Raman Sankar

List of Publications by Year in Descending Order

116 papers	7,816 citations	27 h-index	88 g-index
128 ext. papers	9,370 ext. citations	7.8 avg, IF	5.55 L-index

#	Paper	IF	Citations
116	Segmented Highly Reversible Thermochromic Layered Perovskite [(CH2)2(NH3)2]CuCl4 Crystal Coupled with an Inverse Magnetocaloric Effect. *ACS Applied Electronic Materials*, **2022**, 4, 521-530	4	1
115	Improved Oxygen Redox Activity by High-Valent Fe and Co3+ Sites in the Perovskite LaNi1−xFe0.5xCo0.5xO3. *ACS Applied Energy Materials*, **2022**, 5, 343-354	6.1	3
114	Atomic-scale observation of spontaneous hole doping and concomitant lattice instabilities in strained nickelate films. *New Journal of Physics*, **2022**, 24, 023011	2.9	
113	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	5.6	0
112	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	17.4	0
111	Scanning tunneling microscopy and spectroscopy of NiTe2. *Surface Science*, **2022**, 722, 122099	1.8	
110	Doping from CDW to topological superconductivity: The role of defects on phonon scattering in the non-centrosymmetric PbxTaSe2. *Low Temperature Physics*, **2021**, 47, 912-919	0.7	0
109	Achieving synergistic performance through highly compacted microcrystalline rods induced in Mo doped GeTe based compounds. *Materials Today Physics*, **2021**, 100571	8	0
108	Revealing the Quasi-Periodic Crystallographic Structure of Self-Assembled SnTiS3 Misfit Compound. *Journal of Physical Chemistry C*, **2021**, 125, 9956-9964	3.8	1
107	A Bi-Anti-Ambipolar Field Effect Transistor. *ACS Nano*, **2021**, 15, 8686-8693	16.7	11
106	Switching of the electron-phonon interaction in 1T−VSe2 assisted by hot carriers. *Physical Review B*, **2021**, 103,	3.3	2
105	Two-Dimensional Layered NiLiP2S6 Crystals as an Efficient Bifunctional Electrocatalyst for Overall Water Splitting. *Catalysts*, **2021**, 11, 786	4	
104	Staggered band offset induced high performance opto-electronic devices: Atomically thin vertically stacked GaSe-SnS2 van der Waals p-n heterostructures. *Applied Surface Science*, **2021**, 535, 147480	6.7	6
103	Engineering an Indium Selenide van der Waals Interface for Multilevel Charge Storage. *ACS Applied Materials & Interfaces*, **2021**, 13, 4618-4625	9.5	3
102	High magnetic anisotropy and magnon excitations in single crystals of the double spin chain compound PbMn2Ni6Te3O18. *Physical Review B*, **2021**, 103,	3.3	3
101	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	7.1	1
100	Tailoring the Co/Co active sites in a single perovskite as a bifunctional catalyst for the oxygen electrode reactions. *Dalton Transactions*, **2021**, 50, 7212-7222	4.3	6

