

# Kai Rossnagel

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/51320/publications.pdf>

Version: 2024-02-01

128  
papers

5,480  
citations

71102

41  
h-index

85541

71  
g-index

131  
all docs

131  
docs citations

131  
times ranked

5745  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the origin of charge-density waves in select layered transition-metal dichalcogenides. Journal of Physics Condensed Matter, 2011, 23, 213001.	1.8	509
2	Collapse of long-range charge order tracked by time-resolved photoemission at high momenta. Nature, 2011, 471, 490-493.	27.8	406
3	Time-domain classification of charge-density-wave insulators. Nature Communications, 2012, 3, 1069.	12.8	263
4	Fermi Surface and Quasiparticle Dynamics of $\text{Na}_0.7\text{CoO}_2$ Investigated by Angle-Resolved Photoemission Spectroscopy. Physical Review Letters, 2004, 92, 246402.	7.8	214
5	Non-thermal separation of electronic and structural orders in a persisting charge density wave. Nature Materials, 2014, 13, 857-861.	27.5	181
6	Charge-density-wave phase transition in $1\text{T}\bar{\text{a}}\text{TiSe}_2$ : Excitonic insulator versus band-type Jahn-Teller mechanism. Physical Review B, 2002, 65, .	3.2	162
7	Ultrafast Melting of a Charge-Density Wave in the Mott Insulator $\text{TaS}_2$ . Physical Review Letters, 2010, 105, 187401.	7.8	151
8	Quantum phase transition from triangular to stripe charge order in $\text{NbSe}_2$ . Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 1623-1627.	7.1	145
9	Surface states and Rashba-type spin polarization in antiferromagnetic $\text{MnBi}$ . Physical Review B, 2019, 100, .	3.2	132
10	Vacuum space-charge effects in solid-state photoemission. Physical Review B, 2009, 79, .	3.2	112
11	Phase ordering of charge density waves traced by ultrafast low-energy electron diffraction. Nature Physics, 2018, 14, 184-190.	16.7	110
12	Gaps and kinks in the electronic structure of the superconductor $\text{NbSe}_2$ from angle-resolved photoemission at 1 K. Physical Review B, 2012, 85, .	3.2	109
13	Indium $7\bar{\text{A}}-3\text{on Si}(111)$ : A Nearly Free Electron Metal in Two Dimensions. Physical Review Letters, 2003, 91, 246404.	7.8	107
14	Fermi surface of $2\text{H}\bar{\text{a}}\text{NbSe}_2$ and its implications on the charge-density-wave mechanism. Physical Review B, 2001, 64, .	3.2	99
15	Spin-orbit coupling in the band structure of reconstructed $1\text{T}\bar{\text{a}}\text{TaS}_2$ . Physical Review B, 2006, 73, .	3.2	99
16	Time- and angle-resolved photoemission spectroscopy with optimized high-harmonic pulses using frequency-doubled Ti:Sapphire lasers. Journal of Electron Spectroscopy and Related Phenomena, 2014, 195, 231-236.	1.7	95
17	Electronic Quasiparticle Renormalization on the Spin Wave Energy Scale. Physical Review Letters, 2004, 92, 097205.	7.8	80
18	Ultrafast Doublon Dynamics in Photoexcited $\text{TaS}_2$ . Physical Review Letters, 2018, 120, 166401.	7.8	76

