

# Moritz Hoesch

## List of Publications by Year in descending order

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129  
papers

7,894  
citations

53794

45  
h-index

51608

86  
g-index

131  
all docs

131  
docs citations

131  
times ranked

9160  
citing authors

#	ARTICLE	IF	CITATIONS
1	A stable three-dimensional topological Dirac semimetal Cd <sub>3</sub> As <sub>2</sub> . Nature Materials, 2014, 13, 677-681.	27.5	1,242
2	Emergence of the nematic electronic state in FeSe. Physical Review B, 2015, 91, .	3.2	302
3	Spin structure of the Shockley surface state onAu(111). Physical Review B, 2004, 69, .	3.2	281
4	Direct observation of spin-polarized bulk bands in an inversion-symmetric semiconductor. Nature Physics, 2014, 10, 835-839.	16.7	271
5	Signature of Strong Spin-Orbital Coupling in the Large Nonsaturating Magnetoresistance Material $WTe_2$ . Physical Review Letters, 2015, 115, 166601.	7.8	204
6	Observation of large topologically trivial Fermi arcs in the candidate type-II Weyl semimetal $WT_2$ . Physical Review B, 2016, 94, .	3.2	174
7	Tailoring the nature and strength of electron-phonon interactions in the SrTiO <sub>3</sub> (001) 2D electron liquid. Nature Materials, 2016, 15, 835-839.	27.5	171
8	Direct observation of spin-orbit coupling in iron-based superconductors. Nature Physics, 2016, 12, 311-317.	16.7	170
9	Suppression of thermal conductivity by rattling modes in thermoelectric sodium cobaltate. Nature Materials, 2013, 12, 1028-1032.	27.5	163
10	Time-reversal symmetry breaking type-II Weyl state in YbMnBi <sub>2</sub> . Nature Communications, 2019, 10, 3424.	12.8	155
11	Fermi Arcs and Their Topological Character in the Candidate Type-II Weyl Semimetal $MoTe_2$ . Physical Review X, 2016, 6, .	8.9	154
12	Ubiquitous formation of bulk Dirac cones and topological surface states from a single orbital manifold in transition-metal dichalcogenides. Nature Materials, 2018, 17, 21-28.	27.5	144
13	Collapse of the Mott Gap and Emergence of a Nodal Liquid in Lightly Doped $Sr_2$ . Physical Review Letters, 2015, 115, 176402.	7.8	140
14	Spin-polarized Fermi surface mapping. Journal of Electron Spectroscopy and Related Phenomena, 2002, 124, 263-279.	1.7	133
15	Surface states and Rashba-type spin polarization in antiferromagnetic $MnBi_2$ (001). Physical Review B, 2019, 100, .	3.2	132
16	Generation and Evolution of Spin-, Valley-, and Layer-Polarized Excited Carriers in Inversion-Symmetric $WSe_2$ . Physical Review Letters, 2016, 117, 277201.	7.8	129
17	A weak topological insulator state in quasi-one-dimensional bismuth iodide. Nature, 2019, 566, 518-522.	27.8	119
18	Spin-orbit coupling in the L-gap surface states of Au(111): spin-resolved photoemission experiments and first-principles calculations. Journal of Physics Condensed Matter, 2004, 16, 7581-7597.	1.8	118

