

# Raman Sankar

## List of Publications by Citations

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116  
papers

7,816  
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27  
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88  
g-index

128  
ext. papers

9,370  
ext. citations

7.8  
avg, IF

5.55  
L-index

#	Paper	IF	Citations
116	TOPOLOGICAL MATTER. Discovery of a Weyl fermion semimetal and topological Fermi arcs. <i>Science</i> , <b>2015</b> , 349, 613-7	33.3	2165
115	Observation of a three-dimensional topological Dirac semimetal phase in high-mobility Cd <sub>3</sub> As <sub>2</sub> . <i>Nature Communications</i> , <b>2014</b> , 5, 3786	17.4	938
114	High performance and bendable few-layered InSe photodetectors with broad spectral response. <i>Nano Letters</i> , <b>2014</b> , 14, 2800-6	11.5	563
113	Topological nodal-line fermions in spin-orbit metal PbTaSe <sub>2</sub> . <i>Nature Communications</i> , <b>2016</b> , 7, 10556	17.4	514
112	Observation of Fermi arc surface states in a topological metal. <i>Science</i> , <b>2015</b> , 347, 294-8	33.3	488
111	Observation of a topological crystalline insulator phase and topological phase transition in Pb(1-x)Sn(x)Te. <i>Nature Communications</i> , <b>2012</b> , 3, 1192	17.4	481
110	Intrinsic Electron Mobility Exceeding 10 <sup>5</sup> cm <sup>2</sup> /(V s) in Multilayer InSe FETs. <i>Nano Letters</i> , <b>2015</b> , 15, 3815-9	11.5	278
109	Observation of topological nodal fermion semimetal phase in ZrSiS. <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	232
108	Observation of Dirac node formation and mass acquisition in a topological crystalline insulator. <i>Science</i> , <b>2013</b> , 341, 1496-9	33.3	219
107	Low-Threshold Lasing from 2D Homologous Organic-Inorganic Hybrid Ruddlesden-Popper Perovskite Single Crystals. <i>Nano Letters</i> , <b>2018</b> , 18, 3221-3228	11.5	124
106	Emergence of a Metal-Insulator Transition and High-Temperature Charge-Density Waves in VSe at the Monolayer Limit. <i>Nano Letters</i> , <b>2018</b> , 18, 5432-5438	11.5	123
105	High photosensitivity and broad spectral response of multi-layered germanium sulfide transistors. <i>Nanoscale</i> , <b>2016</b> , 8, 2284-92	7.7	95
104	Dirac mass generation from crystal symmetry breaking on the surfaces of topological crystalline insulators. <i>Nature Materials</i> , <b>2015</b> , 14, 318-24	27	93
103	Superconducting topological surface states in the noncentrosymmetric bulk superconductor PbTaSe. <i>Science Advances</i> , <b>2016</b> , 2, e1600894	14.3	88
102	Tunability of the topological nodal-line semimetal phase in ZrSiX-type materials (X=S, Se, Te). <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	85
101	Mapping the unconventional orbital texture in topological crystalline insulators. <i>Nature Physics</i> , <b>2014</b> , 10, 572-577	16.2	70
100	Strain engineering Dirac surface states in heteroepitaxial topological crystalline insulator thin films. <i>Nature Nanotechnology</i> , <b>2015</b> , 10, 849-53	28.7	59

