

# Gunvant K Solanki

## List of Publications by Year in descending order

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116  
papers

1,960  
citations

249298

26  
h-index

340414

39  
g-index

116  
all docs

116  
docs citations

116  
times ranked

2098  
citing authors

#	ARTICLE	IF	CITATIONS
1	Study of liquid-phase ultrasonically exfoliated Cu <sub>0.4</sub> Sn <sub>0.6</sub> Se ternary alloy nanoparticles-based photodetector. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 8361-8367.	1.1	2
2	Wavelength dependent anisotropic photosensing activity of zirconium trisulfide crystal. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 8417-8425.	1.1	6
3	Study of temperature dependent phonon properties of Sb <sub>x</sub> Ge <sub>1-x</sub> Se (x = 0.00 and 0.15) crystals. <i>Physica B: Condensed Matter</i> , 2022, 625, 413474.	1.3	2
4	Annealing induced phase transformation from amorphous to polycrystalline SnSe <sub>2</sub> thin film photo detector with enhanced light-matter interaction. <i>Journal of Non-Crystalline Solids</i> , 2022, 578, 121353.	1.5	11
5	Surface topography and enhanced photo detecting properties of multilayer MoSe <sub>2</sub> crystal. <i>EPJ Applied Physics</i> , 2022, 97, 8.	0.3	0
6	Photosensitive Schottky barrier diodes based on Cu/p-SnSe thin films fabricated by thermal evaporation. <i>Materials Advances</i> , 2022, 3, 2425-2433.	2.6	18
7	Electrophoretic deposition of MoS <sub>2</sub> nanosheets for photoelectrochemical type photodetector. <i>Optical Materials</i> , 2022, 125, 112097.	1.7	14
8	Synergistic 2D MoSe <sub>2</sub> @WSe <sub>2</sub> nanohybrid heterostructure toward superior hydrogen evolution and flexible supercapacitor. <i>Nanoscale</i> , 2022, 14, 6636-6647.	2.8	23
9	Enhanced visible-light photoresponse of DVT-grown Ni-doped SnSe crystal. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 10086-10095.	1.1	5
10	Liquid-phase exfoliation of WSe <sub>2</sub> nanosheets for ITO/WSe <sub>2</sub> photodetector. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 10314-10322.	1.1	8
11	Superior Cryotronics Performance of the In/p-WSe <sub>2</sub> Schottky Interface. <i>ACS Applied Electronic Materials</i> , 2022, 4, 1633-1641.	2.0	2
12	Photodetector based on liquid phase exfoliated SnSe quantum dots. <i>Optical Materials</i> , 2022, 125, 112110.	1.7	7
13	Tunable anisotropic pulse photo response of ZrS <sub>3</sub> crystal at cryogenic temperatures. <i>Physica B: Condensed Matter</i> , 2022, 633, 413775.	1.3	3
14	Self-standing polyvinyl chloride film as flexible substrate for WSe <sub>2</sub> based photodetector. <i>Current Applied Physics</i> , 2022, 39, 140-146.	1.1	4
15	Optothermal and temperature reliant phonon dynamics probed by Raman spectroscopy. <i>Physica B: Condensed Matter</i> , 2022, , 414074.	1.3	1
16	Quantitative analysis of temperature-dependent vibrational properties of Cobalt incorporated WSe <sub>2</sub> ternary alloy. <i>Journal of Solid State Chemistry</i> , 2022, 314, 123359.	1.4	2
17	Highly sensitive and flexible pressure sensor based on two-dimensional MoSe <sub>2</sub> nanosheets for online wrist pulse monitoring. <i>Journal of Colloid and Interface Science</i> , 2021, 584, 495-504.	5.0	49
18	Superior electrochemical activity of CdSe thin film by chromium substitutional doping. <i>Journal of Alloys and Compounds</i> , 2021, 862, 158016.	2.8	11

