Tawfique Hasan

List of Publications by Year
in descending order

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139 papers	21,245 citations	24978 57 h-index	18075 120 g-index
140 all docs	140 docs citations	140 times ranked	23178 citing authors

#	Article	IF	Citations
1	Graphene photonics and optoelectronics. Nature Photonics, 2010, 4, 611-622.	15.6	6,719
2	Graphene Mode-Locked Ultrafast Laser. ACS Nano, 2010, 4, 803-810.	7.3	1,795
3	Inkjet-Printed Graphene Electronics. ACS Nano, 2012, 6, 2992-3006.	7.3	1,018
4	Production and processing of graphene and 2d crystals. Materials Today, 2012, 15, 564-589.	8.3	866
5	Nanotubeâ€"Polymer Composites for Ultrafast Photonics. Advanced Materials, 2009, 21, 3874-3899.	11.1	778
6	Functional inks and printing of two-dimensional materials. Chemical Society Reviews, 2018, 47, 3265-3300.	18.7	401
7	Sub 200 fs pulse generation from a graphene mode-locked fiber laser. Applied Physics Letters, 2010, 97, .	1.5	398
8	A stable, wideband tunable, near transform-limited, graphene-mode-locked, ultrafast laser. Nano Research, 2010, 3, 653-660.	5.8	351
9	Miniaturization of optical spectrometers. Science, 2021, 371, .	6.0	321
10	Black phosphorus ink formulation for inkjet printing of optoelectronics and photonics. Nature Communications, 2017, 8, 278.	5.8	311
11	Single-nanowire spectrometers. Science, 2019, 365, 1017-1020.	6.0	291
12	Tm-doped fiber laser mode-locked by graphene-polymer composite. Optics Express, 2012, 20, 25077.	1.7	272
13	Solution processed MoS2-PVA composite for sub-bandgap mode-locking of a wideband tunable ultrafast Er:fiber laser. Nano Research, 2015, 8, 1522-1534.	5.8	256
14	Oxygen self-doped g-C₃N₄ with tunable electronic band structure for unprecedentedly enhanced photocatalytic performance. Nanoscale, 2018, 10, 4515-4522.	2.8	247
15	Printed gas sensors. Chemical Society Reviews, 2020, 49, 1756-1789.	18.7	216
16	Ultrafast lasers mode-locked by nanotubes and graphene. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 1082-1091.	1.3	213
17	A self-powered high-performance graphene/silicon ultraviolet photodetector with ultra-shallow junction: breaking the limit of silicon?. Npj 2D Materials and Applications, 2017, 1, .	3.9	211
18	Few-layer MoS_2 saturable absorbers for short-pulse laser technology: current status and future perspectives [Invited]. Photonics Research, 2015, 3, A30.	3.4	185

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19	Photoluminescence Spectroscopy of Carbon Nanotube Bundles: Evidence for Exciton Energy Transfer. Physical Review Letters, 2007, 99, 137402.	2.9	181
20	Ultra-strong nonlinear optical processes and trigonal warping in MoS2 layers. Nature Communications, 2017, 8, 893.	5.8	177
21	Bio-inspired Murray materials for mass transfer and activity. Nature Communications, 2017, 8, 14921.	5.8	176
22	Stabilization and â€œDebundlingâ€•of Single-Wall Carbon Nanotube Dispersions in N-Methyl-2-pyrrolidone (NMP) by Polyvinylpyrrolidone (PVP). Journal of Physical Chemistry C, 2007, 111, 12594-12602.	1.5	158
23	Fast Response and High Sensitivity ZnO/glass Surface Acoustic Wave Humidity Sensors Using Graphene Oxide Sensing Layer. Scientific Reports, 2014, 4, 7206.	1.6	149
24	Carbon Nanotube Polycarbonate Composites for Ultrafast Lasers. Advanced Materials, 2008, 20, 4040-4043.	11.1	148
