

David B Geohegan

List of Publications by Year in descending order

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8732

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254
docs citations

254
times ranked

21181
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly Responsive Ultrathin GaS Nanosheet Photodetectors on Rigid and Flexible Substrates. Nano Letters, 2013, 13, 1649-1654.	4.5	683
2	Synthesis of Novel Thin-Film Materials by Pulsed Laser Deposition. Science, 1996, 273, 898-903.	6.0	547
3	PdSe ₂ : Pentagonal Two-Dimensional Layers with High Air Stability for Electronics. Journal of the American Chemical Society, 2017, 139, 14090-14097.	6.6	509
4	Nonlinear Fano-Resonant Dielectric Metasurfaces. Nano Letters, 2015, 15, 7388-7393.	4.5	474
5	Calcium as the Superior Coating Metal in Functionalization of Carbon Fullerenes for High-Capacity Hydrogen Storage. Physical Review Letters, 2008, 100, 206806.	2.9	391
6	Carbon Nanotubes and Related Nanomaterials: Critical Advances and Challenges for Synthesis toward Mainstream Commercial Applications. ACS Nano, 2018, 12, 11756-11784.	7.3	388
7	Fast intensified-CCD photography of YBa ₂ Cu ₃ O _{7-x} laser ablation in vacuum and ambient oxygen. Applied Physics Letters, 1992, 60, 2732-2734.	1.5	383
8	Equally Efficient Interlayer Exciton Relaxation and Improved Absorption in Epitaxial and Nonepitaxial MoS ₂ /WS ₂ Heterostructures. Nano Letters, 2015, 15, 486-491.	4.5	337
9	Anisotropic Electron-Photon and Electron-Phonon Interactions in Black Phosphorus. Nano Letters, 2016, 16, 2260-2267.	4.5	328
10	Time-resolved imaging of gas phase nanoparticle synthesis by laser ablation. Applied Physics Letters, 1998, 72, 2987-2989.	1.5	318
11	In situ measurements and modeling of carbon nanotube array growth kinetics during chemical vapor deposition. Applied Physics A: Materials Science and Processing, 2005, 81, 223-240.	1.1	300
12	High-Performance Flexible Perovskite Solar Cells by Using a Combination of Ultrasonic Spray-Coating and Low Thermal Budget Photonic Curing. ACS Photonics, 2015, 2, 680-686.	3.2	268
13	Interlayer Coupling in Twisted WSe ₂ /WS ₂ Bilayer Heterostructures Revealed by Optical Spectroscopy. ACS Nano, 2016, 10, 6612-6622.	7.3	249
14	Perovskite Solar Cells with Near 100% Internal Quantum Efficiency Based on Large Single Crystalline Grains and Vertical Bulk Heterojunctions. Journal of the American Chemical Society, 2015, 137, 9210-9213.	6.6	246
15	Two-dimensional GaSe/MoSe ₂ misfit bilayer heterojunctions by van der Waals epitaxy. Science Advances, 2016, 2, e1501882.	4.7	239
16	Ultrathin nanosheets of CrSiTe ₃ : a semiconducting two-dimensional ferromagnetic material. Journal of Materials Chemistry C, 2016, 4, 315-322.	2.7	235
17	Controlled Vapor Phase Growth of Single Crystalline, Two-Dimensional GaSe Crystals with High Photoresponse. Scientific Reports, 2014, 4, 5497.	1.6	222
18	Patterned arrays of lateral heterojunctions within monolayer two-dimensional semiconductors. Nature Communications, 2015, 6, 7749.	5.8	213

