Leslie M Schoop

List of Publications by Year
in descending order

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Version: 2024-02-01

114 papers	6,108 citations	126708 33 h-index	71532 76 g-index
123 all docs	123 docs citations	123 times ranked	7181 citing authors

#	Article	IF	Citations
1	TaCo₂Te₂: An Airâ€Stable, High Mobility Van der Waals Material with Probable Magnetic Order. Advanced Functional Materials, 2022, 32, .	7.8	10
2	Square-Net Topological Semimetals: How Spectroscopy Furthers Understanding and Control. Journal of Physical Chemistry Letters, 2022, 13, 838-850.	2.1	5
3	Evidence for a monolayer excitonic insulator. Nature Physics, 2022, 18, 87-93.	6.5	70
4	Quasiparticle interference observation of the topologically nontrivial drumhead surface state in ZrSiTe. Physical Review B, 2022, 105, .	1.1	3
5	Catalogue of flat-band stoichiometric materials. Nature, 2022, 603, 824-828.	13.7	65
6	One-dimensional Luttinger liquids in a two-dimensional moirÃ© lattice. Nature, 2022, 605, 57-62.	13.7	44
7	Theoretical study of topological properties of ferromagnetic pyrite CoS₂. Journal Physics D: Applied Physics, 2022, 55, 304004.	1.3	4
8	3D Analogs of Square-Net Nodal Line Semimetals: Band Topology of Cubic LaIn₃. Chemistry of Materials, 2022, 34, 4446-4455.	3.2	5
9	Magnetic Nanosheets via Chemical Exfoliation of K_{2x}Mn_xSn_{1â€“x}S₂. Chemistry of Materials, 2022, 34, 5084-5093.	3.2	2
10	A Class of Magnetic Topological Material Candidates with Hypervalent Bi Chains. Journal of the American Chemical Society, 2022, 144, 9785-9796.	6.6	9
11	Ln₃MBi₅ (Ln=Pr, Nd, Sm; M=Zr, Hf): Intermetallics with Hypervalent Bismuth Chains. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2022, 648, .	0.6	1
12	Simple Chemical Rules for Predicting Band Structures of Kagome Materials. Journal of the American Chemical Society, 2022, 144, 10978-10991.	6.6	20
13	Axial Higgs mode detected by quantum pathway interference in RTe3. Nature, 2022, 606, 896-901.	13.7	14
14	Phase tuning of multiple Andreev reflections of Dirac fermions and the Josephson supercurrent in Alâ€“MoTe ₂ â€“Al junctions. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	2
15	The properties and prospects of chemically exfoliated nanosheets for quantum materials in two dimensions. Applied Physics Reviews, 2021, 8, .	5.5	17
16	Complex magnetic phases enriched by charge density waves in the topological semimetals <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>GdSb</mml:mi><mml:mi>x</mml:mi></mml:msub></mml:mrow></mml:math> Physical Review B, 2021, 103, .	1.1	15
17	Robust Narrow-Gap Semiconducting Behavior in Square-Net La₃Cd₂As₆. Chemistry of Materials, 2021, 33, 4122-4127.	3.2	6
18	Signature of an ultrafast photoinduced Lifshitz transition in the nodal-line semimetal ZrSiTe. Physical Review B, 2021, 103, .	1.1	7