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19	Spin Crossover in Ferropentacyanide at High Pressure: A Seismologically Transparent Transition?. Science, 2011, 331, 64-67.	12.6	118
20	A facility for the analysis of the electronic structures of solids and their surfaces by synchrotron radiation photoelectron spectroscopy. Review of Scientific Instruments, 2017, 88, 013106.	1.3	110
21	Fermiology and Superconductivity of Topological Surface States in $\text{PdTe}$ . Physical Review Letters, 2018, 120, 156401.	7.8	107
22	Maximal Rashba-like spin splitting via kinetic-energy-coupled inversion-symmetry breaking. Nature, 2017, 549, 492-496.	27.8	105
23	Control of a Two-Dimensional Electron Gas on $\text{SrTiO}_3$ by Chemical Pressure. Physical Review Letters, 2014, 113, 177601.	7.8	101
24	Experimental realization of type-II Weyl state in noncentrosymmetric $\text{TaIrTe}_4$ . Physical Review B, 2017, 95, .	7.8	101
25	Suppression of orbital ordering by chemical pressure in $\text{FeSe}$ . Physical Review B, 2015, 92, .	7.8	98
26	Evidence for unidirectional nematic bond ordering in $\text{FeSe}$ . Physical Review B, 2016, 94, .	3.2	94
27	Carrier-Density Control of the $\text{SrTiO}_3$ (001) Surface 2D Electron Gas studied by ARPES. Advanced Materials, 2015, 27, 3894-3899.	21.0	88
28	Negative electronic compressibility and tunable spin splitting in $\text{WSe}_2$ . Nature Nanotechnology, 2015, 10, 1043-1047.	31.5	85
29	Spin-valley locking in the normal state of a transition-metal dichalcogenide superconductor. Nature Communications, 2016, 7, 11711.	12.8	85
30	Holstein polaron in a valley-degenerate two-dimensional semiconductor. Nature Materials, 2018, 17, 676-680.	27.5	80
31	Effect of nematic ordering on electronic structure of $\text{FeSe}$ . Scientific Reports, 2016, 6, 36834.	3.3	78
32	Momentum Dependence of Charge Excitations in the Electron-Doped Superconductor $\text{Nd}_{1.85}\text{Ce}_{0.15}\text{CuO}_4$ : A Resonant Inelastic X-Ray Scattering Study. Physical Review Letters, 2005, 94, 207003.	7.8	71
33	Giant Kohn Anomaly and the Phase Transition in Charge Density Wave $\text{ZrTe}_3$ . Physical Review Letters, 2009, 102, 086402.	7.8	71
34	Observation of strong electron pairing on bands without Fermi surfaces in $\text{LiFe}_1-x\text{Co}_x\text{As}$ . Nature Communications, 2015, 6, 6056.	12.8	68
35	Hallmarks of Hund's coupling in the Mott insulator $\text{Ca}_2\text{RuO}_4$ . Nature Communications, 2017, 8, 15176.	12.8	66
36	Electronic anisotropies revealed by detwinned angle-resolved photo-emission spectroscopy measurements of $\text{FeSe}$ . New Journal of Physics, 2017, 19, 103021.	2.9	65

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37	A disorder-enhanced quasi-one-dimensional superconductor. Nature Communications, 2016, 7, 12262.	12.8	62
38	In-situ strain tuning of the metal-insulator-transition of Ca <sub>2</sub> RuO <sub>4</sub> in angle-resolved photoemission experiments. Nature Communications, 2018, 9, 4535.	12.8	62
39	Formation of Hubbard-like bands as a fingerprint of strong electron-electron interactions in FeSe. Physical Review B, 2017, 95, .	3.2	59
40	Determining adsorbate structures from substrate emission X-ray photoelectron diffraction. Surface Science, 2001, 472, 125-132.	1.9	56
41	Nearly free electrons in a 5d delafossite oxide metal. Science Advances, 2015, 1, e1500692.	10.3	56
42	Revealing the role of electrons and phonons in the ultrafast recovery of charge density wave correlations in $1T\text{-TaSe}_2$ . Physical Review B, 2016, 94, .	3.2	50
43	Experimental Determination of the Topological Phase Diagram in Cerium Monopnictides. Physical Review Letters, 2018, 120, 086402.	7.8	50
44	Multiband One-Dimensional Electronic Structure and Spectroscopic Signature of Tomonaga-Luttinger Liquid Behavior in $K_2\text{CuO}_2$ . Physical Review Letters, 2017, 118, 097002.	7.8	48
45	A novel artificial condensed matter lattice and a new platform for one-dimensional topological phases. Science Advances, 2017, 3, e1501692.	10.3	48
46	Understanding the Complex Phase Diagram of Uranium: The Role of Electron-Phonon Coupling. Physical Review Letters, 2011, 107, 136401.	7.8	47
47	Itinerant ferromagnetism of the Pd-terminated polar surface of PdCoO <sub>2</sub> . Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 12956-12960.	7.1	45
48	Anharmonicity due to Electron-Phonon Coupling in Magnetite. Physical Review Letters, 2013, 110, 207204.	7.8	42
49	Phonon softening in superconducting diamond. Physical Review B, 2007, 75, .	3.2	40
50	Bulk and Surface Electronic Structure of the Dual-Topology Semimetal $2\text{-PtBi}$ . Physical Review Letters, 2020, 124, 106402.	7.8	40
51	Splitting in the Fermi surface of $3\text{-ZrTe}_5$ : A surface charge density wave system. Physical Review B, 2009, 80, .	3.2	39
52	Coherent Quasiparticles with a Small Fermi Surface in Lightly Doped $7\text{-Sr}_2\text{O}_7$ . Physical Review Letters, 2014, 113, 256402.	7.8	39
53	Narrow-band anisotropic electronic structure of $2\text{-ReS}_2$ . Physical Review B, 2017, 96, .	3.2	39
54	Hierarchical spin-orbital polarization of a giant Rashba system. Science Advances, 2015, 1, e1500495.	10.3	38

