

# Raman Sankar

## List of Publications by Year in descending order

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127  
papers

10,397  
citations

147566

31  
h-index

31759

101  
g-index

128  
all docs

128  
docs citations

128  
times ranked

9799  
citing authors

#	ARTICLE	IF	CITATIONS
1	Anisotropic transport in a possible quasi-one-dimensional topological candidate: TaNi <sub>2</sub> Te <sub>3</sub> . Tungsten, 2023, 5, 325-331.	2.0	5
2	Achieving synergistic performance through highly compacted microcrystalline rods induced in Mo doped GeTe based compounds. Materials Today Physics, 2022, 22, 100571.	2.9	3
3	Segmented Highly Reversible Thermochromic Layered Perovskite [(CH <sub>2</sub> ) <sub>2</sub> (NH <sub>3</sub> ) <sub>2</sub> ] <sub>2</sub> CuCl <sub>4</sub> Crystal Coupled with an Inverse Magnetocaloric Effect. ACS Applied Electronic Materials, 2022, 4, 521-530.	2.0	11
4	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> . ACS Applied Energy Materials, 2022, 5, 343-354.	2.5	18
5	Atomic-scale observation of spontaneous hole doping and concomitant lattice instabilities in strained nickelate films. New Journal of Physics, 2022, 24, 023011.	1.2	0
6	Phase Modulation of Self-Gating in Ionic Liquid-Functionalized InSe Field-Effect Transistors. Nano Letters, 2022, 22, 2270-2276.	4.5	5
7	Energy Barrier at Indium/Indium Selenide Nanosheet Interfaces: Implications of Metal-to-Insulator Transition for Field-Effect Transistor Modeling. ACS Applied Nano Materials, 2022, 5, 1911-1916.	2.4	2
8	Direct investigation of the reorientational dynamics of A-site cations in 2D organic-inorganic hybrid perovskite by solid-state NMR. Nature Communications, 2022, 13, 1513.	5.8	6
9	Regimented Charge Transport Phenomena in Semiconductive Self-Assembled Rhenium Nanotubes. ACS Applied Materials & Interfaces, 2022, 14, 12423-12433.	4.0	1
10	Scanning tunneling microscopy and spectroscopy of NiTe <sub>2</sub> . Surface Science, 2022, 722, 122099.	0.8	1
11	Lorentz-Boost-Driven Magneto-Optics in a Dirac Nodal-Line Semimetal. Advanced Science, 2022, 9, .	5.6	7
12	Identification and Manipulation of Defects in Black Phosphorus. Journal of Physical Chemistry Letters, 2022, 13, 6276-6282.	2.1	1
13	Effect of aliovalent substituted highly disordered GeTe compound's thermoelectric performance. Journal of Alloys and Compounds, 2022, 922, 166221.	2.8	1
14	Staggered band offset induced high performance opto-electronic devices: Atomically thin vertically stacked GaSe-SnS <sub>2</sub> van der Waals p-n heterostructures. Applied Surface Science, 2021, 535, 147480.	3.1	16
15	Engineering an Indium Selenide van der Waals Interface for Multilevel Charge Storage. ACS Applied Materials & Interfaces, 2021, 13, 4618-4625.	4.0	12
16	High magnetic anisotropy and magnon excitations in single crystals of the double spin chain compound $PbMn_{18}O$ . Physical Review B, 2021, 103, .		
17	Revealing the Quasi-Periodic Crystallographic Structure of Self-Assembled SnTiS <sub>3</sub> Misfit Compound. Journal of Physical Chemistry C, 2021, 125, 9956-9964.	1.5	4
18	A Bi-Anti-Ambipolar Field Effect Transistor. ACS Nano, 2021, 15, 8686-8693.	7.3	30

