

Raman Sankar

List of Publications by Year in descending order

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127
papers

10,397
citations

147566

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31759

101
g-index

128
all docs

128
docs citations

128
times ranked

9799
citing authors

#	ARTICLE	IF	CITATIONS
19	Topological Dirac surface states and superconducting pairing correlations in PbTaSe_2 . Physical Review B, 2016, 93, .		
20	Ultra-Thin Layered Ternary Single Crystals $[\text{Sn}_x\text{Se}_{1-x}]_2$ with Bandgap Engineering for High Performance Phototransistors on Versatile Substrates. Advanced Functional Materials, 2016, 26, 3630-3638.	7.8	77
21	Ultrasensitive tunability of the direct bandgap of 2D InSe flakes via strain engineering. 2D Materials, 2018, 5, 021002.	2.0	75
22	Strain engineering Dirac surface states in heteroepitaxial topological crystalline insulator thin films. Nature Nanotechnology, 2015, 10, 849-853.	15.6	73
23	Crystal growth of Dirac semimetal ZrSiS with high magnetoresistance and mobility. Scientific Reports, 2017, 7, 40603.	1.6	62
24	Tuning Rashba Spin-Orbit Coupling in Gated Multilayer InSe. Nano Letters, 2018, 18, 4403-4408.	4.5	58
25	Polymorphic Layered MoTe_2 from Semiconductor, Topological Insulator, to Weyl Semimetal. Chemistry of Materials, 2017, 29, 699-707.	3.2	52
26	Inducing Strong Superconductivity in WTe_2 by a Proximity Effect. ACS Nano, 2018, 12, 7185-7196.	7.3	48
27	Surface Oxidation Doping to Enhance Photogenerated Carrier Separation Efficiency for Ultrahigh Gain Indium Selenide Photodetector. ACS Photonics, 2017, 4, 2930-2936.	3.2	44
28	Observation of the spin-polarized surface state in a noncentrosymmetric superconductor BiPd. Nature Communications, 2016, 7, 13315.	5.8	42
29	Intrinsic Carrier Transport of Phase-Pure Homologous 2D Organolead Halide Hybrid Perovskite Single Crystals. Small, 2018, 14, e1803763.	5.2	42
30	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
31	Enhanced Light Emission from the Ridge of Two-Dimensional InSe Flakes. Nano Letters, 2018, 18, 5078-5084.	4.5	35
32	Optical phonon dynamics and electronic fluctuations in the Dirac semimetal Cd_3As_2 . Physical Review B, 2015, 91, 041408.	1.1	33
33	Large single crystal growth, transport property and spectroscopic characterizations of three-dimensional Dirac semimetal Cd_3As_2 . Scientific Reports, 2015, 5, 12966.	1.6	31
34	A Bi-Anti-Ambipolar Field Effect Transistor. ACS Nano, 2021, 15, 8686-8693.	7.3	30
35	Evidence for nematic superconductivity of topological surface states in PbTaSe_2 . Science Bulletin, 2020, 65, 1349-1355.	4.3	27
36	Two-step antiferromagnetic transition and moderate triangular frustration in $\text{Li}_2\text{Co}(\text{WO}_4)_2$. Physical Review B, 2014, 90, .	1.1	26