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19	Photocatalytic degradation of organic dyes by Ni (25%) doped WSe <sub>2</sub> nanosheets. Materials Science in Semiconductor Processing, 2021, 125, 105625.	1.9	17
20	Rhenium substitutional doping for enhanced photoresponse of n-SnSe <sub>2</sub> /p-Si heterojunction based tunable and high-performance visible-light photodetector. Applied Surface Science, 2021, 536, 147739.	3.1	30
21	X-ray Diffraction Analysis of Hexagonal Klockmannite CuSe Nanoparticles for Photodetectors under UV Light. Journal of Physical Chemistry C, 2021, 125, 3517-3526.	1.5	13
22	Flexible piezo-resistive pressure sensor based on conducting PANI on paper substrate. Synthetic Metals, 2021, 273, 116697.	2.1	38
23	Sonochemical exfoliation, characterization and photoresponse of MoS <sub>0.5</sub> Se <sub>1.5</sub> nanosheets. Journal of Materials Science: Materials in Electronics, 2021, 32, 11805-11812.	1.1	7
24	A study of optical band gap in GeS <sub>1-x</sub> Se <sub>x</sub> (x = 0, 0.5, 1) single crystals grown using chemical vapour transport technique. Pramana - Journal of Physics, 2021, 95, 1.	0.9	0
25	Temperature-Dependent I-V Characteristics of In/p-SnSe Schottky Diode. Journal of Electronic Materials, 2021, 50, 5217.	1.0	16
26	Ultrasonically Exfoliated Nanocrystal-Based Z-Scheme SnSe <sub>2</sub> /WSe <sub>2</sub> Heterojunction for a Superior Electrochemical Photoresponse. Journal of Physical Chemistry C, 2021, 125, 14729-14740.	1.5	14
27	Photocatalytic degradation of methylene blue and crystal violet dyes under UV light irradiation by sonochemically synthesized CuSnSe nanocrystals. European Physical Journal Plus, 2021, 136, 1.	1.2	11
28	Flexible Self-Powered Electrochemical Photodetector Functionalized by Multilayered Tantalum Diselenide Nanocrystals. Advanced Optical Materials, 2021, 9, 2100993.	3.6	21
29	WSe <sub>2</sub> -PANI nanohybrid structure as efficient electrocatalyst for photo-enhanced hydrogen evolution reaction. Journal of Alloys and Compounds, 2021, 876, 160179.	2.8	36
30	Low temperature anisotropic photoresponse study of bulk ZrS <sub>3</sub> single crystal. Sensors and Actuators A: Physical, 2021, 331, 112969.	2.0	12
31	Enhanced electrical and optoelectronic performance of SnS crystal by Se doping. Journal of Alloys and Compounds, 2021, 883, 160941.	2.8	20
32	Enhanced optoelectronics performances of multilayer Sb <sub>0.1</sub> Mo <sub>0.9</sub> Se <sub>2</sub> /SnSe <sub>2</sub> heterostructure. Journal of Materials Science: Materials in Electronics, 2021, 32, 28739-28749.	1.1	1
33	Optical Switching Device Based on a Crystalline SnSe <sub>2</sub> Photodetector in Diverse Conditions. ACS Applied Electronic Materials, 2021, 3, 4859-4869.	2.0	13
34	Low-Temperature Raman Investigations and Photoresponse of a Detector Based on High-Quality WSe <sub>2</sub> Crystals. Journal of Physical Chemistry C, 2020, 124, 2251-2257.	1.5	32
35	The influence of antimony doping on I-V, C-V and (G/w)-V-f characteristics of indium/ Sb <sub>1-x</sub> Sn <sub>x</sub> Se <sub>2</sub> (X=0, 0.1, 0.5) alloy Schottky diodes. Superlattices and Microstructures, 2020, 137, 106348.	1.4	5
36	Self-powered photodetector based on SnSe <sub>2</sub> /MoSe <sub>2</sub> heterostructure. Materials Today Energy, 2020, 18, 100550.	2.5	17