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55	Boron-Doped Graphene Nanoribbons: Electronic Structure and Raman Fingerprint. ACS Nano, 2018, 12, 7571-7582.	14.6	38
56	Surface structure of Bi <sub>2</sub> Se <sub>3</sub> determined by low-energy electron diffraction and surface x-ray diffraction. Physical Review B, 2013, 88, .	3.2	37
57	Direct observation of orbital hybridisation in a cuprate superconductor. Nature Communications, 2018, 9, 972.	12.8	37
58	Band Structure and Spin-Orbital Texture of the (111) TaO <sub>3</sub> 2D Electron Gas. Advanced Electronic Materials, 2019, 5, 1800860.	5.1	37
59	Short-Range Correlations in Magnetite above the Verwey Temperature. Physical Review X, 2014, 4, .	8.9	36
60	Nonadiabatic Kohn Anomaly in Heavily Boron-Doped Diamond. Physical Review Letters, 2017, 119, 017001.	7.8	36
61	Structural and magnetic phase transitions in Ca <sub>0.7</sub> electron-overdoped FeAs layers. Physical Review B, 2016, 93, .	3.2	31
62	Effects of three-dimensional band structure in angle- and spin-resolved photoemission from half-metallic La <sub>2</sub> Sr <sub>1</sub> Mn <sub>3</sub> O <sub>10</sub> Mn <sub>3</sub> O <sub>10</sub> . Physical Review B, 2008, 77, .	3.2	31
63	Crossover from lattice to plasmonic polarons of a spin-polarised electron gas in ferromagnetic EuO. Nature Communications, 2018, 9, 2305.	12.8	31
64	Robust and tunable itinerant ferromagnetism at the silicon surface of the antiferromagnet GdRh <sub>2</sub> Si <sub>2</sub> . Scientific Reports, 2016, 6, 24254.	3.3	29
65	Spin Orientation of Two-Dimensional Electrons Driven by Temperature-Tunable Competition of Spin-Orbit and Exchange-Magnetic Interactions. Nano Letters, 2017, 17, 811-820.	9.1	28
66	Electronic structure of the candidate 2D Dirac semimetal SrMnSb <sub>2</sub> : a combined experimental and theoretical study. SciPost Physics, 2018, 4, .	4.9	28
67	Absence of giant spin splitting in the two-dimensional electron liquid at the surface of SrTiO <sub>3</sub> . Physical Review B, 2016, 93, .	3.2	27
68	Sharp optical-phonon softening near optimal doping in La <sub>2-x</sub> Ba <sub>x</sub> CuO <sub>4</sub> observed via inelastic x-ray scattering. Physical Review B, 2008, 78, .	3.2	26
69	Probing the reconstructed Fermi surface of antiferromagnetic BaFe <sub>2</sub> As <sub>2</sub> in one domain. Npj Quantum Materials, 2019, 4, .	5.2	26
70	Measurement of strong phonon softening in Cr with and without Fermi-surface nesting by inelastic x-ray scattering. Physical Review B, 2010, 82, .	3.2	25
71	Observation of a Van Hove singularity and implication for strong-coupling induced Cooper pairing in KFe <sub>2</sub> As <sub>2</sub> . Physical Review B, 2015, 92, .	3.2	25
72	Buried double CuO chains in YBa <sub>2</sub> O <sub>8</sub> uncovered by nano-ARPES. Physical Review B, 2019, 99, .	3.2	25