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19	Multistage development of anisotropic magnetic correlations in the Co-based honeycomb lattice <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Na</mml:mi><mml:mn>2</mml:mn></mml:msub></mml:mrow></mml:math> Physical Review B, 2021, 103, .	1.1	22
20	Switching of the electron-phonon interaction in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>1</mml:mn><mml:mi>T</mml:mi></mml:mrow></mml:math> assisted by hot carriers. Physical Review B, 2021, 103, .	1.1	6
21	Two-Dimensional Layered NiLiP2S6 Crystals as an Efficient Bifunctional Electrocatalyst for Overall Water Splitting. Catalysts, 2021, 11, 786.	1.6	3
22	Large magnetoresistance and quantum oscillations in Sn<sub>0.05</sub>Pb<sub>0.95</sub>Te. Journal of Physics Condensed Matter, 2021, 33, 335501.	0.7	3
23	Dirac nodal line and Rashba spin-split surface states in nonsymmorphic ZrGeTe. New Journal of Physics, 2021, 23, 103019.	1.2	4
24	Silicon-based two-dimensional chalcogenide of p-type semiconducting silicon telluride nanosheets for ultrahigh sensitive photodetector applications. Journal of Materials Chemistry C, 2021, 9, 10478-10486.	2.7	5
25	Tailoring the Co<sup>4+</sup>/Co<sup>3+</sup> active sites in a single perovskite as a bifunctional catalyst for the oxygen electrode reactions. Dalton Transactions, 2021, 50, 7212-7222.	1.6	16
26	Water-assisted spin-flop antiferromagnetic behaviour of hydrophobic Cu-based metalâ€‘organic frameworks. Dalton Transactions, 2021, 50, 5754-5758.	1.6	5
27	Magnetotransport in hybrid InSe/monolayer graphene on SiC. Nanotechnology, 2021, 32, 155704.	1.3	3
28	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. Journal of Materials Chemistry C, 2021, 9, 1235-1244.	2.7	4
29	Commensurate and incommensurate magnetic structure of the moderately frustrated antiferromagnet Li2M(WO4)2 with M=Co,Ni. Physical Review B, 2021, 104, .	1.1	1
30	Doping from CDW to topological superconductivity: The role of defects on phonon scattering in the non-centrosymmetric Pb<sub>x</sub>TaSe2. Low Temperature Physics, 2021, 47, 912-919.	0.2	1
31	Magnetic spin order in the honeycomb structured <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>Pb</mml:mi><mml:mn>6</mml:mn></mml:msub><mml:msub><mml:mi>Co</mml:mi><mml:mn>9</mml:mn></mml:msub><mml:mo></mml:mo><mml:msub><mml:mi>Tj</mml:mi></mml:msub></mml:math> compound. Physical Review B, 2021, 104, .	1.1	1
32	Highâ€‘Performance Flexible Broadband Photodetectors Based on 2D Hafnium Selenosulfide Nanosheets. Advanced Electronic Materials, 2020, 6, 1900794.	2.6	24
33	Electrosynthesis of carbon aerogel-modified AuNPs@quercetin <i>via</i> an environmentally benign method for hydrazine (HZ) and hydroxylamine (HA) detection. New Journal of Chemistry, 2020, 44, 586-595.	1.4	9
34	Fully gapped superconductivity without sign reversal in the topological superconductor PbTaSe2. Physical Review B, 2020, 102, .	1.1	2
35	Superposition of semiconductor and semi-metal properties of self-assembled 2D SnTiS3 heterostructures. Npj 2D Materials and Applications, 2020, 4, .	3.9	6
36	Multilayer GaSe/InSe Heterointerface-Based Devices for Charge Transport and Optoelectronics. ACS Applied Nano Materials, 2020, 3, 11769-11776.	2.4	18