25	Ab initio study of electronic and optical behavior of two-dimensional silicon carbide. Journal of Materials Chemistry C, 2013, 1, 2131.	2.7	148
26	Sensitive Electronic-Skin Strain Sensor Array Based on the Patterned Two-Dimensional Î±-In₂Se₃. Chemistry of Materials, 2016, 28, 4278-4283.	3.2	146
27	Density Gradient Ultracentrifugation of Nanotubes: Interplay of Bundling and Surfactants Encapsulation. Journal of Physical Chemistry C, 2010, 114, 17267-17285.	1.5	144
28	Optical Waveplates Based on Birefringence of Anisotropic Two-Dimensional Layered Materials. ACS Photonics, 2017, 4, 3023-3030.	3.2	144
29	Inkjet Printed Largeâ€Area Flexible Fewâ€Layer Graphene Thermoelectrics. Advanced Functional Materials, 2018, 28, 1800480.	7.8	136
30	Engineering symmetry breaking in 2D layered materials. Nature Reviews Physics, 2021, 3, 193-206.	11.9	135
31	Ultrafast stretched-pulse fiber laser mode-locked by carbon nanotubes. Nano Research, 2010, 3, 404-411.	5.8	133
32	Slow Photons for Photocatalysis and Photovoltaics. Advanced Materials, 2017, 29, 1605349.	11.1	129
33	Printed aerogels: chemistry, processing, and applications. Chemical Society Reviews, 2021, 50, 3842-3888.	18.7	128
34	A Fully Printed Flexible MoS₂ Memristive Artificial Synapse with Femtojoule Switching Energy. Advanced Electronic Materials, 2019, 5, 1900740.	2.6	123
35	74-fs nanotube-mode-locked fiber laser. Applied Physics Letters, 2012, 101, 153107.	1.5	122
36	Anisotropic Growth of Nonlayered CdS on MoS₂ Monolayer for Functional Vertical Heterostructures. Advanced Functional Materials, 2016, 26, 2648-2654.	7.8	118

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37	Vertically aligned two-dimensional SnS₂ nanosheets with a strong photon capturing capability for efficient photoelectrochemical water splitting. Journal of Materials Chemistry A, 2017, 5, 1989-1995.	5.2	117
38	3D interconnected macro-mesoporous electrode with self-assembled NiO nanodots for high-performance supercapacitor-like Li-ion battery. Nano Energy, 2016, 22, 269-277.	8.2	115
39	3D Ferroconcreteâ€Like Aminated Carbon Nanotubes Network Anchoring Sulfur for Advanced Lithiumâ€“Sulfur Battery. Advanced Energy Materials, 2018, 8, 1801066.	10.2	115
40	A compact, high power, ultrafast laser mode-locked by carbon nanotubes. Applied Physics Letters, 2009, 95, .	1.5	114
41	Manganese dioxide nanosheet functionalized sulfur@PEDOT coreâ€“shell nanospheres for advanced lithiumâ€“sulfur batteries. Journal of Materials Chemistry A, 2016, 4, 9403-9412.	5.2	112
42	15 GHz picosecond pulse generation from a monolithic waveguide laser with a graphene-film saturable output coupler. Optics Express, 2013, 21, 7943.	1.7	111
43	A Broadband Fluorographene Photodetector. Advanced Materials, 2017, 29, 1700463.	11.1	110
44	102 fs pulse generation from a long-term stable, inkjet-printed black phosphorus-mode-locked fiber laser. Optics Express, 2018, 26, 12506.	1.7	104
45	Inkjet-printed graphene electrodes for dye-sensitized solar cells. Carbon, 2016, 105, 33-41.	5.4	94
46	Anchoring ultrafine metallic and oxidized Pt nanoclusters on yolk-shell TiO2 for unprecedentedly high photocatalytic hydrogen production. Nano Energy, 2017, 38, 118-126.	8.2	91
47	A general ink formulation of 2D crystals for wafer-scale inkjet printing. Science Advances, 2020, 6, eaba5029.	4.7	89
48	152 fs nanotube-mode-locked thulium-doped all-fiber laser. Scientific Reports, 2016, 6, 28885.	1.6	86
