

Masoud Mahjouri-Samani

List of Publications by Year in descending order

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71
papers

2,885
citations

185998

28
h-index

168136

53
g-index

71
all docs

71
docs citations

71
times ranked

5406
citing authors

#	ARTICLE	IF	CITATIONS
1	Interlayer Coupling in Twisted WSe ₂ /WS ₂ Bilayer Heterostructures Revealed by Optical Spectroscopy. ACS Nano, 2016, 10, 6612-6622.	7.3	249
2	Patterned arrays of lateral heterojunctions within monolayer two-dimensional semiconductors. Nature Communications, 2015, 6, 7749.	5.8	213
3	Structure and Formation Mechanism of Black TiO ₂ Nanoparticles. ACS Nano, 2015, 9, 10482-10488.	7.3	170
4	Simultaneous additive and subtractive three-dimensional nanofabrication using integrated two-photon polymerization and multiphoton ablation. Light: Science and Applications, 2012, 1, e6-e6.	7.7	158
5	Low-Frequency Raman Fingerprints of Two-Dimensional Metal Dichalcogenide Layer Stacking Configurations. ACS Nano, 2015, 9, 6333-6342.	7.3	151
6	Two-Dimensional-Material-Based Field-Effect Transistor Biosensor for Detecting COVID-19 Virus (SARS-CoV-2). ACS Nano, 2021, 15, 11461-11469.	7.3	149
7	Tailoring Vacancies Far Beyond Intrinsic Levels Changes the Carrier Type and Optical Response in Monolayer MoSe ₂ Crystals. Nano Letters, 2016, 16, 5213-5220.	4.5	121
8	Pulsed Laser Deposition of Photoresponsive Two-Dimensional GaSe Nanosheet Networks. Advanced Functional Materials, 2014, 24, 6365-6371.	7.8	108
9	Ultrafast Charge Transfer and Hybrid Exciton Formation in 2D/0D Heterostructures. Journal of the American Chemical Society, 2016, 138, 14713-14719.	6.6	102
10	Transparent, flexible, and solid-state supercapacitors based on graphene electrodes. APL Materials, 2013, 1, .	2.2	89
11	Surface-enhanced Raman spectroscopy using gold-coated horizontally aligned carbon nanotubes. Nanotechnology, 2012, 23, 205702.	1.3	87
12	Suppression of Defects and Deep Levels Using Isoelectronic Tungsten Substitution in Monolayer MoSe ₂ . Advanced Functional Materials, 2017, 27, 1603850.	7.8	84
13	Nanoforging Single Layer MoSe ₂ Through Defect Engineering with Focused Helium Ion Beams. Scientific Reports, 2016, 6, 30481.	1.6	82
14	Single-Step Formation of Graphene on Dielectric Surfaces. Advanced Materials, 2013, 25, 630-634.	11.1	75
15	Laser Treated Carbon Nanotube Yarn Microelectrodes for Rapid and Sensitive Detection of Dopamine in Vivo. ACS Sensors, 2016, 1, 508-515.	4.0	74
16	UV-activated ZnO films on a flexible substrate for room temperature O ₂ and H ₂ O sensing. Scientific Reports, 2017, 7, 6053.	1.6	61
17	Laser polishing for improving fatigue performance of additive manufactured Ti-6Al-4V parts. Optics and Laser Technology, 2021, 134, 106639.	2.2	56
18	High Conduction Hopping Behavior Induced in Transition Metal Dichalcogenides by Percolating Defect Networks: Toward Atomically Thin Circuits. Advanced Functional Materials, 2017, 27, 1702829.	7.8	52