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37	Carbon-supported cobalt (III) complex for direct reduction of oxygen in alkaline medium. International Journal of Hydrogen Energy, 2020, 45, 24738-24748.	3.8	4
38	Unprecedented random lasing in 2D organolead halide single-crystalline perovskite microrods. Nanoscale, 2020, 12, 18269-18277.	2.8	19
39	Anisotropic Magnetic Properties of Nonsymmorphic Semimetallic Single Crystal NdSbTe. Crystal Growth and Design, 2020, 20, 6585-6591.	1.4	11
40	Experimental study of multiple magnetic transitions in micrometer and nano-grain sized Ni <sub>3</sub> TeO <sub>6</sub> -type oxide. Journal of Applied Physics, 2020, 128, 123902.	1.1	5
41	Electron-electron interactions in the two-dimensional semiconductor InSe. Physical Review B, 2020, 102, .	1.1	4
42	Anisotropic Transport and Quantum Oscillations in the Quasi-One-Dimensional TaNiTe <sub>5</sub> : Evidence for the Nontrivial Band Topology. Journal of Physical Chemistry Letters, 2020, 11, 7782-7789.	2.1	21
43	Synergistic optimization of thermoelectric performance in earth-abundant Cu <sub>2</sub> ZnSnS <sub>4</sub> by inclusion of graphene nanosheets. Nanotechnology, 2020, 31, 365402.	1.3	13
44	Modulating Charge Separation with Hexagonal Boron Nitride Mediation in Vertical Van der Waals Heterostructures. ACS Applied Materials & Interfaces, 2020, 12, 26213-26221.	4.0	14
45	Evidence for nematic superconductivity of topological surface states in PbTaSe <sub>2</sub> . Science Bulletin, 2020, 65, 1349-1355.	4.3	27
46	Ultralow Schottky Barriers in Hexagonal Boron Nitride-Encapsulated Monolayer WSe <sub>2</sub> Tunnel Field-Effect Transistors. ACS Applied Materials & Interfaces, 2020, 12, 18667-18673.	4.0	22
47	Field-free platform for Majorana-like zero mode in superconductors with a topological surface state. Physical Review B, 2020, 101, .	1.1	22
48	Nickel-Based Hybrid Material for Electrochemical Oxygen Redox Reactions in an Alkaline Medium. ACS Applied Energy Materials, 2020, 3, 6408-6415.	2.5	6
49	Magnetic and orbital correlations in multiferroic CaMn <sub>7</sub> O <sub>12</sub> probed by x-ray resonant elastic scattering. Physical Review B, 2020, 101, .	1.1	3
50	Flexible and free-standing polyvinyl alcohol-reduced graphene oxide-Cu <sub>2</sub> O/CuO thin films for electrochemical reduction of carbon dioxide. Journal of Applied Electrochemistry, 2020, 50, 979-991.	1.5	9
51	Doping Engineered InSe Flakes for High Mobility Phototransistor. , 2020, , .		1
52	Crystal Growth and Magnetic Properties of Topological Nodal-Line Semimetal GdSbTe with Antiferromagnetic Spin Ordering. Inorganic Chemistry, 2019, 58, 11730-11737.	1.9	26
53	Heavy Mediator at Quantum Dot/Graphene Heterojunction for Efficient Charge Carrier Transfer: Alternative Approach for High-Performance Optoelectronic Devices. ACS Applied Materials & Interfaces, 2019, 11, 26518-26527.	4.0	14
54	High unsaturated room-temperature magnetoresistance in phase-engineered Mo <sub>x</sub> W <sub>1-x</sub> Te <sub>2</sub> ultrathin films. Journal of Materials Chemistry C, 2019, 7, 10996-11004.	2.7	9

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55	Two-gap superconductivity and topological surface states in TaOsSi. <i>Physical Review B</i> , 2019, 100, .	1.1	16
56	Extreme magnetoresistance and pressure-induced superconductivity in the topological semimetal candidate YBi. <i>Physical Review B</i> , 2019, 99, .	1.1	17
57	Electrochemical sensing of free radical antioxidant diphenylamine cations (DPAH <sup>+</sup> ) with carbon interlaced nanoflake-assembled Mg <sub>x</sub> Ni <sub>9x</sub> S <sub>8</sub> microspheres. <i>CrystEngComm</i> , 2019, 21, 724-735.	1.3	21
58	Sn-Doping Enhanced Ultrahigh Mobility In <sub>1-x</sub> Sn <sub>x</sub> Se Phototransistor. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 24269-24278.	4.0	17
59	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> , 2019, 123, 15345-15353.	1.5	16
60	Surface Reconstruction, Oxidation Mechanism, and Stability of Cd <sub>3</sub> As <sub>2</sub> . <i>Advanced Functional Materials</i> , 2019, 29, 1900965.	7.8	13
61	Surface Instability and Chemical Reactivity of ZrSiS and ZrSiSe Nodal-Line Semimetals. <i>Advanced Functional Materials</i> , 2019, 29, 1900438.	7.8	6
62	Topological nature of step-edge states on the surface of the topological crystalline insulator $\chi_{\text{Pb}} > 0.7 \chi_{\text{Bi}}$ <i>Physical Review B</i> , 2019, 99, .	1.1	12
63	Gd <sub>2</sub> Te <sub>3</sub> : an antiferromagnetic semimetal. <i>Journal of Physics Condensed Matter</i> , 2019, 31, 285802.	0.7	8
64	High-Temperature Defect-Induced Hopping Conduction in Multilayered Germanium Sulfide for Optoelectronic Applications in Harsh Environments. <i>ACS Applied Nano Materials</i> , 2019, 2, 2169-2175.	2.4	15
65	Oxidized-monolayer tunneling barrier for strong Fermi-level depinning in layered InSe transistors. <i>Npj 2D Materials and Applications</i> , 2019, 3, .	3.9	19
66	Hybrid InSe Nanosheets and MoS <sub>2</sub> Quantum Dots for High-Performance Broadband Photodetectors and Photovoltaic Cells. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801336.	1.9	23
67	Low-Threshold Lasing from 2D Homologous Organic-Inorganic Hybrid Ruddlesden-Popper Perovskite Single Crystals. <i>Nano Letters</i> , 2018, 18, 3221-3228.	4.5	177
68	Interplay of orbital effects and nanoscale strain in topological crystalline insulators. <i>Nature Communications</i> , 2018, 9, 1550.	5.8	26
69	Superconductivity in a Misfit Layered (SnS) <sub>1.15</sub> (TaS <sub>2</sub> ) Compound. <i>Chemistry of Materials</i> , 2018, 30, 1373-1378.	3.2	23
70	Ultrasensitive tunability of the direct bandgap of 2D InSe flakes via strain engineering. <i>2D Materials</i> , 2018, 5, 021002.	2.0	75
71	Evidence of s-wave superconductivity in the noncentrosymmetric La7Ir3. <i>Scientific Reports</i> , 2018, 8, 651.	1.6	19
72	Reinvestigating the surface and bulk electronic properties of Cd <sub>3</sub> As <sub>2</sub> . <i>Physical Review B</i> , 2018, 97, .	1.1	12