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19	Dynamics of laser ablation plume penetration through low pressure background gases. Applied Physics Letters, 1995, 67, 197-199.	1.5	189
20	Low-Frequency Interlayer Breathing Modes in Few-Layer Black Phosphorus. Nano Letters, 2015, 15, 4080-4088.	4.5	182
21	In-Plane Optical Anisotropy of Layered Gallium Telluride. ACS Nano, 2016, 10, 8964-8972.	7.3	179
22	Low-Frequency Interlayer Raman Modes to Probe Interface of Twisted Bilayer MoS ₂ . Nano Letters, 2016, 16, 1435-1444.	4.5	177
23	Low Temperature Growth of Boron Nitride Nanotubes on Substrates. Nano Letters, 2005, 5, 2528-2532.	4.5	176
24	Nature of the band gap and origin of the electro-/photo-activity of Co ₃ O ₄ . Journal of Materials Chemistry C, 2013, 1, 4628.	2.7	176
25	Dynamics of Plume Propagation and Splitting during Pulsed-Laser Ablation. Physical Review Letters, 1997, 79, 1571-1574.	2.9	174
26	Structure and Formation Mechanism of Black TiO ₂ Nanoparticles. ACS Nano, 2015, 9, 10482-10488.	7.3	170
27	Physics and diagnostics of laser ablation plume propagation for high-Tc superconductor film growth. Thin Solid Films, 1992, 220, 138-145.	0.8	165
28	Fast and highly anisotropic thermal transport through vertically aligned carbon nanotube arrays. Applied Physics Letters, 2006, 89, 223110.	1.5	157
29	Near-Edge X-ray Absorption Fine Structure Spectroscopy as a Tool for Investigating Nanomaterials. Small, 2006, 2, 26-35.	5.2	152
30	Low-Frequency Raman Fingerprints of Two-Dimensional Metal Dichalcogenide Layer Stacking Configurations. ACS Nano, 2015, 9, 6333-6342.	7.3	151
31	Dynamics of single-wall carbon nanotube synthesis by laser vaporization. Applied Physics A: Materials Science and Processing, 2000, 70, 153-160.	1.1	148
32	Highly sensitive phototransistors based on two-dimensional GaTe nanosheets with direct bandgap. Nano Research, 2014, 7, 694-703.	5.8	140
33	Characterization of ground-state neutral and ion transport during laser ablation of Y ₁ Ba ₂ Cu ₃ O _{7-δ} using transient optical absorption spectroscopy. Applied Physics Letters, 1989, 55, 2345-2347.	1.5	137
34	Molecular Beam-Controlled Nucleation and Growth of Vertically Aligned Single-Wall Carbon Nanotube Arrays. Journal of Physical Chemistry B, 2005, 109, 16684-16694.	1.2	137
35	Low Energy Implantation into Transition-Metal Dichalcogenide Monolayers to Form Janus Structures. ACS Nano, 2020, 14, 3896-3906.	7.3	136
36	Characterization of thin-film amorphous semiconductors using spectroscopic ellipsometry. Thin Solid Films, 2000, 377-378, 68-73.	0.8	134

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37	Growth behavior of carbon nanotubes on multilayered metal catalyst film in chemical vapor deposition. <i>Chemical Physics Letters</i> , 2003, 374, 222-228.	1.2	133
38	Antioxidant Deactivation on Graphenic Nanocarbon Surfaces. <i>Small</i> , 2011, 7, 2775-2785.	5.2	133
39	Nucleation of Single-Walled Carbon Nanotubes. <i>Physical Review Letters</i> , 2003, 90, 145501.	2.9	127
40	In situ growth rate measurements and length control during chemical vapor deposition of vertically aligned multiwall carbon nanotubes. <i>Applied Physics Letters</i> , 2003, 83, 1851-1853.	1.5	127
41	Surface-Induced Orientation Control of CuPc Molecules for the Epitaxial Growth of Highly Ordered Organic Crystals on Graphene. <i>Journal of the American Chemical Society</i> , 2013, 135, 3680-3687.	6.6	125
42	Thickness-dependent charge transport in few-layer MoS ₂ field-effect transistors. <i>Nanotechnology</i> , 2016, 27, 165203.	1.3	124
43	High-Performance Field-Effect Transistors Based on Polystyrene- <i>b</i> -Poly(3-hexylthiophene) Diblock Copolymers. <i>ACS Nano</i> , 2011, 5, 3559-3567.	7.3	122
44	Tailoring Vacancies Far Beyond Intrinsic Levels Changes the Carrier Type and Optical Response in Monolayer MoSe ₂ Crystals. <i>Nano Letters</i> , 2016, 16, 5213-5220.	4.5	121
45	Twisted MoSe ₂ Bilayers with Variable Local Stacking and Interlayer Coupling Revealed by Low-Frequency Raman Spectroscopy. <i>ACS Nano</i> , 2016, 10, 2736-2744.	7.3	117
46	In situ imaging and spectroscopy of single-wall carbon nanotube synthesis by laser vaporization. <i>Applied Physics Letters</i> , 2000, 76, 182-184.	1.5	115
47	Carbon Nanotubes Grown on Metal Microelectrodes for the Detection of Dopamine. <i>Analytical Chemistry</i> , 2016, 88, 645-652.	3.2	113
48	Deep learning analysis of defect and phase evolution during electron beam-induced transformations in WS ₂ . <i>Npj Computational Materials</i> , 2019, 5, .	3.5	113
49	In situ control of the catalyst efficiency in chemical vapor deposition of vertically aligned carbon nanotubes on predeposited metal catalyst films. <i>Applied Physics Letters</i> , 2004, 84, 1759-1761.	1.5	110
50	PS- <i>b</i> -P3HT Copolymers as P3HT/PCBM Interfacial Compatibilizers for High Efficiency Photovoltaics. <i>Advanced Materials</i> , 2011, 23, 5529-5535.	11.1	110
51	Photoluminescence from gas-suspended SiO _x nanoparticles synthesized by laser ablation. <i>Applied Physics Letters</i> , 1998, 73, 438-440.	1.5	108
52	Pulsed Laser Deposition of Photoresponsive Two-Dimensional GaSe Nanosheet Networks. <i>Advanced Functional Materials</i> , 2014, 24, 6365-6371.	7.8	108
53	Excimer laser reduction and patterning of graphite oxide. <i>Carbon</i> , 2013, 53, 81-89.	5.4	107
54	Imaging of Vapor Plumes Produced by Matrix Assisted Laser Desorption: A Plume Sharpening Effect. <i>Physical Review Letters</i> , 1999, 83, 444-447.	2.9	103