99	Water-assisted spin-flop antiferromagnetic behaviour of hydrophobic Cu-based metal-organic frameworks. *Dalton Transactions*, **2021**, 50, 5754-5758	4.3	1
98	Magnetotransport in hybrid InSe/monolayer graphene on SiC. *Nanotechnology*, **2021**, 32, 155704	3.4	1
97	Assessing the stability of Cd3As2 Dirac semimetal in humid environments: the influence of defects, steps and surface oxidation. *Journal of Materials Chemistry C*, **2021**, 9, 1235-1244	7.1	2
96	Synergistic optimization of thermoelectric performance in earth-abundant CuZnSnS by inclusion of graphene nanosheets. *Nanotechnology*, **2020**, 31, 365402	3.4	9
95	Modulating Charge Separation with Hexagonal Boron Nitride Mediation in Vertical Van der Waals Heterostructures. *ACS Applied Materials & Interfaces*, **2020**, 12, 26213-26221	9.5	12
94	Evidence for nematic superconductivity of topological surface states in PbTaSe2. *Science Bulletin*, **2020**, 65, 1349-1355	10.6	8
93	Ultralow Schottky Barriers in Hexagonal Boron Nitride-Encapsulated Monolayer WSe Tunnel Field-Effect Transistors. *ACS Applied Materials & Interfaces*, **2020**, 12, 18667-18673	9.5	10
92	Field-free platform for Majorana-like zero mode in superconductors with a topological surface state. *Physical Review B*, **2020**, 101,	3.3	15
91	Nickel-Based Hybrid Material for Electrochemical Oxygen Redox Reactions in an Alkaline Medium. *ACS Applied Energy Materials*, **2020**, 3, 6408-6415	6.1	3
90	Magnetic and orbital correlations in multiferroic CaMn7O12 probed by x-ray resonant elastic scattering. *Physical Review B*, **2020**, 101,	3.3	3
89	Flexible and free-standing polyvinyl alcohol-reduced graphene oxide-Cu2O/CuO thin films for electrochemical reduction of carbon dioxide. *Journal of Applied Electrochemistry*, **2020**, 50, 979-991	2.6	5
88	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	3.6	3
87	Fully gapped superconductivity without sign reversal in the topological superconductor PbTaSe2. *Physical Review B*, **2020**, 102,	3.3	2
86	Superposition of semiconductor and semi-metal properties of self-assembled 2D SnTiS3 heterostructures. *Npj 2D Materials and Applications*, **2020**, 4,	8.8	5
85	Multilayer GaSe/InSe Heterointerface-Based Devices for Charge Transport and Optoelectronics. *ACS Applied Nano Materials*, **2020**, 3, 11769-11776	5.6	2
84	Carbon-supported cobalt (III) complex for direct reduction of oxygen in alkaline medium. *International Journal of Hydrogen Energy*, **2020**, 45, 24738-24748	6.7	3
83	Unprecedented random lasing in 2D organolead halide single-crystalline perovskite microrods. *Nanoscale*, **2020**, 12, 18269-18277	7.7	10
82	Anisotropic Magnetic Properties of Nonsymmorphic Semimetallic Single Crystal NdSbTe. *Crystal Growth and Design*, **2020**, 20, 6585-6591	3.5	2

81	Experimental study of multiple magnetic transitions in micrometer and nano-grain sized Ni3TeO6-type oxide. *Journal of Applied Physics*, **2020**, 128, 123902	2.5	1
80	Electron-electron interactions in the two-dimensional semiconductor InSe. *Physical Review B*, **2020**, 102,	3.3	1
79	Anisotropic Transport and Quantum Oscillations in the Quasi-One-Dimensional TaNiTe: Evidence for the Nontrivial Band Topology. *Journal of Physical Chemistry Letters*, **2020**, 11, 7782-7789	6.4	11
78	High-Performance Flexible Broadband Photodetectors Based on 2D Hafnium Selenosulfide Nanosheets. *Advanced Electronic Materials*, **2020**, 6, 1900794	6.4	12
77	High unsaturated room-temperature magnetoresistance in phase-engineered MoxW1Te2+ ultrathin films. *Journal of Materials Chemistry C*, **2019**, 7, 10996-11004	7.1	5
76	Two-gap superconductivity and topological surface states in TaOsSi. *Physical Review B*, **2019**, 100,	3.3	9
75	Extreme magnetoresistance and pressure-induced superconductivity in the topological semimetal candidate YBi. *Physical Review B*, **2019**, 99,	3.3	8
74	Electrochemical sensing of free radical antioxidant diphenylamine cations (DPAH) with carbon interlaced nanoflake-assembled MgxNi9S8 microspheres. *CrystEngComm*, **2019**, 21, 724-735	3.3	14
73	Sn-Doping Enhanced Ultrahigh Mobility InSnSe Phototransistor. *ACS Applied Materials & Interfaces*, **2019**, 11, 24269-24278	9.5	12
72	Thickness-Dependent Resonant Raman and E? Photoluminescence Spectra of Indium Selenide and Indium Selenide/Graphene Heterostructures. *Journal of Physical Chemistry C*, **2019**, 123, 15345-15353	3.8	11
71	Surface Reconstruction, Oxidation Mechanism, and Stability of Cd3As2. *Advanced Functional Materials*, **2019**, 29, 1900965	15.6	9
70	Surface Instability and Chemical Reactivity of ZrSiS and ZrSiSe Nodal-Line Semimetals. *Advanced Functional Materials*, **2019**, 29, 1900438	15.6	5
69	Topological nature of step-edge states on the surface of the topological crystalline insulator Pb0.7Sn0.3Se. *Physical Review B*, **2019**, 99,	3.3	8
68	GdTe: an antiferromagnetic semimetal. *Journal of Physics Condensed Matter*, **2019**, 31, 285802	1.8	5
67	High-Temperature Defect-Induced Hopping Conduction in Multilayered Germanium Sulfide for Optoelectronic Applications in Harsh Environments. *ACS Applied Nano Materials*, **2019**, 2, 2169-2175	5.6	10
66	Crystal Growth and Magnetic Properties of Topological Nodal-Line Semimetal GdSbTe with Antiferromagnetic Spin Ordering. *Inorganic Chemistry*, **2019**, 58, 11730-11737	5.1	12
65	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	9.5	6
64	Oxidized-monolayer tunneling barrier for strong Fermi-level depinning in layered InSe transistors. *Npj 2D Materials and Applications*, **2019**, 3,	8.8	8