99	Topological Dirac surface states and superconducting pairing correlations in PbTaSe <sub>2</sub> . <i>Physical Review B</i> , <b>2016</b> , 93,	3.3	58
98	Topological Type-II Dirac Fermions Approaching the Fermi Level in a Transition Metal Dichalcogenide NiTe <sub>2</sub> . <i>Chemistry of Materials</i> , <b>2018</b> , 30, 4823-4830	9.6	57
97	Ultra-Thin Layered Ternary Single Crystals [Sn(SxSe1-x)2] with Bandgap Engineering for High Performance Phototransistors on Versatile Substrates. <i>Advanced Functional Materials</i> , <b>2016</b> , 26, 3630-3638	15.6	56
96	Ultrasensitive tunability of the direct bandgap of 2D InSe flakes via strain engineering. <i>2D Materials</i> , <b>2018</b> , 5, 021002	5.9	53
95	3D Dirac semimetal Cd <sub>3</sub> As <sub>2</sub> : A review of material properties. <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	53
94	Crystal growth of Dirac semimetal ZrSiS with high magnetoresistance and mobility. <i>Scientific Reports</i> , <b>2017</b> , 7, 40603	4.9	41
93	Polymorphic Layered MoTe <sub>2</sub> from Semiconductor, Topological Insulator, to Weyl Semimetal. <i>Chemistry of Materials</i> , <b>2017</b> , 29, 699-707	9.6	40
92	Tuning Rashba Spin-Orbit Coupling in Gated Multilayer InSe. <i>Nano Letters</i> , <b>2018</b> , 18, 4403-4408	11.5	39
91	Surface Oxidation Doping to Enhance Photogenerated Carrier Separation Efficiency for Ultrahigh Gain Indium Selenide Photodetector. <i>ACS Photonics</i> , <b>2017</b> , 4, 2930-2936	6.3	34
90	Observation of the spin-polarized surface state in a noncentrosymmetric superconductor BiPd. <i>Nature Communications</i> , <b>2016</b> , 7, 13315	17.4	33
89	Large single crystal growth, transport property, and spectroscopic characterizations of three-dimensional Dirac semimetal Cd <sub>3</sub> As <sub>2</sub> . <i>Scientific Reports</i> , <b>2015</b> , 5, 12966	4.9	27
88	Inducing Strong Superconductivity in WTe by a Proximity Effect. <i>ACS Nano</i> , <b>2018</b> , 12, 7185-7196	16.7	26
87	Intrinsic Carrier Transport of Phase-Pure Homologous 2D Organolead Halide Hybrid Perovskite Single Crystals. <i>Small</i> , <b>2018</b> , 14, e1803763	11	26
86	Optical phonon dynamics and electronic fluctuations in the Dirac semimetal Cd <sub>3</sub> As <sub>2</sub> . <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	25
85	Enhanced thermoelectric performance of GeTe-rich germanium antimony tellurides through the control of composition and structure. <i>CrystEngComm</i> , <b>2015</b> , 17, 3440-3445	3.3	23
84	Enhanced Light Emission from the Ridge of Two-Dimensional InSe Flakes. <i>Nano Letters</i> , <b>2018</b> , 18, 5078-5084	15.4	21
83	Topological phase diagram and saddle point singularity in a tunable topological crystalline insulator. <i>Physical Review B</i> , <b>2015</b> , 92,	3.3	21
82	High-Performance InSe Transistors with Ohmic Contact Enabled by Nonrectifying Barrier-Type Indium Electrodes. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2018</b> , 10, 33450-33456	9.5	20