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19	Band Engineering of Dirac Semimetals Using Charge Density Waves. Advanced Materials, 2021, 33, e2101591.	11.1	32
20	Evolving Devil's Staircase Magnetization from Tunable Charge Density Waves in Nonsymmorphic Dirac Semimetals. Advanced Materials, 2021, 33, e2103476.	11.1	14
21	Chemical bonds in topological materials. Trends in Chemistry, 2021, 3, 700-715.	4.4	15
22	Landau quantization and highly mobile fermions in an insulator. Nature, 2021, 589, 225-229.	13.7	54
23	Kinetics and Evolution of Magnetism in Soft-Chemical Synthesis of CrSe₂ from KCrSe₂. Chemistry of Materials, 2021, 33, 8070-8078.	3.2	11
24	Change in Magnetic Properties upon Chemical Exfoliation of FeOCl. Inorganic Chemistry, 2020, 59, 1176-1182.	1.9	25
25	Layer-cake 2D superconductivity. Science, 2020, 370, 170-170.	6.0	4
26	Transient Drude Response Dominates Near-Infrared Pumpâ€“Probe Reflectivity in Nodal-Line Semimetals ZrSiS and ZrSiSe. Journal of Physical Chemistry Letters, 2020, 11, 6105-6111.	2.1	13
27	A cleanroom in a glovebox. Review of Scientific Instruments, 2020, 91, 073909.	0.6	13
28	Weyl fermions, Fermi arcs, and minority-spin carriers in ferromagnetic CoS ₂. Science Advances, 2020, 6, .	4.7	20
29	Anomalous Shubnikov-de Haas quantum oscillations in rare-earth tritelluride <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>NdTe</mml:mi><mml:mn>3</mml:mn></mml:msub></mml:math> Physical Review B, 2020, 102, .	11	10
30	The Role of Delocalized Chemical Bonding in Square-Net-Based Topological Semimetals. Journal of the American Chemical Society, 2020, 142, 6350-6359.	6.6	55
31	Special topic on topological semimetalsâ€”New directions. APL Materials, 2020, 8, .	2.2	5
32	Modular Arithmetic with Nodal Lines: Drumhead Surface States in ZrSiTe. Physical Review X, 2020, 10, .	2.8	21
33	High mobility in a van der Waals layered antiferromagnetic metal. Science Advances, 2020, 6, eaay6407.	4.7	85
34	Strong and fragile topological Dirac semimetals with higher-order Fermi arcs. Nature Communications, 2020, 11, 627.	5.8	152
35	Systematic study of stacked square nets: From Dirac fermions to material realizations. Physical Review B, 2020, 101, .	1.1	26
36	Determination of the Fermi surface and field-induced quasiparticle tunneling around the Dirac nodal loop in ZrSiS. Physical Review Research, 2020, 2, .	1.3	15

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37	Robustness of Yu-Shiba-Rusinov resonances in the presence of a complex superconducting order parameter. Physical Review B, 2019, 100, .	1.1	17
38	A New Three-Dimensional Subsulfide Ir₂In₈S with Dirac Semimetal Behavior. Journal of the American Chemical Society, 2019, 141, 19130-19137.	6.6	26
39	Soft Chemical Synthesis of H_xCrS₂: An Antiferromagnetic Material with Alternating Amorphous and Crystalline Layers. Journal of the American Chemical Society, 2019, 141, 15634-15640.	6.6	31
40	Fermi-level Dirac crossings in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>4</mml:mn><mml:mi>d</mml:mi></mml:mrow></mml:r and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>5</mml:mn><mml:mi>d</mml:mi></mml:mrow></mml:r cubic metal oxides: <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>NaPd</mml:mi><mml:mn>3</mml:mn></mml:mr	1.1	7
41	Ruthenium Oxide Nanosheets for Enhanced Oxygen Evolution Catalysis in Acidic Medium. Advanced Energy Materials, 2019, 9, 1803795.	10.2	147
42	Topological Semimetals in Square-Net Materials. Annual Review of Materials Research, 2019, 49, 185-206.	4.3	98
43	Weyl nodes and magnetostructural instability in antiperovskite Mn3ZnC. APL Materials, 2019, 7, 121104.	2.2	3
44	Charge Density Waves and Magnetism in Topological Semimetal Candidates GdSb_xTe_{2â^'}_x_{â^'}_{Î´}. Advanced Quantum Technologies, 2019, 2, 1900045.	1.8	27
45	Superconducting order parameter of the nodal-line semimetal NaAlSi. APL Materials, 2019, 7, 121103.	2.2	25
46	Dirac fermions and possible weak antilocalization in LaCuSb2. APL Materials, 2019, 7, .	2.2	16
47	Out-of-plane transport in ZrSiS and ZrSiSe microstructures. APL Materials, 2019, 7, 101116.	2.2	7
48	New Light on an Old Story: The Crystal Structure of Boron Tetrathiophosphate Revisited. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2019, 645, 267-271.	0.6	11
49	The effect of spin-orbit coupling on nonsymmorphic square-net compounds. Journal of Physics and Chemistry of Solids, 2019, 128, 296-300.	1.9	16
50	Origin of the butterfly magnetoresistance in ZrSiS. Physical Review Materials, 2019, 3, .	0.9	11
51	Symmetry-enforced band crossings in trigonal materials: Accordion states and Weyl nodal lines. Physical Review Materials, 2019, 3, .	0.9	20
52	Magneto-optical probe of the fully gapped Dirac band in ZrSiS. Physical Review Research, 2019, 1, .	1.3	9
53	Tunable Weyl and Dirac states in the nonsymmorphic compound CeSbTe. Science Advances, 2018, 4, eaar2317.	4.7	110
54	Chemical Principles of Topological Semimetals. Chemistry of Materials, 2018, 30, 3155-3176.	3.2	166

