

Rahul Kumar

List of Publications by Year in descending order

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33
papers

1,676
citations

471061

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all docs

33
docs citations

33
times ranked

1900
citing authors

#	ARTICLE	IF	CITATIONS
1	Coupled excitonic quasiparticle-electron-phonon and interlayer coupling in vertically and horizontally aligned MoS ₂ . Journal of Materials Chemistry C, 2022, 10, 5684-5692.	2.7	4
2	Electron-phonon coupling, thermal expansion coefficient, resonance effect, and phonon dynamics in high-quality CVD-grown monolayer and bilayer MoSe_2 . Physical Review B, 2022, 105, .	1.1	5
3	Conducting polymer-based nanostructures for gas sensors. Coordination Chemistry Reviews, 2022, 462, 214517.	9.5	88
4	Plasmonic Au Nanoparticles Sensitized MoS ₂ , for Bifunctional NO ₂ , and Light Sensing. IEEE Sensors Journal, 2021, 21, 4190-4197.	2.4	12
5	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.	2.0	21
6	Davydov Splitting, Resonance Effect and Phonon Dynamics in Chemical Vapor Deposition Grown Layered MoS ₂ . Nanotechnology, 2021, 32, 285705.	1.3	12
7	MoS ₂ -PVP Nanocomposites Decorated ZnO Microsheets for Efficient Hydrogen Detection. IEEE Sensors Journal, 2021, 21, 8878-8885.	2.4	15
8	Visualization of band offsets at few-layer MoS ₂ /Ge heterojunction. Nanotechnology, 2021, 32, 375711.	1.3	8
9	Gas sensing materials roadmap. Journal of Physics Condensed Matter, 2021, 33, 303001.	0.7	49
10	Single-atom catalysts boosted ultrathin film sensors. Rare Metals, 2020, 39, 1110-1112.	3.6	15
11	Room-Temperature Gas Sensors Under Photoactivation: From Metal Oxides to 2D Materials. Nano-Micro Letters, 2020, 12, 164.	14.4	201
12	Efficient NO ₂ sensing performance of a low-cost nanostructured sensor derived from molybdenite concentrate. Green Chemistry, 2020, 22, 6981-6991.	4.6	10
13	Anisotropic electron-phonon coupling in layered MoS ₂ . Journal of Physics Condensed Matter, 2020, 32, 415702.	0.7	6
14	MoS ₂ -Based Nanomaterials for Room-Temperature Gas Sensors. Advanced Materials Technologies, 2020, 5, 1901062.	3.0	138
15	Transition metal dichalcogenides-based flexible gas sensors. Sensors and Actuators A: Physical, 2020, 303, 111875.	2.0	125
16	Boosting Sensing Performance of Vacancy-Containing Vertically Aligned MoS ₂ Using rGO Particles. IEEE Sensors Journal, 2019, 19, 10214-10220.	2.4	18
17	Ultraviolet photodetector based on chemical vapor deposition grown MoO ₃ microplates. , 2019, , .		1
18	A high-performance hydrogen sensor based on a reverse-biased MoS ₂ /GaN heterojunction. Nanotechnology, 2019, 30, 314001.	1.3	42

#	ARTICLE	IF	CITATIONS
19	Growth of Large-Scale \pm -MoO ₃ on SiO ₂ and Its Uses for Efficient Hydrogen Sensing Application. , 2019, , .		0
20	Scalable Growth of High-Quality MoS ₂ Film by Magnetron Sputtering: Application for NO ₂ Gas Sensing. , 2019, , .		1
21	Growth of MoS ₂ MoO ₃ Hybrid Microflowers via Controlled Vapor Transport Process for Efficient Gas Sensing at Room Temperature. Advanced Materials Interfaces, 2018, 5, 1800071.	1.9	93
22	Enhanced sensing response with complete recovery of MoS ₂ sensor under photoexcitation. AIP Conference Proceedings, 2018, , .	0.3	4
23	Photoactivated Mixed In-Plane and Edge-Enriched p-Type MoS ₂ Flake-Based NO ₂ Sensor Working at Room Temperature. ACS Sensors, 2018, 3, 998-1004.	4.0	149
24	High performance NO ₂ sensor using MoS ₂ nanowires network. Applied Physics Letters, 2018, 112, .	1.5	87
25	Highly selective and reversible NO ₂ gas sensor using vertically aligned MoS ₂ flake networks. Nanotechnology, 2018, 29, 464001.	1.3	79
26	High-performance ultraviolet detector employing out-of-plane rGO/MoS ₂ PN heterostructure. , 2018, , .		0
27	NO ₂ sensing at room temperature using vertically aligned MoS ₂ flakes network. AIP Conference Proceedings, 2018, , .	0.3	1
28	High-performance photodetector based on hybrid of MoS ₂ and reduced graphene oxide. Nanotechnology, 2018, 29, 404001.	1.3	25
29	Wafer-scale synthesis of a uniform film of few-layer MoS ₂ on GaN for 2D heterojunction ultraviolet photodetector. Journal Physics D: Applied Physics, 2018, 51, 374003.	1.3	49
30	Enhanced Carrier Density in a MoS ₂ /Si Heterojunction-Based Photodetector by Inverse Auger Process. IEEE Transactions on Electron Devices, 2018, 65, 4149-4154.	1.6	15
31	Determination of band alignment at two-dimensional MoS ₂ /Si van der Waals heterojunction. Journal of Applied Physics, 2018, 123, .	1.1	19
32	UV-Activated MoS ₂ Based Fast and Reversible NO ₂ Sensor at Room Temperature. ACS Sensors, 2017, 2, 1744-1752.	4.0	346
33	Efficient room temperature hydrogen sensor based on UV-activated ZnO nano-network. Nanotechnology, 2017, 28, 365502.	1.3	38