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37	Structural characterization of layered tin mono-selenide crystals doped with copper grown by DVT technique. AIP Conference Proceedings, 2020, , .	0.3	0
38	Anisotropic study of photo-bolometric effect in Sb <sub>0.15</sub> Ge <sub>0.85</sub> Se ternary alloy at low temperature. Journal of Alloys and Compounds, 2020, 846, 156391.	2.8	22
39	Humidity Sensor Based on Two-Dimensional SnSe <sub>2</sub> /MWCNT Nanohybrids for the Online Monitoring of Human Respiration and a Touchless Positioning Interface. ACS Sustainable Chemistry and Engineering, 2020, 8, 12595-12602.	3.2	31
40	Temperature-dependent vibrational properties of DVT grown orthorhombic SnS single crystals and their application as a self-powered photodetector. Applied Surface Science, 2020, 531, 147406.	3.1	34
41	Orthorhombic SnSe Nanocrystals for Visible-Light Photodetectors. ACS Applied Nano Materials, 2020, 3, 11143-11151.	2.4	44
42	2D-SnSe <sub>2</sub> Nanosheet Functionalized Piezo-resistive Flexible Sensor for Pressure and Human Breath Monitoring. ACS Sustainable Chemistry and Engineering, 2020, 8, 7741-7749.	3.2	54
43	Paper based organic-inorganic hybrid photodetector for visible light detection. Applied Surface Science, 2020, 524, 146589.	3.1	49
44	Investigation of anisotropic photoresponse in Re <sub>0.2</sub> Sn <sub>0.8</sub> Se <sub>2</sub> ternary alloy at low temperature conditions. Journal of Materials Science: Materials in Electronics, 2020, 31, 11123-11130.	1.1	8
45	Solution-Processed Uniform MoSe <sub>2</sub> -WSe <sub>2</sub> Heterojunction Thin Film on Silicon Substrate for Superior and Tunable Photodetection. ACS Sustainable Chemistry and Engineering, 2020, 8, 4809-4817.	3.2	35
46	Transient photo-response properties of pristine MoTe <sub>2</sub> crystals synthesized by direct vapor transport technique. AIP Conference Proceedings, 2020, , .	0.3	0
47	Flexible paper based piezo-resistive sensor functionalised by 2D-WSe <sub>2</sub> nanosheets. Nanotechnology, 2020, 31, 435503.	1.3	39
48	Transferrable thin film of ultrasonically exfoliated MoSe <sub>2</sub> nanocrystals for efficient visible-light photodetector. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 119, 114019.	1.3	29
49	Temperature-dependent vibrational properties of Sb <sub>x</sub> Sn <sub>1-x</sub> Se <sub>2</sub> (x = 0, 0.1, 0.2 & 0.3) ternary alloys. European Physical Journal Plus, 2020, 135, 1.	1.2	6
50	Synthesis and Photodetection Properties of Sonochemically Exfoliated Cu <sub>0.2</sub> Sn <sub>0.8</sub> Se Nanoparticles. Journal of Nano- and Electronic Physics, 2020, 12, 02005-1-02005-5.	0.2	7
51	Flat band potential determination of NbSe <sub>2</sub> photoelectrode using Mott-Schottky plot. AIP Conference Proceedings, 2019, , .	0.3	7
52	Photovoltaic activity of WSe <sub>2</sub> /Si hetero junction. Materials Research Bulletin, 2019, 120, 110602.	2.7	40
53	Growth and application of WSe <sub>2</sub> single crystal synthesized by DVT in thin film hetero-junction photodetector. European Physical Journal B, 2019, 92, 1.	0.6	16
54	Humidity sensor based on Sb <sub>0.1</sub> Sn <sub>0.9</sub> Se <sub>2</sub> ternary alloy for human breath monitoring and touchless positioning interface. European Physical Journal Plus, 2019, 134, 1.	1.2	17

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55	Tunable and anisotropic photoresponse of layered Re <sub>0.2</sub> Sn <sub>0.8</sub> Se <sub>2</sub> ternary alloy. Solar Energy Materials and Solar Cells, 2019, 200, 109936.	3.0	33
56	Paper-Based Flexible Photodetector Functionalized by WSe <sub>2</sub> Nanodots. ACS Applied Nano Materials, 2019, 2, 2758-2766.	2.4	106
57	Growth and application of Sb <sub>0.5</sub> Mo <sub>0.5</sub> Se <sub>2</sub> ternary alloy as photodetector. Materials Letters: X, 2019, 2, 100013.	0.3	1
58	Optoelectronic devices based on chemical vapour transport grown NbSe <sub>2</sub> crystals. AIP Conference Proceedings, 2019, , .	0.3	0
59	Fabrication, photoresponse and temperature dependence of n-VO <sub>2</sub> /n-MoSe <sub>2</sub> heterojunction diode. Superlattices and Microstructures, 2019, 130, 160-167.	1.4	26
60	Transient photoresponse of infrared photodetector based on Sb <sub>0.1</sub> Sn <sub>0.9</sub> Se <sub>2</sub> ternary alloy. Materials Research Express, 2019, 6, 065906.	0.8	4
61	Effect of off-stoichiometry on properties of tin selenide crystals. Bulletin of Materials Science, 2019, 42, 1.	0.8	4
62	Sonochemical exfoliation and photodetection properties of MoS <sub>2</sub> Nanosheets. Materials Science in Semiconductor Processing, 2019, 98, 13-18.	1.9	37
63	Structural and electrical properties of Sb <sub>x</sub> W <sub>1-x</sub> Se <sub>2</sub> (0, 0.5) ternary alloys. Materials Research Express, 2019, 6, 055917.	0.8	5
64	High performance humidity sensor based on V <sub>0.5</sub> Sn <sub>0.5</sub> Se <sub>2</sub> ternary alloy. Journal of Materials Science: Materials in Electronics, 2019, 30, 6065-6070.	1.1	4
65	Giant humidity responsiveness of WSe <sub>2</sub> nanosheets for novel electronic listening and touchless positioning interface. Journal of Materials Science: Materials in Electronics, 2019, 30, 3137-3143.	1.1	21
66	Electrophoretically Deposited MoSe <sub>2</sub> /WSe <sub>2</sub> Heterojunction from Ultrasonically Exfoliated Nanocrystals for Enhanced Electrochemical Photoresponse. ACS Applied Materials & Interfaces, 2019, 11, 4093-4102.	4.0	57
67	Promoting photoresponse of resistive detector based on V <sub>0.15</sub> Sn <sub>0.85</sub> Se <sub>2</sub> ternary alloy. Materials Science in Semiconductor Processing, 2019, 91, 383-386.	1.9	17
68	Investigation of morphological and structural properties of V incorporated SnSe <sub>2</sub> single crystals. Materials Science in Semiconductor Processing, 2018, 80, 137-142.	1.9	28
69	Alloy engineering for enhanced photodetection in V <sub>x</sub> Sn <sub>1-x</sub> Se <sub>2</sub> ternary crystals. Materials Letters, 2018, 221, 35-37.	1.3	28
70	Investigation of structural, electrical and optical properties of Sb <sub>x</sub> W <sub>1-x</sub> Se <sub>2</sub> single crystals. Materials Science in Semiconductor Processing, 2018, 81, 108-112.	1.9	30
71	Effect of doping on all TMC vertical heterointerfaces. AIP Conference Proceedings, 2018, , .	0.3	2
72	Growth and photo-response of NbSe <sub>2</sub> and NbS <sub>2</sub> crystals. AIP Conference Proceedings, 2018, , .	0.3	1