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55	Electrical Transport Signature of the Magnetic Fluctuation-Structure Relation in Î±-RuCl₃ Nanoflakes. Nano Letters, 2018, 18, 3203-3208.	4.5	28
56	Vapor-Phase Amine Intercalation for the Rational Design of Photonic Nanosheet Sensors. Chemistry of Materials, 2018, 30, 2557-2565.	3.2	9
57	Unconventional mass enhancement around the Dirac nodal loop in ZrSiS. Nature Physics, 2018, 14, 178-183.	6.5	129
58	IrOOH nanosheets as acid stable electrocatalysts for the oxygen evolution reaction. Journal of Materials Chemistry A, 2018, 6, 21558-21566.	5.2	72
59	Synthesis and Characterization of Three New Lithiumâ€Scandium Hexathiohypodiphosphates: Li_{4â€“3x}Sc_xP₂S₆ (x = 0.358), mâ€LiScP₂S₆, and tâ€LiScP₂S₆. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2018, 644, 1854-1862.	0.6	3
60	On the possibility of magnetic Weyl fermions in non-symmorphic compound PtFeSb. European Physical Journal B, 2018, 91, 1.	0.6	8
61	Single-Crystal Growth and Characterization of the Chalcopyrite Semiconductor CuInTe₂ for Photoelectrochemical Solar Fuel Production. Journal of Physical Chemistry Letters, 2018, 9, 6833-6840.	2.1	9
62	Free-carrier dynamics in Au2Pb probed by optical conductivity measurements. Journal of Physics Condensed Matter, 2018, 30, 485403.	0.7	7
63	Electron-Hole Tunneling Revealed by Quantum Oscillations in the Nodal-Line Semimetal HfSiS. Physical Review Letters, 2018, 121, 256602.	2.9	33
64	Directly photoexcited Dirac and Weyl fermions in ZrSiS and NbAs. Applied Physics Letters, 2018, 113, .	1.5	13
65	Topological Materials and Solid-State Chemistryâ€"Finding and Characterizing New Topological Materials. Springer Series in Solid-state Sciences, 2018, , 211-243.	0.3	0
66	Topological band crossings in hexagonal materials. Physical Review Materials, 2018, 2, .	0.9	35
67	Structural Stability Diagram of ALnP₂S₆ Compounds (A = Na, K, Rb, Cs; Ln =) Tj ETQq1 1 0.784314 rgBT /O	1.9	33
68	Toward Tunable Photonic Nanosheet Sensors: Strong Influence of the Interlayer Cation on the Sensing Characteristics. Advanced Materials, 2017, 29, 1604884.	11.1	16
69	Dirac cones and effect of spin-orbit coupling in the nonsymmorphic critical semimetals <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>M</mml:mi><mml:mi>SiS</mml:mi><mml:mspace width="0.16em" /><mml:mo>(</mml:mo><mml:mi>M</mml:mi><mml:mo>=</mml:mo><mml:mi>Hf</mml:mi><mml:mo>,</mml:mo><mml:mspace) Tj	1.1	131
70	Ird-band derived superconductivity in the lanthanum-iridium system LaIr₃. Journal of Physics Condensed Matter, 2017, 29, 475602.	0.7	12
71	Trivalent Iridium Oxides: Layered Triangular Lattice Iridate K_{0.75}Na_{0.25}IrO₂ and Oxyhydroxide IrOOH. Chemistry of Materials, 2017, 29, 8338-8345.	3.2	35
72	Similar ultrafast dynamics of several dissimilar Dirac and Weyl semimetals. Journal of Applied Physics, 2017, 122, .	1.1	33