81	Superconductivity in a Misfit Layered (SnS) <sub>1.15</sub> (TaS <sub>2</sub> ) Compound. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 1373-1378	4.3	18
80	Two-step antiferromagnetic transition and moderate triangular frustration in Li <sub>2</sub> Co(WO <sub>4</sub> ) <sub>2</sub> . <i>Physical Review B</i> , <b>2014</b> , 90,	3.3	18
79	Interplay of orbital effects and nanoscale strain in topological crystalline insulators. <i>Nature Communications</i> , <b>2018</b> , 9, 1550	17.4	16
78	Tunable Photoinduced Carrier Transport of a Black Phosphorus Transistor with Extended Stability Using a Light-Sensitized Encapsulated Layer. <i>ACS Photonics</i> , <b>2016</b> , 3, 1102-1108	6.3	16
77	Enhanced electron correlations in the binary stannide PdSn <sub>4</sub> : A homologue of the Dirac nodal arc semimetal PtSn <sub>4</sub> . <i>Physical Review Materials</i> , <b>2017</b> , 1,	3.2	16
76	Field-free platform for Majorana-like zero mode in superconductors with a topological surface state. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	15
75	Electrochemical sensing of free radical antioxidant diphenylamine cations (DPAH <sup>•+</sup> ) with carbon interlaced nanoflake-assembled Mg <sub>x</sub> Ni <sub>9-x</sub> S <sub>8</sub> microspheres. <i>CrystEngComm</i> , <b>2019</b> , 21, 724-735	3.3	14
74	Reinvestigating the surface and bulk electronic properties of Cd <sub>3</sub> As <sub>2</sub> . <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	13
73	Large transverse Hall-like signal in topological Dirac semimetal Cd <sub>3</sub> As <sub>2</sub> . <i>Scientific Reports</i> , <b>2016</b> , 6, 27487	4.9	13
72	Hybrid InSe Nanosheets and MoS <sub>2</sub> Quantum Dots for High-Performance Broadband Photodetectors and Photovoltaic Cells. <i>Advanced Materials Interfaces</i> , <b>2019</b> , 6, 1801336	4.6	13
71	Sn-Doping Enhanced Ultrahigh Mobility InSnSe Phototransistor. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 24269-24278	9.5	12
70	Modulating Charge Separation with Hexagonal Boron Nitride Mediation in Vertical Van der Waals Heterostructures. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 26213-26221	9.5	12
69	Energy scale of Dirac electrons in Cd <sub>3</sub> As <sub>2</sub> . <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	12
68	Crystal Growth and Magnetic Properties of Topological Nodal-Line Semimetal GdSbTe with Antiferromagnetic Spin Ordering. <i>Inorganic Chemistry</i> , <b>2019</b> , 58, 11730-11737	5.1	12
67	Quasiparticle interference in ZrSiS: Strongly band-selective scattering depending on impurity lattice site. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	12
66	High-Performance Flexible Broadband Photodetectors Based on 2D Hafnium Selenosulfide Nanosheets. <i>Advanced Electronic Materials</i> , <b>2020</b> , 6, 1900794	6.4	12
65	Thickness-Dependent Resonant Raman and E <sup>2</sup> Photoluminescence Spectra of Indium Selenide and Indium Selenide/Graphene Heterostructures. <i>Journal of Physical Chemistry C</i> , <b>2019</b> , 123, 15345-15353	3.8	11
64	Evidence of s-wave superconductivity in the noncentrosymmetric LaIr. <i>Scientific Reports</i> , <b>2018</b> , 8, 651	4.9	11