#	ARTICLE	IF	CITATIONS
19	Direct Comparison between Potential Landscape and Local Density of States in a Disordered Two-Dimensional Electron System. <i>Physical Review Letters</i> , 2002, 89, 136806.	7.8	72
20	Collapse of layer dimerization in the photo-induced hidden state of 1T-TaS <sub>2</sub> . <i>Nature Communications</i> , 2020, 11, 1247.	12.8	72
21	Time- and momentum-resolved photoemission studies using time-of-flight momentum microscopy at a free-electron laser. <i>Review of Scientific Instruments</i> , 2020, 91, 013109.	1.3	72
22	Ultrafast Metamorphosis of a Complex Charge-Density Wave. <i>Physical Review Letters</i> , 2016, 116, 016402.	7.8	70
23	Time-resolved x-ray photoelectron spectroscopy at FLASH. <i>New Journal of Physics</i> , 2012, 14, 013062.	2.9	69
24	Reversible coordination-induced spin-state switching in complexes on metal surfaces. <i>Nature Nanotechnology</i> , 2020, 15, 18-21.	31.5	64
25	Fermi surface, charge-density-wave gap, and kinks in 2H-TaSe <sub>2</sub> . <i>Physical Review B</i> , 2005, 72, .	3.2	59
26	Vacuum space charge effect in laser-based solid-state photoemission spectroscopy. <i>Journal of Applied Physics</i> , 2010, 107, .	2.5	57
27	Ultrafast Modulation of the Chemical Potential in $\text{BaFe}_2\text{As}_2$ Coherent Phonons. <i>Physical Review Letters</i> , 2014, 112, .	7.8	56
28	Hard x-ray photoelectron spectroscopy: a snapshot of the state-of-the-art in 2020. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 233001.	1.8	55
29	How fast can a Peierls-Mott insulator be melted?. <i>Faraday Discussions</i> , 2014, 171, 243-257.	3.2	53
30	Time-resolved HAXPES at SACLA: probe and pump pulse-induced space-charge effects. <i>New Journal of Physics</i> , 2014, 16, 123045.	2.9	51
31	Iron(II) Spin-Crossover Complexes in Ultrathin Films: Electronic Structure and Spin-State Switching by Visible and Vacuum-UV Light. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 3019-3023.	13.8	50
32	Self-amplified photo-induced gap quenching in a correlated electron material. <i>Nature Communications</i> , 2016, 7, 12902.	12.8	50
33	Time-resolved ARPES with sub-15 fs temporal and near Fourier-limited spectral resolution. <i>Review of Scientific Instruments</i> , 2016, 87, 103102.	1.3	48
34	Suppression of the Charge Density Wave State in Two-Dimensional $1\text{T-TaSe}_2$ by Atmospheric Oxidation. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 8981-8985.	13.8	48
35	Ultrafast Formation of a Fermi-Dirac Distributed Electron Gas. <i>Physical Review Letters</i> , 2018, 121, 256401.	7.8	46
36	Orbital- and $k_z$ -Selective Hybridization of Se $4p$ and Ti $3d$ States	7.8	46

#	ARTICLE	IF	CITATIONS
37	Electron states and the spin density wave phase diagram in Cr(1 $\times$ 1 $\times$ 0) films. New Journal of Physics, 2005, 7, 114-114.	2.9	45
38	Suppression and emergence of charge-density waves at the surfaces of layered 1T-TiSe <sub>2</sub> and 1T-TaS <sub>2</sub> by in situ Rb deposition. New Journal of Physics, 2010, 12, 125018.	2.9	45
39	Quasi-one-dimensional metallic band dispersion in the commensurate charge density wave of $\text{TaTe}_2$ . Physical Review B, 2017, 96, .	3.2	45
40	Photoinduced Enhancement of the Charge Density Wave Amplitude. Physical Review Letters, 2016, 117, 056401.	7.8	44
41	Ultrafast electron calorimetry uncovers a new long-lived metastable state in 1 $\times$ 2 $\times$ TaSe <sub>2</sub> mediated by mode-selective electron-phonon coupling. Science Advances, 2019, 5, eaav4449.	10.3	43
42	Survival of Floquet Bloch States in the Presence of Scattering. Nano Letters, 2021, 21, 5028-5035.	9.1	41
43	Angle-resolved photoemission spectroscopy of Sr <sub>2</sub> CuO <sub>2</sub> Cl <sub>2</sub> . Physical Review B, 2000, 63, .	3.2	40
44	Hot electron cooling in graphite: Supercollision versus hot phonon decay. Physical Review B, 2015, 92, .	3.2	38
45	Momentum-resolved hot electron dynamics at the $\text{TaTe}_2$ surface. Physical Review B, 2016, 94, .	3.2	38
46	Pump laser-induced space-charge effects in HHG-driven time- and angle-resolved photoelectron spectroscopy. Journal of Applied Physics, 2016, 119, .	2.5	36
47	Yu-Shiba-Rusinov States in the Charge-Density Modulated Superconductor NbSe <sub>2</sub> . Nano Letters, 2020, 20, 339-344.	9.1	36
48	How to Determine Fermi Vectors by Angle-Resolved Photoemission. Physical Review Letters, 1999, 83, 5551-5554.	7.8	35
49	Light-Induced Spin Crossover in an Fe(II) Low-Spin Complex Enabled by Surface Adsorption. Journal of Physical Chemistry Letters, 2018, 9, 1491-1496.	4.6	35
50	Three-dimensional Fermi surface determination by angle-resolved photoelectron spectroscopy. Physical Review B, 2001, 63, .	3.2	34
51	Coherent modulation of the electron temperature and electron-phonon couplings in a 2D material. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 8788-8793.	7.1	34
52	Influence of Substrate Electronic Properties on the Integrity and Functionality of an Adsorbed Fe(II) Spin-Crossover Compound. Journal of Physical Chemistry C, 2019, 123, 17774-17780.	3.1	31
53	Determination of the Hole Lifetime from Photoemission: $\text{Ti}3d$ States in $\text{TiTe}_2$ . Physical Review Letters, 2007, 98, 217604.	7.8	28
54	van der Waals driven anharmonic melting of the 3D charge density wave in VSe <sub>2</sub> . Nature Communications, 2021, 12, 598.	12.8	28