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73	The First Quinary Rare Earth Thiophosphates: Cs5Ln3X3(P2S6)2(PS4) (Ln= La, Ce,X= Br, Cl) and the Quasi-Quaternary Cs10Y4Cl10(P2S6)3. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2017, 643, 1818-1823.	0.6	14
74	Flat Optical Conductivity in ZrSiS due to Two-Dimensional Dirac Bands. Physical Review Letters, 2017, 119, 187401.	2.9	68
75	Pressure effect on superconductivity in FeSe_{0.5}Te_{0.5}. Physica Status Solidi (B): Basic Research, 2017, 254, 1600161.	0.7	7
76	Surface Floating 2D Bands in Layered Nonsymmorphic Semimetals: ZrSiS and Related Compounds. Physical Review X, 2017, 7, .	2.8	48
77	Synthesis and Characterization of Copper Hexathiometadiphosphate Cu₂P₂S₆. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2016, 642, 356-360.	0.6	12
78	Non-symmorphic band degeneracy at the Fermi level in ZrSiTe. New Journal of Physics, 2016, 18, 125014.	1.2	88
79	Butterfly magnetoresistance, quasi-2D Dirac Fermi surface and topological phase transition in ZrSiS. Science Advances, 2016, 2, e1601742.	4.7	182
80	Magnetic Properties of Restacked 2D Spin 1/2 honeycomb RuCl₃ Nanosheets. Nano Letters, 2016, 16, 3578-3584.	4.5	89
81	Li_{0.6}[Li_{0.2}Sn_{0.8}S₂] â€“ a layered lithium superionic conductor. Energy and Environmental Science, 2016, 9, 2578-2585.	15.6	46
82	Toward Fluorinated Spacers for MAPI-Derived Hybrid Perovskites: Synthesis, Characterization, and Phase Transitions of (FC₂H₄NH₃)₂PbCl₄. Chemistry of Materials, 2016, 28, 6560-6566.	3.2	74
83	Evolution of magnetic fluctuations through the Fe-induced paramagnetic to ferromagnetic transition inCr2B. Physical Review B, 2016, 93, .	1.1	2
84	Copper Selenidophosphates Cu4P2Se6, Cu4P3Se4, Cu4P4Se3, and CuP2Se, Featuring Zero-, One-, and Two-Dimensional Anions. Inorganic Chemistry, 2016, 55, 8031-8040.	1.9	4
85	Tuning the magnetoresistance of ultrathin WTe₂sheets by electrostatic gating. Nanoscale, 2016, 8, 18703-18709.	2.8	24
86	Dirac cone protected by non-symmorphic symmetry and three-dimensional Dirac line node in ZrSiS. Nature Communications, 2016, 7, 11696.	5.8	591
87	Pressure induced Dirac semimetal state in pressurized<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">C</mml:mi><mml:msub><mml:mi mathvariant="normal">d</mml:mi><mml:mn>3</mml:mn></mml:msub><mml:mi mathvariant="normal">A</mml:mi><mml:msub><mml:mi	1.1	41
88	Dirac metal to topological metal transition at a structural phase change in<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi mathvariant="normal">Au</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">Pb</mml:mi></mml:math>and prediction of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mrow><mml:mi mathvariant="double-struck">Z</mml:mi></mml:mrow><mml:mn>2</mml:mn></mml:msub></mml:math>topology	1.1	55
89	Three-dimensional Dirac semimetals: Design principles and predictions of new materials. Physical Review B, 2015, 91, .	1.1	203
90	Correlation of crystal quality and extreme magnetoresistance of WTe ₂. Europhysics Letters, 2015, 110, 67002.	0.7	96