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19	Digital Transfer Growth of Patterned 2D Metal Chalcogenides by Confined Nanoparticle Evaporation. ACS Nano, 2014, 8, 11567-11575.	7.3	47
20	Strain tolerance of two-dimensional crystal growth on curved surfaces. Science Advances, 2019, 5, eaav4028.	4.7	46
21	Observation of two distinct negative trions in tungsten disulfide monolayers. Physical Review B, 2015, 92, .	1.1	44
22	Plasmonic-enhanced carbon nanotube infrared bolometers. Nanotechnology, 2013, 24, 035502.	1.3	43
23	Ultrafast Dynamics of Metal Plasmons Induced by 2D Semiconductor Excitons in Hybrid Nanostructure Arrays. ACS Photonics, 2016, 3, 2389-2395.	3.2	42
24	Laser-based micro/nanofabrication in one, two and three dimensions. Frontiers of Optoelectronics, 2015, 8, 351-378.	1.9	36
25	Nonequilibrium Synthesis of TiO ₂ Nanoparticle "Building Blocks" for Crystal Growth by Sequential Attachment in Pulsed Laser Deposition. Nano Letters, 2017, 17, 4624-4633.	4.5	33
26	Laser induced selective removal of metallic carbon nanotubes. Nanotechnology, 2009, 20, 495202.	1.3	32
27	Magnetism and spin dynamics in room-temperature van der Waals magnet Fe ₅ GeTe ₂ . 2D Materials, 2021, 8, 045030.	2.0	32
28	Low temperature synthesis of hierarchical TiO ₂ nanostructures for high performance perovskite solar cells by pulsed laser deposition. Physical Chemistry Chemical Physics, 2016, 18, 27067-27072.	1.3	29
29	Transparent interconnections formed by rapid single-step fabrication of graphene patterns. Applied Physics Letters, 2011, 99, 053103.	1.5	27
30	Self-limiting laser crystallization and direct writing of 2D materials. International Journal of Extreme Manufacturing, 2019, 1, 015001.	6.3	26
31	Photocarrier Transfer across Monolayer MoS ₂ "MoSe ₂ Lateral Heterojunctions. ACS Nano, 2018, 12, 7086-7092.	7.3	25
32	Uniform, Homogenous Coatings of Carbon Nanohorns on Arbitrary Substrates from Common Solvents. ACS Applied Materials & Interfaces, 2013, 5, 13153-13160.	4.0	23
33	Accelerated synthesis of atomically-thin 2D quantum materials by a novel laser-assisted synthesis technique. 2D Materials, 2020, 7, 015014.	2.0	21
34	Self-aligned growth of single-walled carbon nanotubes using optical near-field effects. Nanotechnology, 2009, 20, 025601.	1.3	19
35	Ultrafast dynamics of exciton formation and decay in two-dimensional tungsten disulfide (2D-WS ₂) monolayers. Physical Chemistry Chemical Physics, 2020, 22, 17385-17393.	1.3	19
36	Interfacial Thermal Conductance between Monolayer WSe ₂ and SiO ₂ under Consideration of Radiative Electron-Hole Recombination. ACS Applied Materials & Interfaces, 2020, 12, 51069-51081.	4.0	18

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37	Diameter modulation by fast temperature control in laser-assisted chemical vapor deposition of single-walled carbon nanotubes. <i>Nanotechnology</i> , 2010, 21, 395601.	1.3	17
38	Laser-assisted nanofabrication of carbon nanostructures. <i>Journal of Laser Applications</i> , 2012, 24, .	0.8	17
39	Phase-Selective and Localized TiO ₂ Coating on Additive and Wrought Titanium by a Direct Laser Surface Modification Approach. <i>ACS Omega</i> , 2020, 5, 16744-16751.	1.6	17
40	Photoexcitation Dynamics and Long-Lived Excitons in Strain-Engineered Transition Metal Dichalcogenides. <i>Advanced Materials</i> , 2022, 34, e2110568.	11.1	17
41	Black Anatase Formation by Annealing of Amorphous Nanoparticles and the Role of the Ti ₂ O ₃ Shell in Self-Organized Crystallization by Particle Attachment. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 22018-22025.	4.0	15
42	Towards carbon-nanotube integrated devices: optically controlled parallel integration of single-walled carbon nanotubes. <i>Nanotechnology</i> , 2010, 21, 315601.	1.3	13
43	Performance of biochar assisted catalysts during hydroprocessing of non-edible vegetable oil: Effect of transition metal source on catalytic activity. <i>Energy Conversion and Management</i> , 2022, 252, 115131.	4.4	13
44	Controlled growth of carbon nanotubes on electrodes under different bias polarity. <i>Applied Physics Letters</i> , 2009, 95, 143117.	1.5	12
45	Monolayer 2D quantum materials subjected to gamma irradiation in high-vacuum for nuclear and space applications. <i>Applied Physics Letters</i> , 2020, 116, .	1.5	12
46	Filling Exciton Trap-States in Two-Dimensional Tungsten Disulfide (WS ₂) and Diselenide (WSe ₂) Monolayers. <i>Nanomaterials</i> , 2021, 11, 770.	1.9	11
47	Dexamethasone eluting 3D printed metal devices for bone injuries. <i>Therapeutic Delivery</i> , 2020, 11, 373-386.	1.2	10
48	Application of lasers in the synthesis and processing of two-dimensional quantum materials. <i>Journal of Laser Applications</i> , 2019, 31, 031202.	0.8	9
49	Gas-Phase Formation of Highly Luminescent 2D GaSe Nanoparticle Ensembles in a Nonequilibrium Laser Ablation Process. <i>Nanomaterials</i> , 2020, 10, 908.	1.9	9
50	Rapid laser nanomanufacturing and direct patterning of 2D materials on flexible substrates—2DFlex. <i>Nanotechnology</i> , 2021, 32, 055302.	1.3	8
51	Laser incidence angle influence on energy density variations, surface roughness, and porosity of additively manufactured parts. <i>Additive Manufacturing</i> , 2022, 50, 102572.	1.7	8
52	Image contrast enhancement in field-emission scanning electron microscopy of single-walled carbon nanotubes. <i>Applied Surface Science</i> , 2009, 255, 4341-4346.	3.1	7
53	Laser-assisted selective and localized surface transformation of titanium to anatase, rutile, and mixed phase nanostructures. <i>Journal of Laser Applications</i> , 2021, 33, .	0.8	7
54	Dry Printing and Additive Nanomanufacturing of Flexible Hybrid Electronics and Sensors. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	6