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55	The isotopic effects of deuteration on optoelectronic properties of conducting polymers. <i>Nature Communications</i> , 2014, 5, 3180.	5.8	103
56	Van der Waals Epitaxial Growth of Two-Dimensional Single-Crystalline GaSe Domains on Graphene. <i>ACS Nano</i> , 2015, 9, 8078-8088.	7.3	103
57	Ultrafast Charge Transfer and Hybrid Exciton Formation in 2D/0D Heterostructures. <i>Journal of the American Chemical Society</i> , 2016, 138, 14713-14719.	6.6	102
58	In situ edge engineering in two-dimensional transition metal dichalcogenides. <i>Nature Communications</i> , 2018, 9, 2051.	5.8	100
59	Deciphering Halogen Competition in Organometallic Halide Perovskite Growth. <i>Journal of the American Chemical Society</i> , 2016, 138, 5028-5035.	6.6	92
60	Dynamics of plume propagation, splitting, and nanoparticle formation during pulsed-laser ablation. <i>Applied Surface Science</i> , 1998, 127-129, 151-158.	3.1	91
61	Directed Integration of Tetracyanoquinodimethane-Cu Organic Nanowires into Prefabricated Device Architectures. <i>Advanced Materials</i> , 2006, 18, 2184-2188.	11.1	91
62	Cooperative Island Growth of Large-Area Single-Crystal Graphene on Copper Using Chemical Vapor Deposition. <i>ACS Nano</i> , 2014, 8, 5657-5669.	7.3	91
63	Single-Crystal Organic Nanowires of Copperâ€”Tetracyanoquinodimethane: Synthesis, Patterning, Characterization, and Device Applications. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 2650-2654.	7.2	90
64	Formation of single crystalline ZnO nanotubes without catalysts and templates. <i>Applied Physics Letters</i> , 2007, 90, 113108.	1.5	89
65	Synthesis and emerging properties of 2D layered IIIâ€”VI metal chalcogenides. <i>Applied Physics Reviews</i> , 2019, 6, 041312.	5.5	89
66	Rapid Growth of Long, Vertically Aligned Carbon Nanotubes through Efficient Catalyst Optimization Using Metal Film Gradients. <i>Nano Letters</i> , 2004, 4, 1939-1942.	4.5	88
67	Dynamics of plume propagation and splitting during pulsed-laser ablation of Si in He and Ar. <i>Physical Review B</i> , 1998, 58, 1533-1543.	1.1	87
68	Investigations of single-wall carbon nanotube growth by time-restricted laser vaporization. <i>Physical Review B</i> , 2002, 65, .	1.1	87
69	Imaging and blackbody emission spectra of particulates generated in the KrFâ€”laser ablation of BN and YBa ₂ Cu ₃ O _{7-x} . <i>Applied Physics Letters</i> , 1993, 62, 1463-1465.	1.5	86
70	Excitonic Dynamics in Janus MoSSe and WSSe Monolayers. <i>Nano Letters</i> , 2021, 21, 931-937.	4.5	86
71	Isoelectronic Tungsten Doping in Monolayer MoSe ₂ for Carrier Type Modulation. <i>Advanced Materials</i> , 2016, 28, 8240-8247.	11.1	85
72	Suppression of Defects and Deep Levels Using Isoelectronic Tungsten Substitution in Monolayer MoSe ₂ . <i>Advanced Functional Materials</i> , 2017, 27, 1603850.	7.8	84