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73	Photosensitive space charge limited current in screen printed CdTe thin films. AIP Conference Proceedings, 2018, , .	0.3	0
74	Investigation of transient photoresponse of WSSe ternary alloy crystals. AIP Conference Proceedings, 2018, , .	0.3	0
75	Tuning of photodetection properties of V0.5Sn0.5Se2 ternary alloy. Materials Research Express, 2018, 5, 056207.	0.8	8
76	Fabrication and photoresponse of n- $\text{WS}_2$ / p-V $\text{W}_{0.25}\text{Se}_2$ . Pramana - Journal of Physics, 2018, 91, 1.	0.9	12
77	Growth, characterization and photoconduction properties of Sb0.1Mo0.9Se2 single crystals grown by DVT technique. Materials Science in Semiconductor Processing, 2018, 88, 1-9.	1.9	17
78	Anisotropy of electrical resistivity in PVT grown WSe2 $\hat{a}^x$ crystals. Indian Journal of Physics, 2018, 92, 615-618.	0.9	0
79	Influence of alloy engineering on structural and photo detection properties of SbXSn1-XSe2 ternary alloys. Applied Surface Science, 2018, 462, 856-861.	3.1	56
80	Growth, morphological properties and pulsed photo response of MoTe2 single crystal synthesized by DVT technique. AIP Conference Proceedings, 2018, , .	0.3	3
81	Preparation of H2SO4 doped Polyaniline thin film solar cells by spin coating technique. AIP Conference Proceedings, 2017, , .	0.3	2
82	Layer-engineered I-V characteristics of p-Si/WS2 Van der Waals Heterostructure diode. European Physical Journal Plus, 2017, 132, 1.	1.2	21
83	Crystal growth, characterization and photo detection properties of 2H $\hat{a}^{V_{0.75}W_{0.25}Se_2}$ ternary alloy with 1T $\hat{a}^{VSe_2}$ secondary phase. Materials Research Express, 2017, 4, 106306.	0.8	50
84	Transient photo-response properties of CdTe thin films synthesized by screen printing technique. Materials Science in Semiconductor Processing, 2017, 71, 226-231.	1.9	31
85	Growth and surface topography of WSe2 single crystal. AIP Conference Proceedings, 2016, , .	0.3	16
86	Excitonic emission and absorption resonances in V0.25W0.75Se2 single crystals grown by direct vapour transport technique. Journal of Crystal Growth, 2016, 441, 101-106.	0.7	37
87	Study of structural, electrical, and optical properties of nickel-doped tin selenide crystals. Canadian Journal of Physics, 2016, 94, 212-217.	0.4	2
88	Pressure induced metallization with absence of structural transition in layered molybdenum diselenide. Nature Communications, 2015, 6, 7312.	5.8	193
89	Electronic structure of germanium selenide investigated using ultra-violet photo-electron spectroscopy. Semiconductor Science and Technology, 2015, 30, 075001.	1.0	17
90	Structural and Electrical Properties of ZnTe Thin Films Deposited at Various Substrate Temperatures. Advanced Materials Research, 2013, 665, 80-84.	0.3	0

