Challappally Kesav Sumesh

List of Publications by Year
in descending order

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64 papers	1,568 citations	218381 26 h-index	329751 37 g-index
64 all docs	64 docs citations	64 times ranked	1031 citing authors

#	Article	IF	Citations
1	Paper-Based Flexible Photodetector Functionalized by WSe₂ Nanodots. ACS Applied Nano Materials, 2019, 2, 2758-2766.	2.4	106
2	WS₂ Nanosheet/Graphene Heterostructures for Paper-Based Flexible Photodetectors. ACS Applied Nano Materials, 2020, 3, 6935-6944.	2.4	97
3	Two-dimensional semiconductor transition metal based chalcogenide based heterostructures for water splitting applications. Dalton Transactions, 2019, 48, 12772-12802.	1.6	76
4	Large area, broadband and highly sensitive photodetector based on ZnO-WS2/Si heterojunction. Solar Energy, 2020, 206, 974-982.	2.9	53
5	Crystal growth, characterization and photo detection properties of 2Hâ€“V_{0.75}W_{0.25}Se₂ternary alloy with 1Tâ€“VSe₂secondary phase. Materials Research Express, 2017, 4, 106306.	0.8	50
6	Highly sensitive and flexible pressure sensor based on two-dimensional MoSe2 nanosheets for online wrist pulse monitoring. Journal of Colloid and Interface Science, 2021, 584, 495-504.	5.0	49
7	Photosensitive WS₂/ZnO Nano-Heterostructure-Based Electrocatalysts for Hydrogen Evolution Reaction. ACS Applied Energy Materials, 2021, 4, 755-762.	2.5	49
8	Plasmon-enhanced photoresponse in Ag-WS2/Si heterojunction. Applied Surface Science, 2021, 538, 148121.	3.1	48
9	Zinc oxide functionalized molybdenum disulfide heterostructures as efficient electrocatalysts for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2020, 45, 619-628.	3.8	47
10	Paper-Based Flexible and Photosensitive Electrodes for Electrochemical Hydrogen Evolution. ACS Applied Energy Materials, 2021, 4, 4815-4822.	2.5	42
11	Electrophoretic Deposition of MoSe₂â€“MoO_x Nanosheets for Enhanced Electrocatalytic Hydrogen Evolution Reaction. ACS Applied Energy Materials, 2021, 4, 7891-7899.	2.5	41
12	Low cost and flexible photodetector based on WSe2 Nanosheets/Graphite heterostructure. Synthetic Metals, 2020, 265, 116400.	2.1	41
13	Flexible paper based piezo-resistive sensor functionalised by 2D-WSe₂ nanosheets. Nanotechnology, 2020, 31, 435503.	1.3	39
14	Flexible piezo-resistive pressure sensor based on conducting PANI on paper substrate. Synthetic Metals, 2021, 273, 116697.	2.1	38
15	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
16	Enhanced electrocatalytic hydrogen evolution reaction by injection of photogenerated electrons in Ag/WS2 nanohybrids. Applied Surface Science, 2021, 563, 150323.	3.1	37
17	WSe2-PANI nanohybrid structure as efficient electrocatalyst for photo-enhanced hydrogen evolution reaction. Journal of Alloys and Compounds, 2021, 876, 160179.	2.8	36
18	Solution-Processed Uniform MoSe₂â€“WSe₂ Heterojunction Thin Film on Silicon Substrate for Superior and Tunable Photodetection. ACS Sustainable Chemistry and Engineering, 2020, 8, 4809-4817.	3.2	35