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37	Interplay of orbital effects and nanoscale strain in topological crystalline insulators. Nature Communications, 2018, 9, 1550.	5.8	26
38	Crystal Growth and Magnetic Properties of Topological Nodal-Line Semimetal GdSbTe with Antiferromagnetic Spin Ordering. Inorganic Chemistry, 2019, 58, 11730-11737.	1.9	26
39	Topological phase diagram and saddle point singularity in a tunable topological crystalline insulator. Physical Review B, 2015, 92, .	1.1	25
40	Enhanced thermoelectric performance of GeTe-rich germanium antimony tellurides through the control of composition and structure. CrystEngComm, 2015, 17, 3440-3445.	1.3	25
41	High-Performance Flexible Broadband Photodetectors Based on 2D Hafnium Selenosulfide Nanosheets. Advanced Electronic Materials, 2020, 6, 1900794.	2.6	24
42	Superconductivity in a Misfit Layered (SnS) _{1.15} (TaS ₂) Compound. Chemistry of Materials, 2018, 30, 1373-1378.	3.2	23
43	Hybrid InSe Nanosheets and MoS ₂ Quantum Dots for High-Performance Broadband Photodetectors and Photovoltaic Cells. Advanced Materials Interfaces, 2019, 6, 1801336.	1.9	23
44	Ultralow Schottky Barriers in Hexagonal Boron Nitride-Encapsulated Monolayer WSe ₂ Tunnel Field-Effect Transistors. ACS Applied Materials & Interfaces, 2020, 12, 18667-18673.	4.0	22
45	Field-free platform for Majorana-like zero mode in superconductors with a topological surface state. Physical Review B, 2020, 101, .	1.1	22
46	Multistage development of anisotropic magnetic correlations in the Co-based honeycomb lattice Na_2PdSn_4 Physical Review B, 2021, 103, .	1.1	22
47	A homologue of the Dirac nodal arc semimetal PtSn_4 : PtSn_4 : A homologue of the Dirac nodal arc semimetal Physical Review B, 2021, 103, .	0.9	22
48	Electrochemical sensing of free radical antioxidant diphenylamine cations (DPAH ^{•+}) with carbon interlaced nanoflake-assembled Mg _x Ni ₉ S ₈ microspheres. CrystEngComm, 2019, 21, 724-735.	1.3	21
49	Anisotropic Transport and Quantum Oscillations in the Quasi-One-Dimensional TaNiTe ₅ : Evidence for the Nontrivial Band Topology. Journal of Physical Chemistry Letters, 2020, 11, 7782-7789.	2.1	21
50	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
51	Anisotropic magnetotransport and extremely large magnetoresistance in NbAs ₂ single crystals. Scientific Reports, 2018, 8, 6414.	1.6	20
52	Evidence of s-wave superconductivity in the noncentrosymmetric La7Ir3. Scientific Reports, 2018, 8, 651.	1.6	19
53	Oxidized-monolayer tunneling barrier for strong Fermi-level depinning in layered InSe transistors. Npj 2D Materials and Applications, 2019, 3, .	3.9	19
54	Unprecedented random lasing in 2D organolead halide single-crystalline perovskite microrods. Nanoscale, 2020, 12, 18269-18277.	2.8	19