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73	Energy scale of Dirac electrons in Cd <sub>3</sub> As <sub>2</sub> . Physical Review B, 2018, 97, .	1.1	16
74	Crystal growth and transport properties of Weyl semimetal TaAs. Journal of Physics Condensed Matter, 2018, 30, 015803.	0.7	12
75	Intrinsic Carrier Transport of Phase-Pure Homologous 2D Organolead Halide Hybrid Perovskite Single Crystals. Small, 2018, 14, e1803763.	5.2	42
76	Surface termination dependent quasiparticle scattering interference and magneto-transport study on ZrSiS. New Journal of Physics, 2018, 20, 103025.	1.2	15
77	Anisotropy in the magnetic interaction and lattice-orbital coupling of single crystal Ni <sub>3</sub> TeO <sub>6</sub> . Scientific Reports, 2018, 8, 15779.	1.6	6
78	Influence of GeP precipitates on the thermoelectric properties of P-type GeTe and Ge <sub>0.9</sub> xP <sub>x</sub> Sb <sub>0.1</sub> Te compounds. CrystEngComm, 2018, 20, 6449-6457.	1.3	7
79	Ultra-high performance flexible piezopotential gated In <sub>1-x</sub> Sn <sub>x</sub> Se phototransistor. Nanoscale, 2018, 10, 18642-18650.	2.8	13
80	High-Performance InSe Transistors with Ohmic Contact Enabled by Nonrectifying Barrier-Type Indium Electrodes. ACS Applied Materials & Interfaces, 2018, 10, 33450-33456.	4.0	35
81	Optical spectroscopy study on pressure-induced phase transitions in the three-dimensional Dirac semimetal $Cd_3As_2$ . Physical Review B, 2018, 97, .	1.1	10
82	Topological Type-II Dirac Fermions Approaching the Fermi Level in a Transition Metal Dichalcogenide NiTe <sub>2</sub> . Chemistry of Materials, 2018, 30, 4823-4830.	3.2	101
83	Emergence of a Metal-Insulator Transition and High-Temperature Charge-Density Waves in VSe <sub>2</sub> at the Monolayer Limit. Nano Letters, 2018, 18, 5432-5438.	4.5	170
84	Distinct multiple fermionic states in a single topological metal. Nature Communications, 2018, 9, 3002.	5.8	16
85	Enhanced Light Emission from the Ridge of Two-Dimensional InSe Flakes. Nano Letters, 2018, 18, 5078-5084.	4.5	35
86	Anisotropic magnetotransport and extremely large magnetoresistance in NbAs <sub>2</sub> single crystals. Scientific Reports, 2018, 8, 6414.	1.6	20
87	Tuning Rashba Spin-Orbit Coupling in Gated Multilayer InSe. Nano Letters, 2018, 18, 4403-4408.	4.5	58
88	Inducing Strong Superconductivity in WTe <sub>2</sub> by a Proximity Effect. ACS Nano, 2018, 12, 7185-7196.	7.3	48
89	Dynamic surface electronic reconstruction as symmetry-protected topological orders in topological insulator $Bi_2Se_3$ . Physical Review Materials, 2018, 2, .	0.9	9
90	3D Dirac semimetal $Cd_3As_2$ : A review of material properties. Physical Review Materials, 2018, 2, .	0.3	36