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19	MoS₂/WSe₂ nanohybrids for flexible paper-based photodetectors. Nanotechnology, 2021, 32, 315709.	1.3	35
20	Towards efficient photon management in nanostructured solar cells: Role of 2D layered transition metal dichalcogenide semiconductors. Solar Energy Materials and Solar Cells, 2019, 192, 16-23.	3.0	34
21	Microwave assisted synthesis of SnS nanosheets for fabrication of large area SnS/Si heterojunction. Solar Energy, 2021, 221, 412-417.	2.9	34
22	One-Dimensional/Two-Dimensional/Three-Dimensional Dual Heterostructure Based on MoS₂-Modified ZnO-Heterojunction Diode with Silicon. Journal of Physical Chemistry C, 2019, 123, 21941-21949.	1.5	33
23	Two-Step Facile Preparation of MoS2Â·ZnO Nanocomposite as Efficient Photocatalyst for Methylene Blue (Dye) Degradation. Electronic Materials Letters, 2019, 15, 119-132.	1.0	33
24	Investigation of structural, electrical and optical properties of SbXW1-XSe2 single crystals. Materials Science in Semiconductor Processing, 2018, 81, 108-112.	1.9	30
25	Rhenium substitutional doping for enhanced photoresponse of n-SnSe2/p-Si heterojunction based tunable and high-performance visible-light photodetector. Applied Surface Science, 2021, 536, 147739.	3.1	30
26	Transferrable thin film of ultrasonically exfoliated MoSe2 nanocrystals for efficient visible-light photodetector. Physica E: Low-Dimensional Systems and Nanostructures, 2020, 119, 114019.	1.3	29
27	Enhanced electrocatalysis of <scp> WSe ₂ </scp> nanosheets by partial oxidation for hydrogen generation. International Journal of Energy Research, 2022, 46, 12073-12081.	2.2	29
28	Fabrication, photoresponse and temperature dependence of n-VO2/n-MoSe2 heterojunction diode. Superlattices and Microstructures, 2019, 130, 160-167.	1.4	26
29	Synergistic 2D MoSe₂@WSe₂ nanohybrid heterostructure toward superior hydrogen evolution and flexible supercapacitor. Nanoscale, 2022, 14, 6636-6647.	2.8	23
30	Layer-engineered I-V characteristics of p-Si/WS2 Van der Waals Heterostructure diode. European Physical Journal Plus, 2017, 132, 1.	1.2	21
31	Salt assisted sonochemical exfoliation and synthesis of highly stable few-to-monolayer WS2 quantum dots with tunable optical properties. Journal of Materials Science: Materials in Electronics, 2017, 28, 7184-7189.	1.1	17
32	Self-powered photodetector based on SnSe2/MoSe2 heterostructure. Materials Today Energy, 2020, 18, 100550.	2.5	17
33	Growth and application of WSe2 single crystal synthesized by DVT in thin film hetero-junction photodetector. European Physical Journal B, 2019, 92, 1.	0.6	16
34	Enhanced Antifungal Activity of WS₂/ZnO Nanohybrid against Candida albicans. ACS Biomaterials Science and Engineering, 2020, 6, 6069-6075.	2.6	16
35	Photosensitive electrocatalysts based on Niâ€“WS₂ nanohybrids for hydrogen evolution reaction. Nanotechnology, 2021, 32, 505407.	1.3	16
36	WSe₂ crystals on paper: flexible, large area and broadband photodetectors. Nanotechnology, 2021, 32, 505202.	1.3	16