49	Broadly Defining Lasing Wavelengths in Single Bandgap-Graded Semiconductor Nanowires. Nano Letters, 2014, 14, 3153-3159.	4.5	84
50	Mid-infrared Raman-soliton continuum pumped by a nanotube-mode-locked sub-picosecond Tm-doped MOPFA. Optics Express, 2013, 21, 23261.	1.7	74
51	Lattice Dynamics, Phonon Chirality, and Spinâ€“Phonon Coupling in 2D Itinerant Ferromagnet Fe₃GeTe₂. Advanced Functional Materials, 2019, 29, 1904734.	7.8	70
52	Graphene charge-injection photodetectors. Nature Electronics, 2022, 5, 281-288.	13.1	70
53	Hierarchy Design in Metal Oxides as Anodes for Advanced Lithiumâ€Ion Batteries. Small Methods, 2018, 2, 1800171.	4.6	69
54	Double-Wall Carbon Nanotubes for Wide-Band, Ultrafast Pulse Generation. ACS Nano, 2014, 8, 4836-4847.	7.3	66

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55	Hierarchical Zeolite Single-Crystal Reactor for Excellent Catalytic Efficiency. Matter, 2020, 3, 1226-1245.	5.0	66
56	Hydrophilic bi-functional B-doped g-C3N4 hierarchical architecture for excellent photocatalytic H2O2 production and photoelectrochemical water splitting. Journal of Energy Chemistry, 2022, 70, 236-247.	7.1	66
57	Selenium clusters in Zn-glutamate MOF derived nitrogen-doped hierarchically radial-structured microporous carbon for advanced rechargeable Naâ€“Se batteries. Journal of Materials Chemistry A, 2018, 6, 22790-22797.	5.2	62
58	Ultrafast Raman laser mode-locked by nanotubes. Optics Letters, 2011, 36, 3996.	1.7	60
59	Double-Wall Carbon Nanotube Hybrid Mode-Locker in Tm-doped Fibre Laser: A Novel Mechanism for Robust Bound-State Solitons Generation. Scientific Reports, 2017, 7, 44314.	1.6	57
60	Wavelength and pulse duration tunable ultrafast fiber laser mode-locked with carbon nanotubes. Scientific Reports, 2018, 8, 2738.	1.6	57
61	Designing an Efficient Multimode Environmental Sensor Based on Grapheneâ€“Silicon Heterojunction. Advanced Materials Technologies, 2017, 2, 1600262.	3.0	55
62	Q-switched Dy:ZBLAN fiber lasers beyond 3 Î¼m: comparison of pulse generation using acousto-optic modulation and inkjet-printed black phosphorus. Optics Express, 2019, 27, 15032.	1.7	54
63	320 fs pulse generation from an ultrafast laser inscribed waveguide laser mode-locked by a nanotube saturable absorber. Applied Physics Letters, 2010, 97, 111114.	1.5	53
64	Unique walnut-shaped porous MnO₂/C nanospheres with enhanced reaction kinetics for lithium storage with high capacity and superior rate capability. Journal of Materials Chemistry A, 2016, 4, 4264-4272.	5.2	53
65	Solventâ€Based Softâ€Patterning of Graphene Lateral Heterostructures for Broadband Highâ€Speed Metalâ€“Semiconductorâ€“Metal Photodetectors. Advanced Materials Technologies, 2017, 2, 1600241.	3.0	53
66	Hierarchical nanosheet-constructed yolkâ€“shell TiO₂ porous microspheres for lithium batteries with high capacity, superior rate and long cycle capability. Nanoscale, 2015, 7, 12979-12989.	2.8	51
67	Characterization of carbon nanotubeâ€“thermotropic nematic liquid crystal composites. Journal Physics D: Applied Physics, 2008, 41, 125106.	1.3	50
68	Realization of vertical metal semiconductor heterostructures via solution phase epitaxy. Nature Communications, 2018, 9, 3611.	5.8	49
69	Three-Dimensional (3D) Bicontinuous Hierarchically Porous Mn2O3 Single Crystals for High Performance Lithium-Ion Batteries. Scientific Reports, 2015, 5, 14686.	1.6	47