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73	High Resolution Photoexcitation Measurements Exacerbate the Long-Standing Fe XVII Oscillator Strength Problem. Physical Review Letters, 2020, 124, 225001.	7.8	25
74	Lattice dynamics of vanadium: Inelastic x-ray scattering measurements. Physical Review B, 2008, 78, .	3.2	24
75	Topological surface state of $\text{Bi}_2\text{Se}_3$ on InSb(001) as studied by photoemission. Physical Review B, 2018, 97, .	3.2	23
76	Shifts and Splittings of the Hole Bands in the Nematic Phase of FeSe. Journal of the Physical Society of Japan, 2017, 86, 053703.	1.6	23
77	THE FERMI SURFACE IN A MAGNETIC METAL-INSULATOR INTERFACE. Surface Review and Letters, 2002, 09, 1243-1250.	1.1	22
78	Dimensional Crossover in a Charge Density Wave Material Probed by Angle-Resolved Photoemission Spectroscopy. Physical Review Letters, 2017, 118, 206401.	7.8	22
79	Tailoring the topological surface state in ultrathin $\text{Bi}_2\text{Se}_3$ -Sn(111) films. Physical Review B, 2019, 100, .	3.2	22
80	Spin- and angle-resolved photoemission spectroscopy study of the Au(111) Shockley surface state. Journal of Electron Spectroscopy and Related Phenomena, 2004, 137-140, 119-123.	1.7	21
81	Disorder Quenching of the Charge Density Wave in $\text{ZrTe}_3$ . Physical Review Letters, 2019, 122, 017601.	7.8	21
82	Evolution of the charge density wave superstructure in $\text{ZrTe}_3$ under pressure. Physical Review B, 2016, 93, .	3.2	20
83	Momentum-space signatures of Berry flux monopoles in the Weyl semimetal TaAs. Nature Communications, 2021, 12, 3650.	12.8	20
84	Exchange splitting of the three $\text{d}_{xy}$ surface states of Ni(111) from three-dimensional spin- and angle-resolved photoemission spectroscopy. Physical Review B, 2009, 80, .	3.2	19
85	Reentrant Phase Coherence in Superconducting Nanowire Composites. ACS Nano, 2016, 10, 515-523.	14.6	19
86	Strongly anisotropic spin-orbit splitting in a two-dimensional electron gas. Physical Review B, 2015, 91, .	3.2	17
87	Bulk and surface electronic structure of hexagonal structured $\text{PtBi}_2$ by angle-resolved photoemission spectroscopy. Physical Review B, 2016, 94, .	3.2	16
88	Angle-resolved photoemission spectroscopy study of Fe(110) single crystal: Many-body interactions between quasi-particles at the Fermi level. Surface Science, 2007, 601, 4010-4012.	1.9	16
89	Evaluation of the coupling parameters of many-body interactions in Fe(110). Physical Review B, 2010, 82, .	3.2	16
90	Local corrugation and persistent charge density wave in $\text{ZrTe}_3$ with Ni intercalation. Physical Review B, 2018, 97, .	3.2	16