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91	Goldâ€“Gold Bonding: The Key to Stabilizing the 19-Electron Ternary Phases LnAuSb (Ln =) Tj ETQq1 1 0.784314 rgBT /Ov	6.6	30
92	Interaction Driven Subgap Spin Exciton in the Kondo Insulator<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>SmB</mml:mi></mml:mrow><mml:mrow><mml:mn>6</mml:mn></ Physical Review Letters, 2015, 114, 036401.	2.9	83
93	A new form of Ca3P2 with a ring of Dirac nodes. APL Materials, 2015, 3, .	2.2	287
94	Characterization of the heavy metal pyrochlore lattice superconductor CaIr₂. Journal of Physics Condensed Matter, 2015, 27, 185701.	0.7	23
95	Paramagnetic to ferromagnetic phase transition in lightly Fe-doped<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi mathvariant="normal">Cr</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:mi mathvariant="normal">B</mml:mi></mml:math>. Physical Review B, 2014, 89, .	1.1	20
96	Pressure-induced structural phase transition in the half-Heusler compound CaAuBi. Solid State Sciences, 2014, 30, 6-10.	1.5	24
97	Large, non-saturating magnetoresistance in WTe2. Nature, 2014, 514, 205-208.	13.7	1,329
98	Structure and elementary properties of the new Ir hollandite Rb0.17IrO2. Journal of Solid State Chemistry, 2014, 209, 37-41.	1.4	6
99	Crystal structure and elementary electronic properties of Bi-stabilized Î±-In2Se3. Materials Research Bulletin, 2013, 48, 2517-2521.	2.7	7
100	new polymorph of HfCuGe with a novel structure type. Journal of Solid State Chemistry, 2013, 199, 66-70.	1.4	2
101	Spontaneous Formation of Zigzag Chains at the Metal-Insulator Transition in the<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>Î²</mml:mi></mml:math>-Pyrochlore<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>CsW</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="bold">O</mml:mi><mml:mn>6</mml:mn></mml:msub></mml:math>. Physical Review Letters	2.9	25
102	Lone Pair Effect, Structural Distortions, and Potential for Superconductivity in Tl Perovskites. Inorganic Chemistry, 2013, 52, 5479-5483.	1.9	38
103	Superconductivity in HfCuGe 2 : A non-magnetic analog of the 1111 iron pnictides. Europhysics Letters, 2013, 101, 67001.	0.7	4
104	Correlated evolution of colossal thermoelectric effect and Kondo insulating behavior. APL Materials, 2013, 1, 062102.	2.2	11
105	A ferromagnetic insulating substrate for the epitaxial growth of topological insulators. Journal of Applied Physics, 2013, 114, 114907.	1.1	138
106	Superconductivity in the Cu(Ir<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML") Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 1	1.1	21
107	xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mrow /><mml: Termination-dependent topological surface states of the natural superlattice phase Bi4Se3. Physical Review B, 2013, 88, .	1.1	52
108	Topological semimetal in a Bi-Bi2Se3infinitely adaptive superlattice phase. Physical Review B, 2012, 86, .	1.1	59

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109	Effect of pressure on superconductivity in NaAlSi. Physical Review B, 2012, 86, .	1.1	16
110	Superconductivity and magnetism in Rb0.8Fe1.6Se2under pressure. Physical Review B, 2012, 85, .	1.1	27
111	Thermomagnetic Properties Improved by Selfâ€Organized Flowerâ€Like Phase Separation of Ferromagnetic Co₂Dy_{0.5}Mn_{0.5}Sn. Advanced Functional Materials, 2012, 22, 1822-1826.	7.8	8
112	The effect of Fe doping on superconductivity in ZrRuP. Solid State Communications, 2011, 151, 1504-1506.	0.9	7
113	Pressure-restored superconductivity in Cu-substituted FeSe. Physical Review B, 2011, 84, .	1.1	19
114	Investigation of the Thermoelectric Properties of the Series TiCo_{1â€“x}Ni_xSn_xSb_{1â€“x}Â. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2010, 636, 132-136.	0.6	5