of spin-orbit coupling. Methods: density functional theory, Wannier functions, dynamical mean-field theory, quantum Monte Carlo.
- **Molecular electronics** - Charge transport and magnetic properties of molecular junctions. Methods: density functional theory, non-equilibrium Green functions.

Scientific career:

- **since 2020** - researcher
FZU - Institute of Physics, Czech Academy of Sciences, Prague
- **2017 - 2019** - postdoctoral researcher - group of Dr. Richard Korytár
Faculty of Mathematics and Physics, Charles University, Prague
- **2016 - 2017** - research assistant - group of prof. Václav Janiš
FZU - Institute of Physics, Czech Academy of Sciences, Prague
- **2014 - 2016** - postdoctoral researcher - group of prof. Dieter Vollhardt
Center for Electronic Correlations and Magnetism, University of Augsburg, Germany
- **2008 - 2013** - Ph.D. student - group of prof. Václav Janiš
FZU - Institute of Physics, Czech Academy of Sciences, Prague

Education:

- **2008 - 2013** - Ph.D. degree (Theoretical physics)
Faculty of Mathematics and Physics, Charles University, Prague
- **2003 - 2008** - Mgr. (M.Sc. equiv.) degree (General and mathematical physics)
Faculty of Science, P. J. Šafárik University in Košice, Slovakia

Scientific output:

- Web of Science: 31 publications, 381 citations, H-index: 12 (Jan 2025)
- Google Scholar: 539 citations, H-index: 14 (Jan 2025)
- 43 unique coauthors

Teaching experience:

- **2008 - 2012** - teaching assistant - Thermodynamics and statistical physics I and II
Faculty of Mathematics and Physics, Charles University, Prague
- **since 2024** - lecturer - Computational condensed matter theory
Faculty of Mathematics and Physics, Charles University, Prague

Invited lectures:

- *“Engineering quantum states in radical molecules on superconducting surfaces”*
10th International Conference on Materials Science and Condensed Matter Physics,
Oct 1 - 4 2024, Chişinău, Moldova
- *“Evolution of Andreev bands in superconducting periodic Anderson model”*
Superconducting Hybrids @ Extreme, Jun 28 - Jul 1 2021, Štrbské pleso, Slovakia
- *“Self-consistent calculations of transport properties of molecular junctions”*
Symposium Molecular Electronics, Jul 18 - 20 2018, Regensburg, Germany
- *“Correlation effects in superconducting quantum dot systems”*
1st Joint Czech-Israeli Workshop: Strong Electron Correlations in Nano-materials for
Advanced Energy Applications, Nov 28 - Dec 1 2016, Prague, Czech Republic