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91	Orbitally selective breakdown of Fermi liquid quasiparticles in $\text{CaMn}_2\text{P}_2$ . Physical Review B, 2019, 99, .	3.2	16
92	Zone plates for angle-resolved photoelectron spectroscopy providing sub-micrometre resolution in the extreme ultraviolet regime. Journal of Synchrotron Radiation, 2019, 26, 467-472.	2.4	16
93	Three-dimensional electronic structure of the nematic and antiferromagnetic phases of NaFeAs from detwinned angle-resolved photoemission spectroscopy. Physical Review B, 2018, 97, .	3.2	15
94	3D Imaging of the Fermi Surface by Thermal Diffuse Scattering. Physical Review Letters, 2009, 103, 076403.	7.8	14
95	Electronic structure of $\text{YFe}_2$ by angle-resolved photoemission spectroscopy. Physical Review B, 2016, 93, .	3.2	14
96	Photon energy dependent circular dichroism in angle-resolved photoemission from Au(111) surface states. Physical Review B, 2017, 95, .	3.2	14
97	Phonon anomalies and lattice dynamics in the superconducting oxychlorides $\text{Ca}_x\text{CuO}_2\text{Cl}_2$ . Physical Review B, 2013, 88, .	3.2	13
98	Phonon dispersion and low-energy anomaly in $\text{BaCr}_2\text{As}_2$ symmetrical to $\text{BaFe}_2$ . Physical Review B, 2010, 81, .	3.2	13
99	Phonon dispersion and low-energy anomaly in $\text{BaCr}_2\text{As}_2$ inelastic neutron and x-ray scattering experiments. Physical Review B, 2010, 81, .	3.2	12
100	Observation of non-Fermi liquid behavior in hole-doped $\text{LiFe}_1-x\text{V}_x\text{As}$ . Physical Review B, 2016, 94, .	3.2	12
101	Characterization of the Percival detector with soft X-rays. Journal of Synchrotron Radiation, 2021, 28, 131-145.	2.4	12
102	Emitter-site specificity of hard x-ray photoelectron Kikuchi-diffraction. New Journal of Physics, 2020, 22, 103002.	2.9	12
103	Tuneable electron-magnon coupling of ferromagnetic surface states in $\text{PdCoO}_2$ . Npj Quantum Materials, 2022, 7, .	5.2	12
104	Acoustic and optical phonons in metallic diamond. Science and Technology of Advanced Materials, 2006, 7, S31-S36.	6.1	11
105	Emergence of Dirac-like bands in the monolayer limit of epitaxial Ge films on Au(111). 2D Materials, 2017, 4, 031005.	4.4	10
106	Charge Density Waves in Electron-Doped Molybdenum Disulfide. Nano Letters, 2021, 21, 5516-5521.	9.1	10
107	Surface termination and electronic reconstruction in $\text{YBaCu}_3\text{O}_{7-x}$ . Physical Review B, 2010, 81, .	3.2	9
108	Role of a higher-dimensional interaction in stabilizing charge density waves in quasi-one-dimensional $\text{NbSe}_3$ revealed by angle-resolved photoemission spectroscopy. Physical Review B, 2020, 101, .	3.2	9

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109	Direct 2D spatial-coherence determination using the Fourier-analysis method: multi-parameter characterization of the P04 beamline at PETRAIII. Optics Express, 2020, 28, 7282.	3.4	9
110	A device for the application of uniaxial strain to single crystal samples for use in synchrotron radiation experiments. Review of Scientific Instruments, 2015, 86, 103904.	1.3	8
111	Non-local effect of impurity states on the exchange coupling mechanism in magnetic topological insulators. Npj Quantum Materials, 2020, 5, .	5.2	8
112	Two- and three-dimensional band structure of ultrathin Ni on Cu(001). Physical Review B, 2009, 79, .	3.2	7
113	orbital subband structures and chiral orbital angular momentum in the (001) surface states of Lattice dynamics of the cluster chain compounds	3.2	7
114			



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127	High-resolution angle-resolved photoemission study of the spin-polarized Fermi surface of Ni(100). Journal of Magnetism and Magnetic Materials, 2007, 310, 1082-1083.	2.3	1
128	Orbital-selective metal-insulator transition lifting the t <sub>2g</sub> band hybridization in the Hund metal Sr <sub>3</sub> (Ru <sub>1-x</sub> Mnx)O <sub>7</sub> . Physical Review B, 2018, 98, .	3.2	1
129	Enabling time-resolved 2D spatial-coherence measurements using the Fourier-analysis method with an integrated curved-grating beam monitor. Optics Letters, 2020, 45, 5591.	3.3	1