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73	Metastable Copper-Phthalocyanine Single-Crystal Nanowires and Their Use in Fabricating High-Performance Field-Effect Transistors. <i>Advanced Functional Materials</i> , 2009, 19, 3776-3780.	7.8	81
74	Defect-Mediated Phase Transformation in Anisotropic Two-Dimensional PdSe ₂ Crystals for Seamless Electrical Contacts. <i>Journal of the American Chemical Society</i> , 2019, 141, 8928-8936.	6.6	81
75	Two-Dimensional Palladium Diselenide with Strong In-Plane Optical Anisotropy and High Mobility Grown by Chemical Vapor Deposition. <i>Advanced Materials</i> , 2020, 32, e1906238.	11.1	81
76	Enhancement of van der Waals Interlayer Coupling through Polar Janus MoSSe. <i>Journal of the American Chemical Society</i> , 2020, 142, 17499-17507.	6.6	80
77	A water-soluble polythiophene for organic field-effect transistors. <i>Polymer Chemistry</i> , 2013, 4, 5270.	1.9	78
78	Laser ablation plume thermalization dynamics in background gases: combined imaging, optical absorption and emission spectroscopy, and ion probe measurements. <i>Applied Surface Science</i> , 1996, 96-98, 131-138.	3.1	75
79	Gas-phase diagnostics and LIF-imaging of 3-hydroxypicolinic acid maldi-matrix plumes. <i>Chemical Physics Letters</i> , 1998, 286, 425-432.	1.2	74
80	Enhancing Ion Migration in Grain Boundaries of Hybrid Organic-Inorganic Perovskites by Chlorine. <i>Advanced Functional Materials</i> , 2017, 27, 1700749.	7.8	74
81	Structure and optical properties of amorphous diamond films prepared by ArF laser ablation as a function of carbon ion kinetic energy. <i>Applied Physics Letters</i> , 1998, 73, 2591-2593.	1.5	70
82	Metal-assisted hydrogen storage on Pt-decorated single-walled carbon nanohorns. <i>Carbon</i> , 2012, 50, 4953-4964.	5.4	69
83	Single walled carbon nanohorns as photothermal cancer agents. <i>Lasers in Surgery and Medicine</i> , 2011, 43, 43-51.	1.1	67
84	Edge-Controlled Growth and Etching of Two-Dimensional GaSe Monolayers. <i>Journal of the American Chemical Society</i> , 2017, 139, 482-491.	6.6	65
85	Improving Light Harvesting in Dye-Sensitized Solar Cells Using Hybrid Bimetallic Nanostructures. <i>ACS Photonics</i> , 2016, 3, 385-394.	3.2	64
86	Electronic transport imaging in a multiwire SnO ₂ chemical field-effect transistor device. <i>Journal of Applied Physics</i> , 2005, 98, 044503.	1.1	62
87	Real-time imaging of vertically aligned carbon nanotube array growth kinetics. <i>Nanotechnology</i> , 2008, 19, 055605.	1.3	61
88	Accelerated Expansion of Laser-Ablated Materials near a Solid Surface. <i>Physical Review Letters</i> , 1995, 75, 4706-4709.	2.9	60
89	Gas-phase nanoparticle formation and transport during pulsed laser deposition of Y ₁ Ba ₂ Cu ₃ O _{7-δ} . <i>Applied Physics Letters</i> , 1999, 74, 3788-3790.	1.5	60
90	Real-Time Observation of Order-Disorder Transformation of Organic Cations Induced Phase Transition and Anomalous Photoluminescence in Hybrid Perovskites. <i>Advanced Materials</i> , 2018, 30, e1705801.	11.1	60