70	Pulse dynamics in carbon nanotube mode-locked fiber lasers near zero cavity dispersion. Optics Express, 2015, 23, 9947.	1.7	46
71	Unprecedented and highly stable lithium storage capacity of (001) faceted nanosheet-constructed hierarchically porous TiO2/rGO hybrid architecture for high-performance Li-ion batteries. National Science Review, 2020, 7, 1046-1058.	4.6	46
72	Polymer-Assisted Isolation of Single Wall Carbon Nanotubes in Organic Solvents for Optical-Quality Nanotubeâ˜Polymer Composites. Journal of Physical Chemistry C, 2008, 112, 20227-20232.	1.5	45

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73	Synthesis of YBa₂Cu₃O_{7â^'Î´} and Y₂BaCuO₅ Nanocrystalline Powders for YBCO Superconductors Using Carbon Nanotube Templates. ACS Nano, 2012, 6, 5395-5403.	7.3	43
74	Optimizing inner voids in yolk-shell TiO2 nanostructure for high-performance and ultralong-life lithium-sulfur batteries. Chemical Engineering Journal, 2021, 417, 129241.	6.6	42
75	Conformal Printing of Graphene for Singleâ€•and Multilayered Devices onto Arbitrarily Shaped 3D Surfaces. Advanced Functional Materials, 2019, 29, 1807933.	7.8	40
76	Ab initio optical study of graphene on hexagonal boron nitride and fluorographene substrates. Journal of Materials Chemistry C, 2013, 1, 1618.	2.7	39
77	Ultrafast nonlinear photoresponse of single-wall carbon nanotubes: a broadband degenerate investigation. Nanoscale, 2016, 8, 9304-9309.	2.8	39
78	Hierarchical TiO₂/C nanocomposite monoliths with a robust scaffolding architecture, mesoporeâ€“macropore network and TiO₂â€“C heterostructure for high-performance lithium ion batteries. Nanoscale, 2016, 8, 10928-10937.	2.8	38
79	Inkjetâ€Printed rGO/binary Metal Oxide Sensor for Predictive Gas Sensing in a Mixed Environment. Advanced Functional Materials, 2022, 32, .	7.8	38
80	Enhancing monolayer photoluminescence on optical micro/nanofibers for low-threshold lasing. Science Advances, 2019, 5, eaax7398.	4.7	36
81	Stable, Surfactant-Free Graphene-Styrene Methylmethacrylate Composite for Ultrafast Lasers. Advanced Optical Materials, 2016, 4, 1088-1097.	3.6	35
82	Theory of edge-state optical absorption in two-dimensional transition metal dichalcogenide flakes. Physical Review B, 2016, 94, .	1.1	35
83	Graphene actively Q-switched lasers. 2D Materials, 2017, 4, 025095.	2.0	34
84	Optical properties of nanotube bundles by photoluminescence excitation and absorption spectroscopy. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 2352-2359.	1.3	33
85	500fs wideband tunable fiber laser mode-locked by nanotubes. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 1078-1081.	1.3	33
86	High-energy and efficient Raman soliton generation tunable from 198 to 229â€‰â€‰Âµm in an all-silica-fiber thulium laser system. Optics Letters, 2017, 42, 3518.	1.7	31
87	Nanotubes Complexed with DNA and Proteins for Resistive-Pulse Sensing. ACS Nano, 2013, 7, 8857-8869.	7.3	30
88	Inkjet-printed CMOS-integrated grapheneâ€“metal oxide sensors for breath analysis. Npj 2D Materials and Applications, 2019, 3, .	3.9	30
89	Surfactantâ€aided exfoliation of molybdenum disulfide for ultrafast pulse generation through edgeâ€state saturable absorption. Physica Status Solidi (B): Basic Research, 2016, 253, 911-917.	0.7	29
