Rahul Kumar

List of Publications by Year
in descending order

33 papers	1,676 citations	471509 17 h-index	477307 29 g-index
33 all docs	33 docs citations	33 times ranked	1900 citing authors

#	Article	IF	Citations
1	UV-Activated MoS₂ Based Fast and Reversible NO₂ Sensor at Room Temperature. ACS Sensors, 2017, 2, 1744-1752.	7.8	346
2	Room-Temperature Gas Sensors Under Photoactivation: From Metal Oxides to 2D Materials. Nano-Micro Letters, 2020, 12, 164.	27.0	201
3	Photoactivated Mixed In-Plane and Edge-Enriched p-Type MoS₂ Flake-Based NO₂ Sensor Working at Room Temperature. ACS Sensors, 2018, 3, 998-1004.	7.8	149
4	MoS₂â€Based Nanomaterials for Roomâ€Temperature Gas Sensors. Advanced Materials Technologies, 2020, 5, 1901062.	5.8	138
5	Transition metal dichalcogenides-based flexible gas sensors. Sensors and Actuators A: Physical, 2020, 303, 111875.	4.1	125
6	Growth of MoS₂â€“MoO₃ Hybrid Microflowers via Controlled Vapor Transport Process for Efficient Gas Sensing at Room Temperature. Advanced Materials Interfaces, 2018, 5, 1800071.	3.7	93
7	Conducting polymer-based nanostructures for gas sensors. Coordination Chemistry Reviews, 2022, 462, 214517.	18.8	88
8	High performance NO2 sensor using MoS2 nanowires network. Applied Physics Letters, 2018, 112, .	3.3	87
9	Highly selective and reversible NO₂ gas sensor using vertically aligned MoS₂ flake networks. Nanotechnology, 2018, 29, 464001.	2.6	79
10	Wafer-scale synthesis of a uniform film of few-layer MoS₂ on GaN for 2D heterojunction ultraviolet photodetector. Journal Physics D: Applied Physics, 2018, 51, 374003.	2.8	49
11	Gas sensing materials roadmap. Journal of Physics Condensed Matter, 2021, 33, 303001.	1.8	49
12	A high-performance hydrogen sensor based on a reverse-biased MoS₂/GaN heterojunction. Nanotechnology, 2019, 30, 314001.	2.6	42
13	Efficient room temperature hydrogen sensor based on UV-activated ZnO nano-network. Nanotechnology, 2017, 28, 365502.	2.6	38
14	High-performance photodetector based on hybrid of MoS₂ and reduced graphene oxide. Nanotechnology, 2018, 29, 404001.	2.6	25
15	Two-dimensional transition metal dichalcogenides and their composites for lab-based sensing applications: Recent progress and future outlook. Sensors and Actuators A: Physical, 2021, 318, 112517.	4.1	21
16	Determination of band alignment at two-dimensional MoS2/Si van der Waals heterojunction. Journal of Applied Physics, 2018, 123, .	2.5	19
17	Boosting Sensing Performance of Vacancy-Containing Vertically Aligned MoS₂ Using rGO Particles. IEEE Sensors Journal, 2019, 19, 10214-10220.	4.7	18
18	Enhanced Carrier Density in a MoS₂/Si Heterojunction-Based Photodetector by Inverse Auger Process. IEEE Transactions on Electron Devices, 2018, 65, 4149-4154.	3.0	15

#	Article	IF	Citations
19	Single-atom catalysts boosted ultrathin film sensors. Rare Metals, 2020, 39, 1110-1112.	7.1	15
20	MoS₂-PVP Nanocomposites Decorated ZnO Microsheets for Efficient Hydrogen Detection. IEEE Sensors Journal, 2021, 21, 8878-8885.	4.7	15
21	Plasmonic Au Nanoparticles Sensitized MoSâ,, for Bifunctional NOâ,, and Light Sensing. IEEE Sensors Journal, 2021, 21, 4190-4197.	4.7	12
22	Davydov Splitting, Resonance Effect and Phonon Dynamics in Chemical Vapor Deposition Grown Layered MoS₂. Nanotechnology, 2021, 32, 285705.	2.6	12
23	Efficient NO₂ sensing performance of a low-cost nanostructured sensor derived from molybdenite concentrate. Green Chemistry, 2020, 22, 6981-6991.	9.0	10
24	Visualization of band offsets at few-layer MoS₂/Ge heterojunction. Nanotechnology, 2021, 32, 375711.	2.6	8
25	Anisotropic electronâ€"photonâ€"phonon coupling in layered MoS₂. Journal of Physics Condensed Matter, 2020, 32, 415702.	1.8	6
26	Electron-phonon coupling, thermal expansion coefficient, resonance effect, and phonon dynamics in high-quality CVD-grown monolayer and bilayer <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>MoSe</mml:mi><mml:mn>2</mml:mn></mml:msub></m Physical Review B, 2022, 105, .	3.2	5
27	Enhanced sensing response with complete recovery of MoS2 sensor under photoexcitation. AIP Conference Proceedings, 2018, , .	0.4	4
28	Coupled excitonic quasiparticle-electronâ€"phonon and interlayer coupling in vertically and horizontally aligned MoS₂. Journal of Materials Chemistry C, 2022, 10, 5684-5692.	5.5	4
29	NO2 sensing at room temperature using vertically aligned MoS2 flakes network. AIP Conference Proceedings, 2018, , .	0.4	1
30	Ultraviolet photodetector based on chemical vapor deposition grown MoO3 microplates. , 2019, , .		1
31	Scalable Growth of High-Quality MoS2 Film by Magnetron Sputtering: Application for NO2 Gas Sensing. , 2019, , .		1
32	High-performance ultraviolet detector employing out-of-plane rGO/MoS₂ PN heterostructure. , 2018, , .		0
33	Growth of Large-Scale Î±-MoO3 on SiO2 and Its Uses for Efficient Hydrogen Sensing Application. , 2019, , .		0