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91	Anomalous interlayer vibrations in strongly coupled layered PdSe ₂ . 2D Materials, 2018, 5, 035016.	2.0	60
92	Model for Self-Assembly of Carbon Nanotubes from Acetylene Based on Real-Time Studies of Vertically Aligned Growth Kinetics. Journal of Physical Chemistry C, 2009, 113, 15484-15491.	1.5	59
93	Carbon nanotube effects on electroluminescence and photovoltaic response in conjugated polymers. Applied Physics Letters, 2005, 87, 263118.	1.5	57
94	The effect of annealing on the electrical and thermal transport properties of macroscopic bundles of long multi-wall carbon nanotubes. Physica B: Condensed Matter, 2007, 388, 326-330.	1.3	57
95	Selective Patterned Growth of Single-Crystal AgTCNQ Nanowires for Devices by Vapor-Solid Chemical Reaction. Advanced Functional Materials, 2008, 18, 3043-3048.	7.8	57
96	Separation of junction and bundle resistance in single wall carbon nanotube percolation networks by impedance spectroscopy. Applied Physics Letters, 2010, 97, .	1.5	56
97	In Vitro and in Vivo Studies of Single-Walled Carbon Nanohorns with Encapsulated Metallofullerenes and Exohedrally Functionalized Quantum Dots. Nano Letters, 2010, 10, 2843-2848.	4.5	56
98	Correlating high power conversion efficiency of PTB7:PC ₇₁ BM inverted organic solar cells with nanoscale structures. Nanoscale, 2015, 7, 15576-15583.	2.8	54
99	Observation of Nanoscale Morphological and Structural Degradation in Perovskite Solar Cells by in Situ TEM. ACS Applied Materials & Interfaces, 2016, 8, 32333-32340.	4.0	54
100	Simple model of the interrelation between single- and multiwall carbon nanotube growth rates for the CVD process. Physical Review B, 2007, 75, .	1.1	53
101	Electron-Beam-Related Studies of Halide Perovskites: Challenges and Opportunities. Advanced Energy Materials, 2020, 10, 1903191.	10.2	53
102	Condensed phase growth of single-wall carbon nanotubes from laser annealed nanoparticulates. Applied Physics Letters, 2001, 78, 3307-3309.	1.5	52
103	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
104	Controllable Thin-Film Approaches for Doping and Alloying Transition Metal Dichalcogenides Monolayers. Advanced Science, 2021, 8, 2004249.	5.6	51
105	Comparative diagnostics of ArF- and KrF-laser generated carbon plumes used for amorphous diamond-like carbon film deposition. Applied Surface Science, 1996, 96-98, 859-865.	3.1	50
106	Raman study of Fano interference in p-type doped silicon. Journal of Raman Spectroscopy, 2010, 41, 1759-1764.	1.2	49
107	Room-Temperature Electron-Hole Liquid in Monolayer MoS ₂ . ACS Nano, 2019, 13, 10351-10358.	7.3	49
108	Growth, Patterning, and One-Dimensional Electron Transport Properties of Self-Assembled Ag-TCNQF4 Organic Nanowires. Chemistry of Materials, 2009, 21, 4275-4281.	3.2	48