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91	Crystal growth of Dirac semimetal ZrSiS with high magnetoresistance and mobility. Scientific Reports, 2017, 7, 40603.	1.6	62
92	Polymorphic Layered MoTe <sub>2</sub> from Semiconductor, Topological Insulator, to Weyl Semimetal. Chemistry of Materials, 2017, 29, 699-707.	3.2	52
93	Surface Oxidation Doping to Enhance Photogenerated Carrier Separation Efficiency for Ultrahigh Gain Indium Selenide Photodetector. ACS Photonics, 2017, 4, 2930-2936.	3.2	44
94	Topological phase transition under pressure in the topological nodal-line superconductor $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:mi} \rangle \text{PbTaSe} \langle \text{mml:mi} \rangle \langle \text{mml:mn} \rangle 2 \langle \text{mml:mn} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:msub} \rangle \langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle$ Physical Review B, 2017, 96, .	1.1	14
95	Observation of ultrahigh mobility surface states in a topological crystalline insulator by infrared spectroscopy. Nature Communications, 2017, 8, 366. Tunability of the topological nodal-line semimetal phase in $\langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:mi} \rangle \text{ZrSi} \langle \text{mml:mi} \rangle \langle \text{mml:mi} \rangle \text{X} \langle \text{mml:mi} \rangle \langle \text{mml:mrow} \rangle \langle \text{mml:math} \text{xmlns:mml="http://www.w3.org/1998/Math/MathML"} \rangle$	5.8	12
96			

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109	Tunable Photoinduced Carrier Transport of a Black Phosphorus Transistor with Extended Stability Using a Light-Sensitized Encapsulated Layer. ACS Photonics, 2016, 3, 1102-1108.	3.2	20
110	Topological nodal-line fermions in spin-orbit metal PbTaSe <sub>2</sub> . Nature Communications, 2016, 7, 10556.	5.8	688
111	High photosensitivity and broad spectral response of multi-layered germanium sulfide transistors. Nanoscale, 2016, 8, 2284-2292.	2.8	129
112	Topological phase diagram and saddle point singularity in a tunable topological crystalline insulator. Physical Review B, 2015, 92, .	1.1	25
113	Large single crystal growth, transport property and spectroscopic characterizations of three-dimensional Dirac semimetal Cd <sub>3</sub> As <sub>2</sub> . Scientific Reports, 2015, 5, 12966.	1.6	31
114	Dirac mass generation from crystal symmetry breaking on the surfaces of topological crystalline insulators. Nature Materials, 2015, 14, 318-324.	13.3	113
115	Discovery of a Weyl fermion semimetal and topological Fermi arcs. Science, 2015, 349, 613-617.	6.0	2,753
116	Enhanced thermoelectric performance of GeTe-rich germanium antimony tellurides through the control of composition and structure. CrystEngComm, 2015, 17, 3440-3445.	1.3	25
117	Intrinsic Electron Mobility Exceeding $10^3 \text{ cm}^2/(\text{V s})$ in Multilayer InSe FETs. Nano Letters, 2015, 15, 3815-3819.	4.5	354
118	Strain engineering Dirac surface states in heteroepitaxial topological crystalline insulator thin films. Nature Nanotechnology, 2015, 10, 849-853.	15.6	73
119	Observation of Fermi arc surface states in a topological metal. Science, 2015, 347, 294-298.	6.0	603
120	Two-step antiferromagnetic transition and moderate triangular frustration in Li <sub>2</sub> Co(WO <sub>4</sub> ) <sub>2</sub> . Physical Review B, 2014, 90, .	1.1	26
121	Observation of a three-dimensional topological Dirac semimetal phase in high-mobility Cd <sub>3</sub> As <sub>2</sub> . Nature Communications, 2014, 5, 3786.	5.8	1,166
122	High Performance and Bendable Few-Layered InSe Photodetectors with Broad Spectral Response. Nano Letters, 2014, 14, 2800-2806.	4.5	690
123	Mapping the unconventional orbital texture in topological crystalline insulators. Nature Physics, 2014, 10, 572-577.	6.5	79
124	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. Dalton Transactions, 2013, 42, 10439.	1.6	16
125	Observation of Dirac Node Formation and Mass Acquisition in a Topological Crystalline Insulator. Science, 2013, 341, 1496-1499.	6.0	252
126	Observation of a topological crystalline insulator phase and topological phase transition in Pb <sub>1-x</sub> SnxTe. Nature Communications, 2012, 3, 1192.	5.8	574



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127	Stable Formamidinium-Based Centimeter Long Two-Dimensional Lead Halide Perovskite Single-Crystal for Long-Live Optoelectronic Applications. <i>Advanced Functional Materials</i> , 0, , 2112277.	7.8	8