63	Observation of ultrahigh mobility surface states in a topological crystalline insulator by infrared spectroscopy. <i>Nature Communications</i> , <b>2017</b> , 8, 366	17.4	11
62	Anisotropic Transport and Quantum Oscillations in the Quasi-One-Dimensional TaNiTe: Evidence for the Nontrivial Band Topology. <i>Journal of Physical Chemistry Letters</i> , <b>2020</b> , 11, 7782-7789	6.4	11
61	A Bi-Anti-Ambipolar Field Effect Transistor. <i>ACS Nano</i> , <b>2021</b> , 15, 8686-8693	16.7	11
60	Surface termination dependent quasiparticle scattering interference and magneto-transport study on ZrSiS. <i>New Journal of Physics</i> , <b>2018</b> , 20, 103025	2.9	11
59	High-Temperature Defect-Induced Hopping Conduction in Multilayered Germanium Sulfide for Optoelectronic Applications in Harsh Environments. <i>ACS Applied Nano Materials</i> , <b>2019</b> , 2, 2169-2175	5.6	10
58	Ultralow Schottky Barriers in Hexagonal Boron Nitride-Encapsulated Monolayer WSe Tunnel Field-Effect Transistors. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2020</b> , 12, 18667-18673	9.5	10
57	Anisotropic magnetotransport and extremely large magnetoresistance in NbAs single crystals. <i>Scientific Reports</i> , <b>2018</b> , 8, 6414	4.9	10
56	Unprecedented random lasing in 2D organolead halide single-crystalline perovskite microrods. <i>Nanoscale</i> , <b>2020</b> , 12, 18269-18277	7.7	10
55	Two-gap superconductivity and topological surface states in TaOsSi. <i>Physical Review B</i> , <b>2019</b> , 100,	3.3	9
54	Surface Reconstruction, Oxidation Mechanism, and Stability of Cd <sub>3</sub> As <sub>2</sub> . <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1900965	15.6	9
53	Synergistic optimization of thermoelectric performance in earth-abundant CuZnSnS by inclusion of graphene nanosheets. <i>Nanotechnology</i> , <b>2020</b> , 31, 365402	3.4	9
52	Topological phase transition under pressure in the topological nodal-line superconductor PbTaSe <sub>2</sub> . <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	9
51	Ultra-high performance flexible piezopotential gated InSnSe phototransistor. <i>Nanoscale</i> , <b>2018</b> , 10, 18642-18650	7.7	9
50	Extreme magnetoresistance and pressure-induced superconductivity in the topological semimetal candidate YBi. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	8
49	Topological nature of step-edge states on the surface of the topological crystalline insulator Pb <sub>0.7</sub> Sn <sub>0.3</sub> Se. <i>Physical Review B</i> , <b>2019</b> , 99,	3.3	8
48	Evidence for nematic superconductivity of topological surface states in PbTaSe <sub>2</sub> . <i>Science Bulletin</i> , <b>2020</b> , 65, 1349-1355	10.6	8
47	Distinct multiple fermionic states in a single topological metal. <i>Nature Communications</i> , <b>2018</b> , 9, 3002	17.4	8
46	Growing of fixed orientation plane of single crystal using the flux growth technique and ferrimagnetic ordering in Ni <sub>3</sub> TeO <sub>6</sub> of stacked 2D honeycomb rings. <i>Dalton Transactions</i> , <b>2013</b> , 42, 10439-10443	4.3	8