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109	Modeling of dynamical processes in laser ablation. <i>Applied Surface Science</i> , 1996, 96-98, 14-23.	3.1	47
110	Digital Transfer Growth of Patterned 2D Metal Chalcogenides by Confined Nanoparticle Evaporation. <i>ACS Nano</i> , 2014, 8, 11567-11575.	7.3	47
111	Improving Dispersion of Single-Walled Carbon Nanotubes in a Polymer Matrix Using Specific Interactions. <i>Chemistry of Materials</i> , 2006, 18, 3513-3522.	3.2	46
112	Low thermal budget, photonic-cured compact TiO ₂ layers for high-efficiency perovskite solar cells. <i>Journal of Materials Chemistry A</i> , 2016, 4, 9685-9690.	5.2	46
113	Strain tolerance of two-dimensional crystal growth on curved surfaces. <i>Science Advances</i> , 2019, 5, eaav4028.	4.7	46
114	Revealing the Preferred Interlayer Orientations and Stackings of Two-Dimensional Bilayer Gallium Selenide Crystals. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 2712-2717.	7.2	45
115	Synthesis and characterization of single-wall carbon nanotube/amorphous diamond thin-film composites. <i>Applied Physics Letters</i> , 2002, 81, 2097-2099.	1.5	44
116	Observation of two distinct negative trions in tungsten disulfide monolayers. <i>Physical Review B</i> , 2015, 92, .	1.1	44
117	Ultrafast Spectral Dynamics of CsPb(Br _x Cl _{1-x}) ₃ Mixed-Halide Nanocrystals. <i>ACS Photonics</i> , 2018, 5, 3575-3583.	3.2	44
118	Nanoparticle generation and transport resulting from femtosecond laser ablation of ultrathin metal films: Time-resolved measurements and molecular dynamics simulations. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	42
119	Ultrafast Dynamics of Metal Plasmons Induced by 2D Semiconductor Excitons in Hybrid Nanostructure Arrays. <i>ACS Photonics</i> , 2016, 3, 2389-2395.	3.2	42
120	Isotope-Engineering the Thermal Conductivity of Two-Dimensional MoS ₂ . <i>ACS Nano</i> , 2019, 13, 2481-2489.	7.3	42
121	Pulsed Growth of Vertically Aligned Nanotube Arrays with Variable Density. <i>ACS Nano</i> , 2010, 4, 7573-7581.	7.3	41
122	Controllable Growth of Perovskite Films by Room-Temperature Air Exposure for Efficient Planar Heterojunction Photovoltaic Cells. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 14862-14865.	7.2	41
123	Development of pulsed laser-assisted thermal relaxation technique for thermal characterization of microscale wires. <i>Journal of Applied Physics</i> , 2008, 103, .	1.1	40
124	Intrinsic Defects in MoS ₂ Grown by Pulsed Laser Deposition: From Monolayers to Bilayers. <i>ACS Nano</i> , 2021, 15, 2858-2868.	7.3	40
125	Modeling of plume dynamics in laser ablation processes for thin film deposition of materials. <i>Physics of Plasmas</i> , 1996, 3, 2203-2209.	0.7	39
126	Understanding How Processing Additives Tune the Nanoscale Morphology of High Efficiency Organic Photovoltaic Blends: From Casting Solution to Spin-Cast Thin Film. <i>Advanced Functional Materials</i> , 2014, 24, 6647-6657.	7.8	39

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127	Growth of highly doped p-type ZnTe films by pulsed laser ablation in molecular nitrogen. Applied Physics Letters, 1995, 67, 2545-2547.	1.5	38
128	High-density vertically aligned multiwalled carbon nanotubes with tubular structures. Applied Physics Letters, 2005, 86, 253105.	1.5	38
129	Theory and numerical modeling of the accelerated expansion of laser-ablated materials near a solid surface. Physical Review B, 1999, 60, 8373-8382.	1.1	37
130	Ultrafast carrier dynamics in bimetallic nanostructure-enhanced methylammonium lead bromide perovskites. Nanoscale, 2017, 9, 1475-1483.	2.8	37
131	Laser-solid interaction and dynamics of laser-ablated materials. Applied Surface Science, 1996, 96-98, 45-49.	3.1	35
132	Cumulative and continuous laser vaporization synthesis of single wall carbon nanotubes and nanohorns. Applied Physics A: Materials Science and Processing, 2008, 93, 849-855.	1.1	34
133	The importance of chain connectivity in the formation of non-covalent interactions between polymers and single-walled carbon nanotubes and its impact on dispersion. Soft Matter, 2010, 6, 2801.	1.2	34
134	Flux-Dependent Growth Kinetics and Diameter Selectivity in Single-Wall Carbon Nanotube Arrays. ACS Nano, 2011, 5, 8311-8321.	7.3	33
135	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
136	Mechanisms affecting kinetic energies of laser-ablated materials. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1996, 14, 1111-1114.	0.9	31
137	Mapping mesoscopic phase evolution during E-beam induced transformations via deep learning of atomically resolved images. Npj Computational Materials, 2018, 4, .	3.5	31
138	Characterization and Carbonization of Highly Oriented Poly(diiododiacetylene) Nanofibers. Macromolecules, 2011, 44, 2626-2631.	2.2	30
139	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
140	Non-Equilibrium Synthesis of Highly Active Nanostructured, Oxygen-Incorporated Amorphous Molybdenum Sulfide HER Electrocatalyst. Small, 2020, 16, e2004047.	5.2	29
141	Assembly of Single-Walled Carbon Nanohorn Supported Liposome Particles. Bioconjugate Chemistry, 2011, 22, 1012-1016.	1.8	28
142	Atomic Insight into Thermolysis-Driven Growth of 2D MoS ₂ . Advanced Functional Materials, 2019, 29, 1902149.	7.8	28
143	High-performance organic field-effect transistors with dielectric and active layers printed sequentially by ultrasonic spraying. Journal of Materials Chemistry C, 2013, 1, 4384.	2.7	27
144	Tilt Grain Boundary Topology Induced by Substrate Topography. ACS Nano, 2017, 11, 8612-8618.	7.3	27