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55	Quasiparticle interference in ZrSiS: Strongly band-selective scattering depending on impurity lattice site. <i>Physical Review B</i> , 2017, 96, .	1.1	18
56	Multilayer GaSe/InSe Heterointerface-Based Devices for Charge Transport and Optoelectronics. <i>ACS Applied Nano Materials</i> , 2020, 3, 11769-11776.	2.4	18
57	Improved Oxygen Redox Activity by High-Valent Fe and Co^{3+} Sites in the Perovskite $\text{LaNi}_{1-x}\text{Fe}_{0.5x}\text{Co}_{0.5x}\text{O}_3$. <i>ACS Applied Energy Materials</i> , 2022, 5, 343-354.	2.5	18
58	Reinvestigating the surface and bulk electronic properties of CdMn_2P_2 . <i>Physical Review B</i> , 2018, 97, .	1.3	17
59	Extreme magnetoresistance and pressure-induced superconductivity in the topological semimetal candidate YBi. <i>Physical Review B</i> , 2019, 99, .	1.1	17
60	Sn-Doping Enhanced Ultrahigh Mobility $\text{In}_{1-x}\text{Sn}_x\text{Se}$ Phototransistor. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 24269-24278.	4.0	17
61	Growing of fixed orientation plane of single crystal using the flux growth technique and ferrimagnetic ordering in Ni_3TeO_6 of stacked 2D honeycomb rings. <i>Dalton Transactions</i> , 2013, 42, 10439.	1.6	16
62	Large transverse Hall-like signal in topological Dirac semimetal Cd_3As_2 . <i>Scientific Reports</i> , 2016, 6, 27487.	1.6	16
63	Energy scale of Dirac electrons in Cd_3As_2 . <i>Physical Review B</i> , 2018, 97, .	1.1	16
64	Distinct multiple fermionic states in a single topological metal. <i>Nature Communications</i> , 2018, 9, 3002.	5.8	16
65	Two-gap superconductivity and topological surface states in TaOsSi. <i>Physical Review B</i> , 2019, 100, .	1.1	16
66	Thickness-Dependent Resonant Raman and $E\hbar^2$ Photoluminescence Spectra of Indium Selenide and Indium Selenide/Graphene Heterostructures. <i>Journal of Physical Chemistry C</i> , 2019, 123, 15345-15353.	1.5	16
67	Staggered band offset induced high performance opto-electronic devices: Atomically thin vertically stacked GaSe-SnS ₂ van der Waals p-n heterostructures. <i>Applied Surface Science</i> , 2021, 535, 147480.	3.1	16
68	Tailoring the $\text{Co}^{4+}/\text{Co}^{3+}$ active sites in a single perovskite as a bifunctional catalyst for the oxygen electrode reactions. <i>Dalton Transactions</i> , 2021, 50, 7212-7222.	1.6	16
69	Surface termination dependent quasiparticle scattering interference and magneto-transport study on ZrSiS. <i>New Journal of Physics</i> , 2018, 20, 103025.	1.2	15
70	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
71	Topological phase transition under pressure in the topological nodal-line superconductor PbTaSe_2 . <i>Physical Review B</i> , 2017, 96, .	1.1	14
72	Heavy Mediator at Quantum Dot/Graphene Heterojunction for Efficient Charge Carrier Transfer: Alternative Approach for High-Performance Optoelectronic Devices. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 26518-26527.	4.0	14

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73	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
74	Ultra-high performance flexible piezopotential gated $\text{In}_x\text{Sn}_x\text{Se}$ phototransistor. Nanoscale, 2018, 10, 18642-18650.	2.8	13
75	Surface Reconstruction, Oxidation Mechanism, and Stability of Cd_3As_2 . Advanced Functional Materials, 2019, 29, 1900965.	7.8	13
76	Synergistic optimization of thermoelectric performance in earth-abundant $\text{Cu}_2\text{ZnSnS}_4$ by inclusion of graphene nanosheets. Nanotechnology, 2020, 31, 365402.	1.3	13
77	Observation of ultrahigh mobility surface states in a topological crystalline insulator by infrared spectroscopy. Nature Communications, 2017, 8, 366.	5.8	12
78	Crystal growth and transport properties of Weyl semimetal TaAs. Journal of Physics Condensed Matter, 2018, 30, 015803.	0.7	12
79	Topological nature of step-edge states on the surface of the topological crystalline insulator Pb_2Te . Physical Review B, 2019, 99, .	1.1	12
80	Engineering an Indium Selenide van der Waals Interface for Multilevel Charge Storage. ACS Applied Materials & Interfaces, 2021, 13, 4618-4625.	4.0	12
81	Large negative thermal expansion in the cubic phase of $\text{CaMn}_7\text{O}_{12}$. Physical Review B, 2017, 95, .	1.1	11
82	Anisotropic Magnetic Properties of Nonsymmorphic Semimetallic Single Crystal NdSbTe . Crystal Growth and Design, 2020, 20, 6585-6591.	1.4	11
83	Segmented Highly Reversible Thermochromic Layered Perovskite $[(\text{CH}_3\text{NH}_3)_2(\text{NH}_4)_2]\text{CuCl}_4$ Crystal Coupled with an Inverse Magnetocaloric Effect. ACS Applied Electronic Materials, 2022, 4, 521-530.	2.0	11
84	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
85	High unsaturated room-temperature magnetoresistance in phase-engineered $\text{Mo}_x\text{W}_{1-x}\text{Te}_2$ ultrathin films. Journal of Materials Chemistry C, 2019, 7, 10996-11004.	2.7	9
86	Electrosynthesis of carbon aerogel-modified AuNPs@quercetin via an environmentally benign method for hydrazine (HZ) and hydroxylamine (HA) detection. New Journal of Chemistry, 2020, 44, 586-595.	1.4	9
87	Flexible and free-standing polyvinyl alcohol-reduced graphene oxide-Cu ₂ O/CuO thin films for electrochemical reduction of carbon dioxide. Journal of Applied Electrochemistry, 2020, 50, 979-991.	1.5	9
88	Dynamic surface electronic reconstruction as symmetry-protected topological orders in topological insulator Bi_2Te_3 . Physical Review Materials, 2018, 2, .	0.9	9
89	Gd_2Te_3 : an antiferromagnetic semimetal. Journal of Physics Condensed Matter, 2019, 31, 285802.	0.7	8
90	Stable Formamidinium-Based Centimeter Long Two-Dimensional Lead Halide Perovskite Single-Crystal for Long-Live Optoelectronic Applications. Advanced Functional Materials, 0, , 2112277.	7.8	8