#	ARTICLE	IF	CITATIONS
55	Stabilization of the Misfit Layer Compound $PbS_{1-x}Tl_x$ by Overlocking of the $Tl$ Sites. Physical Review Letters, 2008, 100, 065502.	7.8	27
56	Fermi-Surface Topology and Helical Antiferromagnetism in Heavy Lanthanide Metals. Physical Review Letters, 2010, 104, 246401.	7.8	27
57	80% Valley Polarization of Free Carriers in Singly Oriented Single-Layer $WS_2$ on Au(111). Physical Review Letters, 2019, 123, 236802.	7.8	27
58	Vacuum space-charge effects in nano-ARPES. Physical Review B, 2012, 85, .	3.2	26
59	Enhanced ultrafast relaxation rate in the Weyl semimetal phase of $MoTe_2$ measured by time- and angle-resolved photoelectron spectroscopy. Physical Review B, 2017, 96, .	3.2	26
60	High-accuracy bulk electronic bandmapping with eliminated diffraction effects using hard X-ray photoelectron momentum microscopy. Communications Physics, 2019, 2, .	5.3	26
61	Spin-orbit splitting, Fermi surface topology, and charge-density-wave gapping in $2H-TaSe_2$ . Physical Review B, 2007, 76, .	3.2	25
62	Continuous Tuning of Electronic Correlations by Alkali Adsorption on Layered $1T-TaS_2$ . Physical Review Letters, 2005, 95, 126403.	7.8	24
63	Electronic band structure and Fermi surface of ferromagnetic Tb: Experiment and theory. Physical Review B, 2007, 76, .	3.2	23
64	Focusing light with a reflection photon sieve. Optics Letters, 2011, 36, 2405.	3.3	23
65	A high performance angle-resolving electron spectrometer. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2001, 467-468, 1485-1488.	1.6	21
66	Time-resolved HAXPES using a microfocused XFEL beam: From vacuum space-charge effects to intrinsic charge-carrier recombination dynamics. Scientific Reports, 2016, 6, 35087.	3.3	21
67	Tuning Dimensionality by Nanowire Adsorption on Layered Materials. Physical Review Letters, 2001, 86, 1303-1306.	7.8	20
68	Structural dynamics of incommensurate charge-density waves tracked by ultrafast low-energy electron diffraction. Structural Dynamics, 2020, 7, 034304.	2.3	20
69	Momentum-space signatures of Berry flux monopoles in the Weyl semimetal TaAs. Nature Communications, 2021, 12, 3650.	12.8	20
70	Quantum spins and hybridization in artificially-constructed chains of magnetic adatoms on a superconductor. Nature Communications, 2022, 13, 2160.	12.8	20
71	Suppression of the vacuum space-charge effect in fs-photoemission by a retarding electrostatic front lens. Review of Scientific Instruments, 2021, 92, 053703.	1.3	17
72	Photoswitching of azobenzene multilayers on a layered semiconductor. Applied Physics Letters, 2010, 97, 063112.	3.3	16