45	Large negative thermal expansion in the cubic phase of CaMn <sub>7</sub> O <sub>12</sub> . <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	8
44	Dynamic surface electronic reconstruction as symmetry-protected topological orders in topological insulator Bi <sub>2</sub> Se <sub>3</sub> . <i>Physical Review Materials</i> , <b>2018</b> , 2,	3.2	8
43	Oxidized-monolayer tunneling barrier for strong Fermi-level depinning in layered InSe transistors. <i>Npj 2D Materials and Applications</i> , <b>2019</b> , 3,	8.8	8
42	Optical spectroscopy study on pressure-induced phase transitions in the three-dimensional Dirac semimetal Cd <sub>3</sub> As <sub>2</sub> . <i>Physical Review B</i> , <b>2018</b> , 97,	3.3	7
41	Heavy Mediator at Quantum Dot/Graphene Heterojunction for Efficient Charge Carrier Transfer: Alternative Approach for High-Performance Optoelectronic Devices. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 26518-26527	9.5	6
40	Staggered band offset induced high performance opto-electronic devices: Atomically thin vertically stacked GaSe-SnS <sub>2</sub> van der Waals p-n heterostructures. <i>Applied Surface Science</i> , <b>2021</b> , 535, 147480	6.7	6
39	Tailoring the Co/Co active sites in a single perovskite as a bifunctional catalyst for the oxygen electrode reactions. <i>Dalton Transactions</i> , <b>2021</b> , 50, 7212-7222	4.3	6
38	High unsaturated room-temperature magnetoresistance in phase-engineered Mo <sub>x</sub> W <sub>1-x</sub> Te <sub>2</sub> +□ ultrathin films. <i>Journal of Materials Chemistry C</i> , <b>2019</b> , 7, 10996-11004	7.1	5
37	Surface Instability and Chemical Reactivity of ZrSiS and ZrSiSe Nodal-Line Semimetals. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1900438	15.6	5
36	GdTe: an antiferromagnetic semimetal. <i>Journal of Physics Condensed Matter</i> , <b>2019</b> , 31, 285802	1.8	5
35	Flexible and free-standing polyvinyl alcohol-reduced graphene oxide-Cu <sub>2</sub> O/CuO thin films for electrochemical reduction of carbon dioxide. <i>Journal of Applied Electrochemistry</i> , <b>2020</b> , 50, 979-991	2.6	5
34	Superposition of semiconductor and semi-metal properties of self-assembled 2D SnTiS <sub>3</sub> heterostructures. <i>Npj 2D Materials and Applications</i> , <b>2020</b> , 4,	8.8	5
33	Influence of GeP precipitates on the thermoelectric properties of P-type GeTe and Ge <sub>0.9</sub> P <sub>x</sub> Sb <sub>0.1</sub> Te compounds. <i>CrystEngComm</i> , <b>2018</b> , 20, 6449-6457	3.3	5
32	Correlation between non-Fermi-liquid behavior and superconductivity in (Ca, La)(Fe,Co)As <sub>2</sub> iron arsenides: A high-pressure study. <i>Physical Review B</i> , <b>2017</b> , 96,	3.3	4
31	Crystal growth and transport properties of Weyl semimetal TaAs. <i>Journal of Physics Condensed Matter</i> , <b>2018</b> , 30, 015803	1.8	4
30	Nickel-Based Hybrid Material for Electrochemical Oxygen Redox Reactions in an Alkaline Medium. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 6408-6415	6.1	3
29	Magnetic and orbital correlations in multiferroic CaMn <sub>7</sub> O <sub>12</sub> probed by x-ray resonant elastic scattering. <i>Physical Review B</i> , <b>2020</b> , 101,	3.3	3
28	Improved Oxygen Redox Activity by High-Valent Fe and Co <sup>3+</sup> Sites in the Perovskite LaNi <sub>1-x</sub> Fe <sub>0.5x</sub> Co <sub>0.5x</sub> O <sub>3</sub> . <i>ACS Applied Energy Materials</i> , <b>2022</b> , 5, 343-354	6.1	3