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55	Laser-Assisted Synthesis of Monolayer 2D MoSe ₂ Crystals with Tunable Vacancy Concentrations: Implications for Gas and Biosensing. ACS Applied Nano Materials, 2022, 5, 9129-9139.	2.4	6
56	Interface Thermal Resistance between Monolayer WSe ₂ and SiO ₂ : Raman Probing with Consideration of Optical Acoustic Phonon Nonequilibrium. Advanced Materials Interfaces, 2022, 9, .	1.9	5
57	Additive Nanomanufacturing of Multifunctional Materials and Patterned Structures: A Novel Laser-Based Dry Printing Process. Advanced Materials Technologies, 2021, 6, 2001260.	3.0	4
58	Laser-assisted solid-state synthesis of carbon nanotube/silicon core/shell structures. Nanotechnology, 2013, 24, 255604.	1.3	3
59	Rapid Growth of m-plane Oriented Gallium Nitride Nanoplates on Silicon Substrate Using Laser-Assisted Metal Organic Chemical Vapor Deposition. Crystal Growth and Design, 2013, 13, 3171-3176.	1.4	3
60	Transition Metal Dichalcogenides: Suppression of Defects and Deep Levels Using Isoelectronic Tungsten Substitution in Monolayer MoSe ₂ (Adv. Funct. Mater. 19/2017). Advanced Functional Materials, 2017, 27, .	7.8	3
61	Radiation Effects on Thin Flexible Superconducting Cables. IEEE Transactions on Applied Superconductivity, 2021, 31, 1-5.	1.1	3
62	Controlled-growth of single-walled carbon nanotubes using optical near-field effects. Proceedings of SPIE, 2009, , .	0.8	2
63	Strong photoluminescence from diameter-modulated single-walled carbon nanotubes. Applied Physics Letters, 2012, 101, 043123.	1.5	1
64	Three-dimensional micro/nano-fabrication by integration of additive and subtractive femtosecond-laser direct writing processes. , 2012, , .		1
65	Catalytic nanoparticles for carbon nanotube growth synthesized by through thin film femtosecond laser ablation. Proceedings of SPIE, 2014, , .	0.8	1
66	Phase Determination of Black TiO ₂ Nanoparticles. Microscopy and Microanalysis, 2015, 21, 815-816.	0.2	1
67	Laser Synthesis, Processing, and Spectroscopy of Atomically-Thin Two Dimensional Materials. Springer Series in Materials Science, 2018, , 1-37.	0.4	1
68	Polarity determined growth of carbon nanotubes of different alignments. Proceedings of SPIE, 2010, , .	0.8	0
69	What Can Lasers Do in the Nano-Fabrication of Carbon Nanotube Based Devices?. Materials Research Society Symposia Proceedings, 2011, 1365, 1.	0.1	0
70	Diameter modulation of carbon nanotubes by rapid temperature modulation in laser-assisted chemical vapor deposition. Proceedings of SPIE, 2011, , .	0.8	0
71	Three-dimensional sub-wavelength fabrication by integration of additive and subtractive femtosecond-laser direct writing. Materials Research Society Symposia Proceedings, 2013, 1499, 1.	0.1	0