#	ARTICLE	IF	CITATIONS
73	Electronic structure, adsorption geometry, and photoswitchability of azobenzene layers adsorbed on layered crystals. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 20272.	2.8	15
74	Surface structure and stacking of the commensurate $(13\text{\AA}-13)\text{R}13.9\text{\AA}$ charge density wave phase of $1\text{T}\hat{\nu}\text{-TaS}_2(0001)$ . <i>Physical Review B</i> , 2019, 100, .	3.2	14
75	Electronic band structure of gallium nitride: a comparative angle-resolved photoemission study of single crystals and thin films. <i>Surface Science</i> , 2002, 507-510, 223-228.	1.9	13
76	<i>In situ</i> hard x-ray photoemission spectroscopy of barrier-height control at metal/PMN-PT interfaces. <i>Physical Review B</i> , 2016, 93, .	3.2	13
77	Structural involvement in the melting of the charge density wave in $\text{T} < \text{TiSe}_2 >$ . <i>Physical Review Research</i> , 2021, 3, .	3.6	13
78	Ultrafast electronic linewidth broadening in the C $1\text{s}$ core level of graphene. <i>Physical Review B</i> , 2021, 104, .	3.2	13
79	Bypassing the Structural Bottleneck in the Ultrafast Melting of Electronic Order. <i>Physical Review Letters</i> , 2020, 125, 266402.	7.8	12
80	Real-space anisotropy of the superconducting gap in the charge-density wave material $2\text{H-NbSe}_2$ . <i>Npj Quantum Materials</i> , 2022, 7, .	5.2	11
81	Influence of Ring Contraction on the Electronic Structure of Nickel Tetrapyrrole Complexes: Corrole vs Porphyrin. <i>ECS Journal of Solid State Science and Technology</i> , 2020, 9, 061005.	1.8	10
82	Charting the Exciton-Polariton Landscape of $\text{WSe}_2$ Thin Flakes by Cathodoluminescence Spectroscopy. <i>Advanced Photonics Research</i> , 2022, 3, 2100124.	3.6	10
83	Does the excitation wavelength affect the ultrafast quenching dynamics of the charge-density wave in $1\text{T-TiSe}_2$ ?. <i>Journal of Electron Spectroscopy and Related Phenomena</i> , 2014, 195, 244-248.	1.7	9
84	Electronic structure and ultrafast dynamics of $\text{FeAs}_2$ -based superconductors by angle- and time-resolved photoemission spectroscopy. <i>Physica Status Solidi (B): Basic Research</i> , 2017, 254, 1600382.	1.5	9
85	Transient three-dimensional structural dynamics in $\text{T} < \text{TiSe}_2 >$ . <i>Physical Review B</i> , 2020, 101, .	3.2	9
86	Correlation between electronic and structural orders in $\text{T} < \text{TiSe}_2 >$ . <i>Physical Review Research</i> , 2021, 3, .	3.6	9
87	Non-local effect of impurity states on the exchange coupling mechanism in magnetic topological insulators. <i>Npj Quantum Materials</i> , 2020, 5, .	5.2	8
88	Doublon bottleneck in the ultrafast relaxation dynamics of hot electrons in $1\text{T}\hat{\nu}\text{-TaS}_2$ . <i>Physical Review Research</i> , 2020, 2, .	3.6	8
89	Tracking the relaxation pathway of photo-excited electrons in $1\text{T-TiSe}_2$ . <i>European Physical Journal: Special Topics</i> , 2013, 222, 997-1004.	2.6	7
90	Electron Dynamics Probed by Time-Resolved Hard X-ray Photoelectron Spectroscopy. <i>Transactions of the Materials Research Society of Japan</i> , 2014, 39, 469-473.	0.2	7

#	ARTICLE	IF	CITATIONS
91	Excitation and Relaxation Dynamics of the Photo-Perturbed Correlated Electron System 1T-TaS <sub>2</sub> . Applied Sciences (Switzerland), 2019, 9, 44.	2.5	7
92	Magnetic order and surface state gap in (Sb <sub>0.95</sub> Cr <sub>0.05</sub> ) <sub>2</sub> Te <sub>3</sub> . Physical Review B, 2021, 103, .	3.2	7
93	Hidden bulk and surface effects in the spin polarization of the nodal-line semimetal ZrSiTe. Communications Physics, 2021, 4, .	5.3	7
94	Creation of a novel inverted charge density wave state. Structural Dynamics, 2022, 9, 014501.	2.3	7
95	Tailoring the Band Structure of Plexcitonic Crystals by Strong Coupling. ACS Photonics, 2022, 9, 2473-2482.	6.6	7
96	Laterally confined metal-to-insulator and quasi-two-dimensional to two-dimensional transition by focused Rb intercalation of 1T-TaS <sub>2</sub> . Physical Review B, 2011, 84, .	3.2	6
97	Soft x-ray imaging spectroscopy with micrometer resolution. Optica, 2021, 8, 156.	9.3	6
98	Publisher's Note: Vacuum space-charge effects in solid-state photoemission [Phys. Rev. B <b>79</b> , 035402 (2009)]. Physical Review B, 2009, 79, .	3.2	5
99	Attractive Coulomb interaction, temperature-dependent hybridization, and natural circular dichroism in $\text{TiSe}_2$ . Physical Review B, 2020, 102, .	3.2	5
100	Ultrafast spot-profile LEED of a charge-density wave phase transition. Applied Physics Letters, 2021, 118, 221603.	3.3	5
101	Experimental evidence for a metastable state in FeTe <sub>1-x</sub> Se <sub>x</sub> following coherent-phonon excitation. Journal of Electron Spectroscopy and Related Phenomena, 2021, 250, 147085.	1.7	5
102	Crystal structure of 1,4-bis(dimethoxy-4-iodophenyl)quaterphenylene. Materials Letters, 2009, 63, 2399-2401.	1.4	4
103	Surface photovoltage effect at the $\text{p-WSe}_2$ surface: Photoemission experiment and numerical model. Physical Review B, 2011, 83, .	3.2	4
104	Shooting Electronic Structure Movies with Time-resolved Photoemission. Synchrotron Radiation News, 2012, 25, 12-18.	0.8	4
105	A direct view onto the carrier dynamics in graphite at the H point. EPJ Web of Conferences, 2013, 41, 04022.	0.3	4
106	Direct time-domain determination of electron-phonon coupling strengths in chromium. Physical Review B, 2020, 102, .	3.2	4
107	Interaction of excitons with Cherenkov radiation in $\text{WSe}_2$ beyond the non-recoil approximation. Journal Physics D: Applied Physics, 2022, 55, 145101.	2.8	4
108	Time-domain evidence for an excitonic insulator. EPJ Web of Conferences, 2013, 41, 03022.	0.3	3