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37	Enhanced photoresponse by plasmon resonance in Ni-WS2/Si photodiode. Materials Research Bulletin, 2022, 145, 111518.	2.7	16
38	MoS2 nanosheets on Cu-foil for rapid electrocatalytic hydrogen evolution reaction. Journal of Electroanalytical Chemistry, 2022, 912, 116270.	1.9	15
39	Ultrasonically Exfoliated Nanocrystal-Based Z-Scheme SnSe₂/WSe₂ Heterojunction for a Superior Electrochemical Photoresponse. Journal of Physical Chemistry C, 2021, 125, 14729-14740.	1.5	14
40	Fabrication and photoresponse of n- $$hbox {WS}_{2}/$$ WS 2 / p-V $$_{0.25}$$. Pramana - Journal of Physics, 2018, 91, 1.	0.9	12
41	Superior electrochemical activity of CdSe thin film by chromium substitutional doping. Journal of Alloys and Compounds, 2021, 862, 158016.	2.8	11
42	Annealing induced phase transformation from amorphous to polycrystalline SnSe2 thin film photo detector with enhanced light-matter interaction. Journal of Non-Crystalline Solids, 2022, 578, 121353.	1.5	11
43	ZnO-WS2Nano-heterojunction/ITO photodetector for detection of visible light. Materials Science in Semiconductor Processing, 2022, 148, 106778.	1.9	11
44	Self-powered photodetector functionalized by SnS quantum dots. Optical Materials, 2022, 129, 112504.	1.7	11
45	Low temperature electrical transport properties in p-SnSe single crystals. EPJ Applied Physics, 2011, 53, 10302.	0.3	10
46	Electrical properties of Ag/p-Cu2NiSnS4 thin film Schottky diode. Materials Today Communications, 2021, 28, 102697.	0.9	8
47	Photodetector based on liquid phase exfoliated SnSe quantum dots. Optical Materials, 2022, 125, 112110.	1.7	7
48	Flexible photodetector based on Graphite/ZnOâ€“WS2 nanohybrids on paper. Journal of Materials Science: Materials in Electronics, 2022, 33, 13771-13781.	1.1	7
49	Atomically thin WSe2 nanosheets for fabrication of high-performance p-Si/WSe2 heterostructure. Optical Materials, 2022, 129, 112537.	1.7	7
50	Nanocatalytic physicochemical adsorption and degradation of organic dyes. Pramana - Journal of Physics, 2019, 92, 1.	0.9	6
51	Investigation of carrier scattering mechanisms in molybdenum diselenide single crystals by hall effect measurements. Crystal Research and Technology, 2010, 45, 957-960.	0.6	5
52	Analysis of current â€•voltage â€•temperature characteristics of In and Cu contacts on nâ€‘type MoSe₂ single crystals. Crystal Research and Technology, 2011, 46, 61-64.	0.6	5
53	An approach for scalable production of silver (Ag) decorated WS2 nanosheets. AIP Conference Proceedings, 2018, , .	0.3	5
54	Large-area binder free synthesis of Cu2CoSnS4 on Ag-substrate for electrocatalytic hydrogen evolution. Surfaces and Interfaces, 2022, 29, 101807.	1.5	5

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55	Current Transport in Copper Schottky Contacts to a -Plane/ c -Plane n-Type MoSe ₂. Chinese Physics Letters, 2011, 28, 087201.	1.3	4
56	Analysis of barrier height inhomogeneities in Al-pSnSe Schottky diode. EPJ Applied Physics, 2012, 59, 10103.	0.3	4
57	UV light induced photodegradation of organic dye by ZnO nanocatalysts. AIP Conference Proceedings, 2013, , .	0.3	4
58	Visible light enhanced photocatalytic performance of WS2 catalyst for the degradation of ternary dye mixture. AIP Conference Proceedings, 2020, , .	0.3	4
59	Low temperature Hall effect studies of InSb thin films grown by flash evaporation. EPJ Applied Physics, 2011, 54, 10303.	0.3	3
60	One pot sono-chemical synthesis of 2D layered MoS2 nanosheets. AIP Conference Proceedings, 2016, , .	0.3	3
61	Effect of doping on all TMC vertical heterointerfaces. AIP Conference Proceedings, 2018, , .	0.3	2
62	Current transport characteristics of pSe-nMoSe2heterojunction diode. EPJ Applied Physics, 2010, 52, 30302.	0.3	1
63	Temperature dependant electronic charge transport characteristics at MX2 (Mâ€‰=â€‰Mo, W; Xâ€‰=â€‰S, Se)/Si heterojunction devices. Journal of Materials Science: Materials in Electronics, 2019, 30, 4117-4127.	1.1	1
64	Barrier height inhomogeneities in Cu-nMoSe₂Schottky diode. EPJ Applied Physics, 2011, 56, 10103.	0.3	0