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91	Correlation between non-Fermi-liquid behavior and superconductivity in (Ca, La)(Fe,Co) iron arsenides: A high-pressure study. <i>Physical Review B</i> , 2017, 96, .		
92	Influence of GeP precipitates on the thermoelectric properties of P-type GeTe and $\text{Ge}_{0.9\text{As}}\text{P}_{0.1}\text{Sb}_{0.1}\text{Te}$ compounds. <i>CrystEngComm</i> , 2018, 20, 6449-6457.	1.3	7
93	Lorentz-Boost-Driven Magneto-Optics in a Dirac Nodal-Line Semimetal. <i>Advanced Science</i> , 2022, 9, .	5.6	7
94	Anisotropy in the magnetic interaction and lattice-orbital coupling of single crystal Ni_3TeO_6 . <i>Scientific Reports</i> , 2018, 8, 15779.	1.6	6
95	Surface Instability and Chemical Reactivity of ZrSiS and ZrSiSe Nodal-Line Semimetals. <i>Advanced Functional Materials</i> , 2019, 29, 1900438.	7.8	6
96	Superposition of semiconductor and semi-metal properties of self-assembled 2D SnTiS_3 heterostructures. <i>Npj 2D Materials and Applications</i> , 2020, 4, .	3.9	6
97	Nickel-Based Hybrid Material for Electrochemical Oxygen Redox Reactions in an Alkaline Medium. <i>ACS Applied Energy Materials</i> , 2020, 3, 6408-6415.	2.5	6
98	Switching of the electron-phonon interaction in LiTiO_2 assisted by hot carriers. <i>Physical Review B</i> , 2021, 103, .	4.1	6
99	Direct investigation of the reorientational dynamics of A-site cations in 2D organic-inorganic hybrid perovskite by solid-state NMR. <i>Nature Communications</i> , 2022, 13, 1513.	5.8	6
100	Antiferromagnetism of Li_2O_{14} with alternating dimers and trimers in chains. <i>Physical Review B</i> , 2017, 95, .	1.1	5
101	Experimental study of multiple magnetic transitions in micrometer and nano-grain sized Ni_3TeO_6 -type oxide. <i>Journal of Applied Physics</i> , 2020, 128, 123902.	1.1	5
102	Anisotropic transport in a possible quasi-one-dimensional topological candidate: TaNi_2Te_3 . <i>Tungsten</i> , 2023, 5, 325-331.	2.0	5
103	Silicon-based two-dimensional chalcogenide of p-type semiconducting silicon telluride nanosheets for ultrahigh sensitive photodetector applications. <i>Journal of Materials Chemistry C</i> , 2021, 9, 10478-10486.	2.7	5
104	Water-assisted spin-flop antiferromagnetic behaviour of hydrophobic Cu-based metal-organic frameworks. <i>Dalton Transactions</i> , 2021, 50, 5754-5758.	1.6	5
105	Phase Modulation of Self-Gating in Ionic Liquid-Functionalized InSe Field-Effect Transistors. <i>Nano Letters</i> , 2022, 22, 2270-2276.	4.5	5
106	Carbon-supported cobalt (III) complex for direct reduction of oxygen in alkaline medium. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 24738-24748.	3.8	4
107	Electron-electron interactions in the two-dimensional semiconductor InSe. <i>Physical Review B</i> , 2020, 102, .	1.1	4
108	Revealing the Quasi-Periodic Crystallographic Structure of Self-Assembled SnTiS_3 Misfit Compound. <i>Journal of Physical Chemistry C</i> , 2021, 125, 9956-9964.	1.5	4