90	Flexible Dielectric Nanocomposites with Ultrawide Zero-Temperature Coefficient Windows for Electrical Energy Storage and Conversion under Extreme Conditions. ACS Applied Materials & Interfaces, 2017, 9, 7591-7600.	4.0	29

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91	Hexagonal Boron Nitrideâ€“Enhanced Optically Transparent Polymer Dielectric Inks for Printable Electronics. Advanced Functional Materials, 2020, 30, 2002339.	7.8	29
92	Functional inks of graphene, metal dichalcogenides and black phosphorus for photonics and (opto)electronics. Proceedings of SPIE, 2015, , .	0.8	27
93	Wavelength tunable soliton rains in a nanotube-mode locked Tm-doped fiber laser. Applied Physics Letters, 2018, 113, .	1.5	26
94	Printing of Graphene and Related 2D Materials. , 2019, , .		25
95	Interwoven scaffolded porous titanium oxide nanocubes/carbon nanotubes framework for high-performance sodium-ion battery. Journal of Energy Chemistry, 2021, 59, 38-46.	7.1	25
96	Scalar Nanosecond Pulse Generation in a Nanotube Mode-Locked Environmentally Stable Fiber Laser. IEEE Photonics Technology Letters, 2014, 26, 1672-1675.	1.3	24
97	Hysteresis suppression in self-assembled single-wall nanotube field effect transistors. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 2278-2282.	1.3	23
98	Single-cell yolk-shell nanoencapsulation for long-term viability with size-dependent permeability and molecular recognition. National Science Review, 2021, 8, nwaa097.	4.6	23
99	Environmentally stable black phosphorus saturable absorber for ultrafast laser. Nanophotonics, 2020, 9, 2445-2449.	2.9	21
100	172â€‰â€‰fs, 243â€‰â€‰kW peak power pulse generation from a Ho-doped fiber laser system. Optics Letters, 2018, 43, 4619.	1.7	20
101	Machine-intelligent inkjet-printed Î±-Fe2O3/rGO towards NO2 quantification in ambient humidity. Sensors and Actuators B: Chemical, 2020, 321, 128446.	4.0	20
102	Dispersibility and stability improvement of unfunctionalized nanotubes in amide solvents by polymer wrapping. Physica E: Low-Dimensional Systems and Nanostructures, 2008, 40, 2414-2418.	1.3	19
103	Q-switched Fiber Laser with MoS2 Saturable Absorber. , 2014, , .		19
104	3D interconnected hierarchically macro-mesoporous TiO₂ networks optimized by biomolecular self-assembly for high performance lithium ion batteries. RSC Advances, 2016, 6, 26856-26862.	1.7	19
105	Evanescent-wave coupled right angled buried waveguide: Applications in carbon nanotube mode-locking. Applied Physics Letters, 2013, 103, 221117.	1.5	18
106	Broad bandwidth dual-wavelength fiber laser simultaneously delivering stretched pulse and dissipative soliton. Optics Express, 2020, 28, 6937.	1.7	17
107	Unprecedented strong and reversible atomic orbital hybridization enables a highly stable Liâ€“S battery. National Science Review, 2022, 9, .	4.6	15
108	Spectroscopic characterization of protein-wrapped single-wall carbon nanotubes and quantification of their cellular uptake in multiple cell generations. Nanotechnology, 2013, 24, 265102.	1.3	14

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109	Vertically aligned smooth ZnO nanorod films for planar device applications. Journal of Materials Chemistry C, 2013, 1, 2525.	2.7	13
110	Sub-150 fs dispersion-managed soliton generation from an all-fiber Tm-doped laser with BP-SA. Optics Express, 2020, 28, 34104.	1.7	12