63	Hybrid InSe Nanosheets and MoS2 Quantum Dots for High-Performance Broadband Photodetectors and Photovoltaic Cells. *Advanced Materials Interfaces*, **2019**, 6, 1801336	4.6	13
62	Low-Threshold Lasing from 2D Homologous Organic-Inorganic Hybrid Ruddlesden-Popper Perovskite Single Crystals. *Nano Letters*, **2018**, 18, 3221-3228	11.5	124
61	Interplay of orbital effects and nanoscale strain in topological crystalline insulators. *Nature Communications*, **2018**, 9, 1550	17.4	16
60	Superconductivity in a Misfit Layered (SnS)1.15(TaS2) Compound. *Chemistry of Materials*, **2018**, 30, 1373-1378	9.6	18
59	Ultrasensitive tunability of the direct bandgap of 2D InSe flakes via strain engineering. *2D Materials* , **2018**, 5, 021002	5.9	53
58	Evidence of s-wave superconductivity in the noncentrosymmetric LaIr. *Scientific Reports*, **2018**, 8, 651	4.9	11
57	Reinvestigating the surface and bulk electronic properties of Cd3As2. *Physical Review B*, **2018**, 97,	3.3	13
56	Energy scale of Dirac electrons in Cd3As2. *Physical Review B*, **2018**, 97,	3.3	12
55	Topological Type-II Dirac Fermions Approaching the Fermi Level in a Transition Metal Dichalcogenide NiTe2. *Chemistry of Materials*, **2018**, 30, 4823-4830	9.6	57
54	Emergence of a Metal-Insulator Transition and High-Temperature Charge-Density Waves in VSe at the Monolayer Limit. *Nano Letters*, **2018**, 18, 5432-5438	11.5	123
53	Distinct multiple fermionic states in a single topological metal. *Nature Communications*, **2018**, 9, 3002	17.4	8
52	Enhanced Light Emission from the Ridge of Two-Dimensional InSe Flakes. *Nano Letters*, **2018**, 18, 5078-5084	11.5	21
51	Anisotropic magnetotransport and extremely large magnetoresistance in NbAs single crystals. *Scientific Reports*, **2018**, 8, 6414	4.9	10
50	Tuning Rashba Spin-Orbit Coupling in Gated Multilayer InSe. *Nano Letters*, **2018**, 18, 4403-4408	11.5	39
49	Inducing Strong Superconductivity in WTe by a Proximity Effect. *ACS Nano*, **2018**, 12, 7185-7196	16.7	26
48	Dynamic surface electronic reconstruction as symmetry-protected topological orders in topological insulator Bi2Se3. *Physical Review Materials*, **2018**, 2,	3.2	8
47	3D Dirac semimetal Cd3As2: A review of material properties. *Physical Review Materials*, **2018**, 2,	3.2	53
46	Crystal growth and transport properties of Weyl semimetal TaAs. *Journal of Physics Condensed Matter*, **2018**, 30, 015803	1.8	4