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109	Dirac nodal line and Rashba spin-split surface states in nonsymmorphic ZrGeTe. <i>New Journal of Physics</i> , 2021, 23, 103019.	1.2	4
110	Assessing the stability of Cd ₃ As ₂ Dirac semimetal in humid environments: the influence of defects, steps and surface oxidation. <i>Journal of Materials Chemistry C</i> , 2021, 9, 1235-1244.	2.7	4
111	Magnetic and orbital correlations in multiferroic CaMn ₇ O ₁₂ probed by x-ray resonant elastic scattering. <i>Physical Review B</i> , 2020, 101, .	1.1	3
112	High magnetic anisotropy and magnon excitations in single crystals of the double spin chain compound PbMn_2O_8 . <i>Physical Review B</i> , 2021, 103, .		
113	Two-Dimensional Layered NiLiP ₂ S ₆ Crystals as an Efficient Bifunctional Electrocatalyst for Overall Water Splitting. <i>Catalysts</i> , 2021, 11, 786.	1.6	3
114	Large magnetoresistance and quantum oscillations in Sn _{0.05} Pb _{0.95} Te. <i>Journal of Physics Condensed Matter</i> , 2021, 33, 335501.	0.7	3
115	Magnetotransport in hybrid InSe/monolayer graphene on SiC. <i>Nanotechnology</i> , 2021, 32, 155704.	1.3	3
116	Achieving synergistic performance through highly compacted microcrystalline rods induced in Mo doped GeTe based compounds. <i>Materials Today Physics</i> , 2022, 22, 100571.	2.9	3
117	Fully gapped superconductivity without sign reversal in the topological superconductor PbTaSe ₂ . <i>Physical Review B</i> , 2020, 102, .	1.1	2
118	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> , 2022, 5, 1911-1916.	2.4	2
119	Doping Engineered InSe Flakes for High Mobility Phototransistor. , 2020, , .		1
120	Commensurate and incommensurate magnetic structure of the moderately frustrated antiferromagnet Li ₂ M(WO ₄) ₂ with M=Co,Ni. <i>Physical Review B</i> , 2021, 104, .	1.1	1
121	Doping from CDW to topological superconductivity: The role of defects on phonon scattering in the non-centrosymmetric PbxTaSe ₂ . <i>Low Temperature Physics</i> , 2021, 47, 912-919.	0.2	1
122	Magnetic spin order in the honeycomb structured Pb_6Co_9 compound. <i>Physical Review B</i> , 2021, 104, .	1.1	1
123	Regimented Charge Transport Phenomena in Semiconductive Self-Assembled Rhenium Nanotubes. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 12423-12433.	4.0	1
124	Scanning tunneling microscopy and spectroscopy of NiTe ₂ . <i>Surface Science</i> , 2022, 722, 122099.	0.8	1
125	Identification and Manipulation of Defects in Black Phosphorus. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 6276-6282.	2.1	1
126	Effect of aliovalent substituted highly disordered GeTe compound's thermoelectric performance. <i>Journal of Alloys and Compounds</i> , 2022, 922, 166221.	2.8	1

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127	Atomic-scale observation of spontaneous hole doping and concomitant lattice instabilities in strained nickelate films. <i>New Journal of Physics</i> , 2022, 24, 023011.	1.2	0