111	Fiber-Integrated Reversibly Wavelength-Tunable Nanowire Laser Based on Nanocavity Mode Coupling. ACS Nano, 2019, 13, 9965-9972.	7.3	11
112	Giant All-Optical Modulation of Second-Harmonic Generation Mediated by Dark Excitons. ACS Photonics, 2021, 8, 2320-2328.	3.2	11
113	All-Fiber Passively Q-Switched Laser Based on Tm3+-Doped Tellurite Fiber. IEEE Photonics Technology Letters, 2015, 27, 689-692.	1.3	10
114	New Approach for Thickness Determination of Solution-Deposited Graphene Thin Films. ACS Omega, 2017, 2, 2630-2638.	1.6	8
115	Thickness modulations enable multi-functional spin valves based on Van der Waals hetero-structure. Nano Today, 2022, 42, 101373.	6.2	8
116	Coexistence of Contact Electrification and Dynamic pâ€“n Junction Modulation Effects in Triboelectrification. ACS Applied Materials & Interfaces, 2022, 14, 30410-30419.	4.0	8
117	Soliton Mode-Locked Large-Mode-Area Tm-Doped Fiber Oscillator. IEEE Photonics Technology Letters, 2020, 32, 117-120.	1.3	7
118	100â€‰mâ€‰min^{â”1} Industrialâ€Scale Flexographic Printing of Grapheneâ€Incorporated Conductive Ink. Advanced Engineering Materials, 2022, 24, 2101217.	1.6	7
119	Controlling surface porosity of graphene-based printed aerogels. Npj 2D Materials and Applications, 2022, 6, .	3.9	6
120	Fluorinated graphene and hexagonal boron nitride as ALD seed layers for graphene-based van der Waals heterostructures. Nanotechnology, 2014, 25, 355202.	1.3	5
121	High-Power Femtosecond Pulse Generation From an All-Fiber Er-Doped Chirped Pulse Amplification System. IEEE Photonics Journal, 2020, 12, 1-8.	1.0	3
122	Structures, Properties and Applications of 2D Materials. , 2019, , 19-51.		2
123	2D Material Production Methods. , 2019, , 53-101.		2
124	Printing Technologies. , 2019, , 135-178.		2
125	2D Ink Design. , 2019, , 103-134.		2
126	Ultrafast nonlinear absorption in SWNTs: An ultra-broadband investigation. , 2015, , .		1

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127	Photodetectors: A Broadband Fluorographene Photodetector (Adv. Mater. 22/2017). Advanced Materials, 2017, 29, .	11.1	1
128	Applications of Printed 2D Materials. , 2019, , 179-216.		1
129	Nanotube mode-locked, low repetition rate pulse source for fiber-based supercontinuum generation at low average pump power. , 2014, , .		1
130	Fabrication and mechanical property of carbon nanotube/metal composites. , 2010, , .		0
131	Q-switched modelocking using carbon nanotubes in an ultrafast laser inscribed ytterbium doped bismuthate glass waveguide laser. , 2012, , .		0
132	Spectroscopic characteristics and cellular compatibility of protein wrapped single wall carbon nanotubes. , 2012, , .		0
133	Improving the efficiency of nanowire based ultraviolet light emitting diode. , 2015, , .		0
134	Wideband tunable ultrafast fiber laser using blackphosphorus saturable absorber. , 2017, , .		0
135	Observation of tunable dual-wavelength in a fiber laser mode-locked by black phosphorus. , 2017, , .		0
136	Manufacturing 2D Material Based Saturable Absorbers: From Composites to Printing. , 2021, , .		0
137	Q-switched pulse generation in Yb- and Er-doped fiber laser with WS2 saturable absorber. , 2015, , .		0
138	136fs, 6 nJ thulium-based all-fiber CPA system. , 2016, , .		0
139	Graphene-based inkjet-printable electrodes for dye-sensitized solar cells. Acta Crystallographica Section A: Foundations and Advances, 2017, 73, C1070-C1070.	0.0	0