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145	Time-resolved diagnostics of single wall carbon nanotube synthesis by laser vaporization. Applied Surface Science, 2002, 197-198, 552-562.	3.1	26
146	Species-resolved imaging and gated photon counting Spectroscopy of laser ablation plume dynamics During krf- and arf-laser pld of amorphous diamond films. Materials Research Society Symposia Proceedings, 1995, 397, 55.	0.1	25
147	Pulsed laser CVD investigations of single-wall carbon nanotube growth dynamics. Applied Physics A: Materials Science and Processing, 2008, 93, 987-993.	1.1	25
148	Investigation of $Gd_3N@C_{2n}(40\%n\%44)$ family by Raman and inelastic electron tunneling spectroscopy. Physical Review B, 2010, 81, .	1.1	25
149	Photocarrier Transfer across Monolayer MoS_2 – $MoSe_2$ Lateral Heterojunctions. ACS Nano, 2018, 12, 7086-7092.	7.3	25
150	Pulsed laser deposition of thin superconducting films of $HoBaCu_3O_7$ and $YBaCu_3O_7$. Journal of Materials Research, 1988, 3, 1169-1179.	1.2	24
151	LIF imaging and gas-phase diagnostics of laser desorbed MALDI-matrix plumes. Applied Surface Science, 1998, 127-129, 248-254.	3.1	24
152	Operation of individual integrally gated carbon nanotube field emitter cells. Applied Physics Letters, 2002, 81, 2860-2862.	1.5	24
153	Scanning probe microscopy imaging of frequency dependent electrical transport through carbon nanotube networks in polymers. Nanotechnology, 2004, 15, 907-912.	1.3	23
154	Fluorination of brick and mortar-soft-templated graphitic ordered mesoporous carbons for high power lithium-ion battery. Journal of Materials Chemistry A, 2013, 1, 9414.	5.2	23
155	Uniform, Homogenous Coatings of Carbon Nanohorns on Arbitrary Substrates from Common Solvents. ACS Applied Materials & Interfaces, 2013, 5, 13153-13160.	4.0	23
156	Bottom up synthesis of boron-doped graphene for stable intermediate temperature fuel cell electrodes. Carbon, 2017, 123, 605-615.	5.4	23
157	Ultrafast Exciton Dissociation at the $2D-WS_2$ Monolayer/Perovskite Interface. Journal of Physical Chemistry C, 2018, 122, 28910-28917.	1.5	23
158	One-dimensional electron transport in Cu-tetracyanoquinodimethane organic nanowires. Applied Physics Letters, 2007, 90, 193115.	1.5	22
159	A Facile High-speed Vibration Milling Method to Water-disperse Single-walled Carbon Nanohorns. Chemistry of Materials, 2010, 22, 347-351.	3.2	22
160	Real-time optical diagnostics of graphene growth induced by pulsed chemical vapor deposition. Nanoscale, 2013, 5, 6507.	2.8	22
161	Absorption spectrum of $KrF_2(4\hat{e}2\hat{i})$ in the near ultraviolet and visible (335–600 nm): Comparison with $Kr^{2+}(1/2\text{u})$ measurements. Journal of Chemical Physics, 1988, 89, 3410-3427.	1.2	21
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