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91	Growth and thermal properties of GeSePb <sub>0.4</sub> single crystals. , 2012, , .		1
92	High Pressure Studies of as Grown WX <sub>2</sub> -xSingle Crystals. Journal of Physics: Conference Series, 2012, 377, 012017.	0.3	0
93	Low temperature Hall effect studies of InSb thin films grown by flash evaporation. EPJ Applied Physics, 2011, 54, 10303.	0.3	3
94	Low temperature electrical transport properties in p-SnSe single crystals. EPJ Applied Physics, 2011, 53, 10302.	0.3	10
95	Mechanism of conduction in TTF and TMTSF organic conductors from a study of their vibrational spectra. Indian Journal of Physics, 2010, 84, 1527-1540.	0.9	5
96	Synthesis and characterization of germanium monosulphide (GeS) single crystals grown using different transporting agents. Pramana - Journal of Physics, 2010, 74, 813-825.	0.9	6
97	Growth and transport property measurements of rhenium doped tungsten diselenide single crystal. Materials Chemistry and Physics, 2009, 117, 350-354.	2.0	10
98	Effect of enhancement of selenium content in zirconium sulphoselenide on its photoelectrochemical behaviour. Indian Journal of Physics, 2009, 83, 275-284.	0.9	1
99	Transport property measurements in tungsten sulphoselenide single crystals grown by a CVT technique. Crystal Research and Technology, 2008, 43, 179-185.	0.6	32
100	Pressure dependence electrical resistivity in DVT grown molybdenum dichalcogenides. High Pressure Research, 2008, 28, 133-140.	0.4	11
101	Polaron hopping in some biomolecular solids and their charge transfer complexes. Indian Journal of Biochemistry and Biophysics, 2008, 45, 421-9.	0.2	0
102	Performance evaluation of tungsten sulphoselenides as a material for non-conventional energy devices. Materials Letters, 2007, 61, 3511-3515.	1.3	2
103	Band gap in tungsten sulphoselenide single crystals determined by the optical absorption method. Materials Science in Semiconductor Processing, 2005, 8, 576-586.	1.9	11
104	Kuhn Periodicity in Oligoanilines and Oligoanilineâ€“Iodine Complexes. Molecular Crystals and Liquid Crystals, 2005, 442, 167-180.	0.4	4
105	Effect of pressure on optical and electrical properties of tungsten diselenide single crystals. High Pressure Research, 2004, 24, 255-261.	0.4	4
106	Title is missing!. Journal of Materials Science Letters, 2003, 22, 985-987.	0.5	40
107	Two- and three-dimensional models for analysis of optical absorption in tungsten disulphide single crystals. Bulletin of Materials Science, 2001, 24, 291-296.	0.8	7
108	High pressure studies on layered semiconductor germanium sulphide single crystals grown using different techniques. High Pressure Research, 2001, 21, 15-29.	0.4	1

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109	Optical band gap in tungsten diselenide single crystals intercalated by indium. Materials Letters, 2000, 43, 66-72.	1.3	27
110	Growth, Structural and High Pressure Study of $\text{GeS}_{0.25}\text{Se}_{0.75}$ and $\text{GeS}_{0.75}\text{Se}_{0.25}$ Single Crystals. Advanced Materials Research, 0, 665, 37-42.	0.3	0
111	Structural and Thermal Properties of Cu Doped Nanocrystalline Tin Selenide. Advanced Materials Research, 0, 665, 15-21.	0.3	1
112	Growth and Optical Characterization of DVT Grown $\text{SnSe}_{0.5}\text{Te}_{0.5}$ Single Crystals. Advanced Materials Research, 0, 665, 29-36.	0.3	0
113	DVT Grown GeSe Single Crystals and their Thermal Parameters in $\text{N}_2$ . Advanced Materials Research, 0, 665, 8-14.	0.3	0
114	Growth and Electrical Characterizations of $\text{Sn}_{0.3}\text{Se}_{0.7}$ Crystals Grown by Direct Vapour Transport Technique. Advanced Materials Research, 0, 1141, 103-106.	0.3	4
115	Investigation of structural, electrical and optical properties of $\text{Sn}_{0.75}\text{Se}_{0.25}$ ternary alloy crystals. Journal of Materials Science: Materials in Electronics, 0, , 1.	1.1	0
116	Enhancement in the transient visible light anisotropic photoresponse of cobalt-incorporated tungsten diselenide ternary alloy. International Journal of Energy Research, 0, , .	2.2	2