45	Intrinsic Carrier Transport of Phase-Pure Homologous 2D Organolead Halide Hybrid Perovskite Single Crystals. *Small*, **2018**, 14, e1803763	11	26
44	Surface termination dependent quasiparticle scattering interference and magneto-transport study on ZrSiS. *New Journal of Physics*, **2018**, 20, 103025	2.9	11
43	Anisotropy in the magnetic interaction and lattice-orbital coupling of single crystal NiTeO. *Scientific Reports*, **2018**, 8, 15779	4.9	3
42	Influence of GeP precipitates on the thermoelectric properties of P-type GeTe and Ge0.9□PxSb0.1Te compounds. *CrystEngComm*, **2018**, 20, 6449-6457	3.3	5
41	Ultra-high performance flexible piezopotential gated InSnSe phototransistor. *Nanoscale*, **2018**, 10, 18642-18650	7.7	9
40	High-Performance InSe Transistors with Ohmic Contact Enabled by Nonrectifying Barrier-Type Indium Electrodes. *ACS Applied Materials & Interfaces*, **2018**, 10, 33450-33456	9.5	20
39	Optical spectroscopy study on pressure-induced phase transitions in the three-dimensional Dirac semimetal Cd3As2. *Physical Review B*, **2018**, 97,	3.3	7
38	Crystal growth of Dirac semimetal ZrSiS with high magnetoresistance and mobility. *Scientific Reports*, **2017**, 7, 40603	4.9	41
37	Polymorphic Layered MoTe2 from Semiconductor, Topological Insulator, to Weyl Semimetal. *Chemistry of Materials*, **2017**, 29, 699-707	9.6	40
36	Surface Oxidation Doping to Enhance Photogenerated Carrier Separation Efficiency for Ultrahigh Gain Indium Selenide Photodetector. *ACS Photonics*, **2017**, 4, 2930-2936	6.3	34
35	Topological phase transition under pressure in the topological nodal-line superconductor PbTaSe2. *Physical Review B*, **2017**, 96,	3.3	9
34	Observation of ultrahigh mobility surface states in a topological crystalline insulator by infrared spectroscopy. *Nature Communications*, **2017**, 8, 366	17.4	11
33	Tunability of the topological nodal-line semimetal phase in ZrSiX-type materials (X=S, Se, Te). *Physical Review B*, **2017**, 95,	3.3	85
32	Optical phonon dynamics and electronic fluctuations in the Dirac semimetal Cd3As2. *Physical Review B*, **2017**, 95,	3.3	25
31	Quasiparticle interference in ZrSiS: Strongly band-selective scattering depending on impurity lattice site. *Physical Review B*, **2017**, 96,	3.3	12
30	Correlation between non-Fermi-liquid behavior and superconductivity in (Ca, La)(Fe,Co)As2 iron arsenides: A high-pressure study. *Physical Review B*, **2017**, 96,	3.3	4
29	Antiferromagnetism of Li2Cu5Si4O14 with alternating dimers and trimers in chains. *Physical Review B*, **2017**, 95,	3.3	2
28	Large negative thermal expansion in the cubic phase of CaMn7O12. *Physical Review B*, **2017**, 95,	3.3	8