27	Electrosynthesis of carbon aerogel-modified AuNPs@quercetin via an environmentally benign method for hydrazine (HZ) and hydroxylamine (HA) detection. <i>New Journal of Chemistry</i> , <b>2020</b> , 44, 586-595	3.6	3
26	Carbon-supported cobalt (III) complex for direct reduction of oxygen in alkaline medium. <i>International Journal of Hydrogen Energy</i> , <b>2020</b> , 45, 24738-24748	6.7	3
25	Engineering an Indium Selenide van der Waals Interface for Multilevel Charge Storage. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 4618-4625	9.5	3
24	High magnetic anisotropy and magnon excitations in single crystals of the double spin chain compound PbMn <sub>2</sub> Ni <sub>6</sub> Te <sub>3</sub> O <sub>18</sub> . <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	3
23	Anisotropy in the magnetic interaction and lattice-orbital coupling of single crystal NiTeO. <i>Scientific Reports</i> , <b>2018</b> , 8, 15779	4.9	3
22	Stable Formamidinium-Based Centimeter Long Two-Dimensional Lead Halide Perovskite Single-Crystal for Long-Live Optoelectronic Applications. <i>Advanced Functional Materials</i> , 2112277	15.6	3
21	Antiferromagnetism of Li <sub>2</sub> Cu <sub>5</sub> Si <sub>4</sub> O <sub>14</sub> with alternating dimers and trimers in chains. <i>Physical Review B</i> , <b>2017</b> , 95,	3.3	2
20	Fully gapped superconductivity without sign reversal in the topological superconductor PbTaSe <sub>2</sub> . <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	2
19	Multilayer GaSe/InSe Heterointerface-Based Devices for Charge Transport and Optoelectronics. <i>ACS Applied Nano Materials</i> , <b>2020</b> , 3, 11769-11776	5.6	2
18	Anisotropic Magnetic Properties of Nonsymmorphic Semimetallic Single Crystal NdSbTe. <i>Crystal Growth and Design</i> , <b>2020</b> , 20, 6585-6591	3.5	2
17	Switching of the electron-phonon interaction in 1T <sub>⋄</sub> Se <sub>2</sub> assisted by hot carriers. <i>Physical Review B</i> , <b>2021</b> , 103,	3.3	2
16	Assessing the stability of Cd <sub>3</sub> As <sub>2</sub> Dirac semimetal in humid environments: the influence of defects, steps and surface oxidation. <i>Journal of Materials Chemistry C</i> , <b>2021</b> , 9, 1235-1244	7.1	2
15	Segmented Highly Reversible Thermochromic Layered Perovskite [(CH <sub>2</sub> ) <sub>2</sub> (NH <sub>3</sub> ) <sub>2</sub> ]CuCl <sub>4</sub> Crystal Coupled with an Inverse Magnetocaloric Effect. <i>ACS Applied Electronic Materials</i> , <b>2022</b> , 4, 521-530	4	1
14	Experimental study of multiple magnetic transitions in micrometer and nano-grain sized Ni <sub>3</sub> TeO <sub>6</sub> -type oxide. <i>Journal of Applied Physics</i> , <b>2020</b> , 128, 123902	2.5	1
13	Electron-electron interactions in the two-dimensional semiconductor InSe. <i>Physical Review B</i> , <b>2020</b> , 102,	3.3	1
12	Revealing the Quasi-Periodic Crystallographic Structure of Self-Assembled SnTiS <sub>3</sub> Misfit Compound. <i>Journal of Physical Chemistry C</i> , <b>2021</b> , 125, 9956-9964	3.8	1
11	Silicon-based two-dimensional chalcogenide of p-type semiconducting silicon telluride nanosheets for ultrahigh sensitive photodetector applications. <i>Journal of Materials Chemistry C</i> , <b>2021</b> , 9, 10478-10486	7.1	1
10	Water-assisted spin-flop antiferromagnetic behaviour of hydrophobic Cu-based metal-organic frameworks. <i>Dalton Transactions</i> , <b>2021</b> , 50, 5754-5758	4.3	1

9	Magnetotransport in hybrid InSe/monolayer graphene on SiC. <i>Nanotechnology</i> , <b>2021</b> , 32, 155704	3.4	1
8	Doping from CDW to topological superconductivity: The role of defects on phonon scattering in the non-centrosymmetric PbxTaSe2. <i>Low Temperature Physics</i> , <b>2021</b> , 47, 912-919	0.7	0
7	Achieving synergistic performance through highly compacted microcrystalline rods induced in Mo doped GeTe based compounds. <i>Materials Today Physics</i> , <b>2021</b> , 100571	8	0
6	Anisotropic transport in a possible quasi-one-dimensional topological candidate: TaNi2Te3. <i>Tungsten</i> , 1	4.6	0
5	Energy Barrier at Indium/Indium Selenide Nanosheet Interfaces: Implications of Metal-to-Insulator Transition for Field-Effect Transistor Modeling. <i>ACS Applied Nano Materials</i> , <b>2022</b> , 5, 1911-1916	5.6	0
4	Direct investigation of the reorientational dynamics of A-site cations in 2D organic-inorganic hybrid perovskite by solid-state NMR. <i>Nature Communications</i> , <b>2022</b> , 13, 1513	17.4	0
3	Atomic-scale observation of spontaneous hole doping and concomitant lattice instabilities in strained nickelate films. <i>New Journal of Physics</i> , <b>2022</b> , 24, 023011	2.9	
2	Two-Dimensional Layered NiLiP2S6 Crystals as an Efficient Bifunctional Electrocatalyst for Overall Water Splitting. <i>Catalysts</i> , <b>2021</b> , 11, 786	4	
1	Scanning tunneling microscopy and spectroscopy of NiTe2. <i>Surface Science</i> , <b>2022</b> , 722, 122099	1.8	