#	ARTICLE	IF	CITATIONS
109	Accessing and probing of the photo-induced hidden state in $1T\text{-TaS}_2$ with time- and angle-resolved photoemission spectroscopy. Proceedings of SPIE, 2016, , .	0.8	3
110	Probing the Spin State of Spin-Crossover Complexes on Surfaces with Vacuum Ultraviolet Angle-Resolved Photoemission Spectroscopy. Journal of Physical Chemistry C, 2021, 125, 14105-14116.	3.1	3
111	Oxide Fermi liquid universality revealed by electron spectroscopy. Physical Review B, 2020, 102, .	3.2	3
112	Coexisting ferromagnetic component and negative magnetoresistance at low temperature in single crystals of the VdW material GaGeTe. Journal of Solid State Chemistry, 2022, 312, 123106.	2.9	3
113	Electronic structure and UPS of the misfit chalcogenide $(\text{SnS})\text{NbS}_2$ and related compounds. Journal of Electron Spectroscopy and Related Phenomena, 2001, 114-116, 1133-1138.	1.7	2
114	Fermi Surface Map of the Single-Layer Bi-Cuprate $\text{Bi}_2\text{Sr}_2\text{xLaxCuO}_6 + \hat{\Gamma}$ at Optimal Doping. Journal of Superconductivity and Novel Magnetism, 2001, 14, 659-668.	0.5	2
115	Suppression of the Charge Density Wave State in Two-Dimensional $1T\text{-}\hat{\Gamma}\text{-TiSe}_2$ by Atmospheric Oxidation. Angewandte Chemie, 2017, 129, 9109-9113.	2.0	2
116	Pushing the space-charge limit in electron momentum microscopy. New Journal of Physics, 2018, 20, 021001.	2.9	2
117	More than electrons. Nature Materials, 2018, 17, 658-660.	27.5	2
118	The growth and electronic structure of azobenzene-based functional molecules on layered crystals. Journal of Physics Condensed Matter, 2012, 24, 394011.	1.8	1
119	Chemical reaction dynamics II and Correlated systems, surfaces and catalysis: general discussion. Faraday Discussions, 2014, 171, 323-356.	3.2	0
120	Ultrafast dissection of excitonic and structural orders in a persisting charge density wave. , 2015, , .		0
121	Femtosecond terahertz dynamics of cooperative transitions: from charge density waves to polariton condensates. Proceedings of SPIE, 2016, , .	0.8	0
122	Structural phase transitions and phase ordering at surfaces probed by ultrafast LEED. EPJ Web of Conferences, 2019, 205, 08005.	0.3	0
123	CDW-superlattice suppression probed in time-resolved XUV-photoemission at the border of the Brillouin zone. , 2010, , .		0
124	Ultrafast Metamorphosis of a Complex Charge Density Wave in Tantalumdiselenite. , 2016, , .		0
125	Light-induced manipulation of the charge density wave in $1T\text{-TaSe}_2$ . , 2020, , .		0
126	Coherent electron-phonon couplings in a charge density wave material. , 2020, , .		0



#	ARTICLE	IF	CITATIONS
127	Digging deeper: Buried layers and interfaces studied by modified total electron yield and soft x-ray absorption spectroscopy. Applied Physics Letters, 2022, 120, 181601.	3.3	0
128	Microstructure effects on the phase transition behavior of a prototypical quantum material. Scientific Reports, 2022, 12, .	3.3	0