27	Enhanced electron correlations in the binary stannide PdSn4: A homologue of the Dirac nodal arc semimetal PtSn4. *Physical Review Materials*, **2017**, 1,	3.2	16
26	Superconducting topological surface states in the noncentrosymmetric bulk superconductor PbTaSe. *Science Advances*, **2016**, 2, e1600894	14.3	88
25	Observation of topological nodal fermion semimetal phase in ZrSiS. *Physical Review B*, **2016**, 93,	3.3	232
24	Topological Dirac surface states and superconducting pairing correlations in PbTaSe2. *Physical Review B*, **2016**, 93,	3.3	58
23	Observation of the spin-polarized surface state in a noncentrosymmetric superconductor BiPd. *Nature Communications*, **2016**, 7, 13315	17.4	33
22	Ultra-Thin Layered Ternary Single Crystals [Sn(SxSe1−x)2] with Bandgap Engineering for High Performance Phototransistors on Versatile Substrates. *Advanced Functional Materials*, **2016**, 26, 3630-3638	15.6	56
21	Tunable Photoinduced Carrier Transport of a Black Phosphorus Transistor with Extended Stability Using a Light-Sensitized Encapsulated Layer. *ACS Photonics*, **2016**, 3, 1102-1108	6.3	16
20	Topological nodal-line fermions in spin-orbit metal PbTaSe2. *Nature Communications*, **2016**, 7, 10556	17.4	514
19	High photosensitivity and broad spectral response of multi-layered germanium sulfide transistors. *Nanoscale*, **2016**, 8, 2284-92	7.7	95
18	Large transverse Hall-like signal in topological Dirac semimetal Cd3As2. *Scientific Reports*, **2016**, 6, 27487	4.9	13
17	TOPOLOGICAL MATTER. Discovery of a Weyl fermion semimetal and topological Fermi arcs. *Science* , **2015**, 349, 613-7	33.3	2165
16	Enhanced thermoelectric performance of GeTe-rich germanium antimony tellurides through the control of composition and structure. *CrystEngComm*, **2015**, 17, 3440-3445	3.3	23
15	Intrinsic Electron Mobility Exceeding 10□cm□/(V s) in Multilayer InSe FETs. *Nano Letters*, **2015**, 15, 3815-9	11.5	278
14	Strain engineering Dirac surface states in heteroepitaxial topological crystalline insulator thin films. *Nature Nanotechnology*, **2015**, 10, 849-53	28.7	59
13	Observation of Fermi arc surface states in a topological metal. *Science*, **2015**, 347, 294-8	33.3	488
12	Topological phase diagram and saddle point singularity in a tunable topological crystalline insulator. *Physical Review B*, **2015**, 92,	3.3	21
11	Large single crystal growth, transport property, and spectroscopic characterizations of three-dimensional Dirac semimetal Cd3As2. *Scientific Reports*, **2015**, 5, 12966	4.9	27
10	Dirac mass generation from crystal symmetry breaking on the surfaces of topological crystalline insulators. *Nature Materials*, **2015**, 14, 318-24	27	93

9	Observation of a three-dimensional topological Dirac semimetal phase in high-mobility Cd3As2. *Nature Communications*, **2014**, 5, 3786	17.4	938
8	High performance and bendable few-layered InSe photodetectors with broad spectral response. *Nano Letters*, **2014**, 14, 2800-6	11.5	563
7	Mapping the unconventional orbital texture in topological crystalline insulators. *Nature Physics*, **2014**, 10, 572-577	16.2	70
6	Two-step antiferromagnetic transition and moderate triangular frustration in Li2Co(WO4)2. *Physical Review B*, **2014**, 90,	3.3	18
5	Growing of fixed orientation plane of single crystal using the flux growth technique and ferrimagnetic ordering in Ni3TeO6 of stacked 2D honeycomb rings. *Dalton Transactions*, **2013**, 42, 10439-43	4.2	8
4	Observation of Dirac node formation and mass acquisition in a topological crystalline insulator. *Science*, **2013**, 341, 1496-9	33.3	219
3	Observation of a topological crystalline insulator phase and topological phase transition in Pb(1-x)Sn(x)Te. *Nature Communications*, **2012**, 3, 1192	17.4	481
2	Anisotropic transport in a possible quasi-one-dimensional topological candidate: TaNi2Te3. *Tungsten*,1	4.6	0
1	Stable Formamidinium-Based Centimeter Long Two-Dimensional Lead Halide Perovskite Single-Crystal for Long-Live Optoelectronic Applications. *Advanced Functional Materials*,2112277	15.6	3