Gary J Cheng

List of Publications by Citations

211 papers	5,086 citations	38 h-index	59 g-index
252 ext. papers	6,285 ext. citations	7.5 avg, IF	5.99 L-index

#	Paper	IF	Citations
211	Double-negative-index ceramic aerogels for thermal superinsulation. *Science*, **2019**, 363, 723-727	33.3	229
210	Fatigue performance improvement in AISI 4140 steel by dynamic strain aging and dynamic precipitation during warm laser shock peening. *Acta Materialia*, **2011**, 59, 1014-1025	8.4	174
209	3D stereolithography printing of graphene oxide reinforced complex architectures. *Nanotechnology*, **2015**, 26, 434003	3.4	131
208	Single-layer graphene oxide reinforced metal matrix composites by laser sintering: Microstructure and mechanical property enhancement. *Acta Materialia*, **2014**, 80, 183-193	8.4	129
207	Stable mid-infrared polarization imaging based on quasi-2D tellurium at room temperature. *Nature Communications*, **2020**, 11, 2308	17.4	120
206	Nanolithography. Large-scale nanoshaping of ultrasmooth 3D crystalline metallic structures. *Science*, **2014**, 346, 1352-6	33.3	113
205	Laser Sintering of Liquid Metal Nanoparticles for Scalable Manufacturing of Soft and Flexible Electronics. *ACS Applied Materials & Interfaces*, **2018**, 10, 28232-28241	9.5	104
204	Precipitation strengthening of stress-aged Al□Cu alloys. *Acta Materialia*, **2000**, 48, 2239-2246	8.4	100
203	Bimodal nanocrystallization of NiTi shape memory alloy by laser shock peening and post-deformation annealing. *Acta Materialia*, **2011**, 59, 7219-7227	8.4	97
202	3D nanostructured inkjet printed graphene via UV-pulsed laser irradiation enables paper-based electronics and electrochemical devices. *Nanoscale*, **2016**, 8, 15870-9	7.7	93
201	Mesoporous nitrogen-doped carbon hollow spheres as high-performance anodes for lithium-ion batteries. *Journal of Power Sources*, **2016**, 324, 233-238	8.9	87
200	Analytical and finite element model pull-in study of rigid and deformable electrostatic microactuators. *Journal of Micromechanics and Microengineering*, **2004**, 14, 57-68	2	85
199	Bioceramic coating of hydroxyapatite on titanium substrate with Nd-YAG laser. *Materials Science and Engineering C*, **2005**, 25, 541-547	8.3	85
198	Crystalline Nanojoining Silver Nanowire Percolated Networks on Flexible Substrate. *ACS Nano*, **2015**, 9, 10018-31	16.7	71
197	Microstructure and mechanical property characterizations of metal foil after microscale laser dynamic forming. *Journal of Applied Physics*, **2007**, 101, 063108	2.5	71
196	Large-Area Direct Laser-Shock Imprinting of a 3D Biomimic Hierarchical Metal Surface for Triboelectric Nanogenerators. *Advanced Materials*, **2018**, 30, 1705840	24	70
195	[INVITED] A review: Warm laser shock peening and related laser processing technique. *Optics and Laser Technology*, **2016**, 78, 15-24	4.2	66

194	Ultrahigh dense and gradient nano-precipitates generated by warm laser shock peening for combination of high strength and ductility. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2014**, 609, 195-203	5.3	64
193	Cooling Effects in Multiscan Laser Forming. *Journal of Manufacturing Processes*, **2001**, 3, 60-72	5	64
192	Three-dimensional printing of complex structures: man made or toward nature?. *ACS Nano*, **2014**, 8, 9710-17	13.7	61
191	The mechanisms of thermal engineered laser shock peening for enhanced fatigue performance. *Acta Materialia*, **2012**, 60, 4997-5009	8.4	59
190	Observation of Optical and Electrical In-Plane Anisotropy in High-Mobility Few-Layer ZrTe. *Nano Letters*, **2016**, 16, 7364-7369	11.5	59
189	Flyweight, Superelastic, Electrically Conductive, and Flame-Retardant 3D Multi-Nanolayer Graphene/Ceramic Metamaterial. *Advanced Materials*, **2017**, 29, 1605506	24	55
188	Shock engineering the additive manufactured graphene-metal nanocomposite with high density nanotwins and dislocations for ultra-stable mechanical properties. *Acta Materialia*, **2018**, 150, 360-372	8.4	55
187	A reusable laser wrapped graphene-Ag array based SERS sensor for trace detection of genomic DNA methylation. *Biosensors and Bioelectronics*, **2017**, 92, 755-762	11.8	53
186	Three-dimensional-linked carbon fiber-carbon nanotube hybrid structure for enhancing thermal conductivity of silicon carbonitride matrix composites. *Carbon*, **2016**, 108, 38-46	10.4	52
185	Stability, antimicrobial activity, and cytotoxicity of poly(amidoamine) dendrimers on titanium substrates. *ACS Applied Materials & Interfaces*, **2011**, 3, 2885-94	9.5	46
184	Laser sintered graphene nickel nanocomposites. *Journal of Materials Processing Technology*, **2016**, 231, 143-150	5.3	45
183	Laser-Induced High-Strain-Rate Superplastic 3-D Microforming of Metallic Thin Films. *Journal of Microelectromechanical Systems*, **2010**, 19, 273-281	2.5	45
182	An eXtended Finite Element Method (XFEM) study on the effect of reinforcing particles on the crack propagation behavior in a metal matrix composite. *International Journal of Fatigue*, **2012**, 44, 151-156	5	44
181	Nanoscale strainability of graphene by laser shock-induced three-dimensional shaping. *Nano Letters* , **2012**, 12, 4577-83	11.5	43
180	Deformation-induced martensite and nanotwins by cryogenic laser shock peening of AISI 304 stainless steel and the effects on mechanical properties. *Philosophical Magazine*, **2012**, 92, 1369-1389	1.6	43
179	Microstructure Integrated Modeling of Multiscan Laser Forming. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2002**, 124, 379-388	3.3	42
178	Deformation Behaviors and Critical Parameters in Microscale Laser Dynamic Forming. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2009**, 131,	3.3	41
177	Process Design of Laser Forming for Three-Dimensional Thin Plates. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2004**, 126, 217-225	3.3	41

176	Nanoscale Laser Metallurgy and Patterning in Air Using MOFs. *Journal of the American Chemical Society*, **2019**, 141, 5481-5489	16.4	41
175	Graphene laminated gold bipyramids as sensitive detection platforms for antibiotic molecules. *Chemical Communications*, **2015**, 51, 15494-7	5.8	40
174	Single-Layer Graphene as a Barrier Layer for Intense UV Laser-Induced Damages for Silver Nanowire Network. *ACS Nano*, **2015**, 9, 11121-33	16.7	39
173	Straining effects in MoS monolayer on nanostructured substrates: temperature-dependent photoluminescence and exciton dynamics. *Nanoscale*, **2018**, 10, 5717-5724	7.7	38
172	Nucleation of highly dense nanoscale precipitates based on warm laser shock peening. *Journal of Applied Physics*, **2010**, 108, 063518	2.5	38
171	Graphene/PbS-Quantum Dots/Graphene Sandwich Structures Enabled by Laser Shock Imprinting for High Performance Photodetectors. *ACS Applied Materials & Interfaces*, **2017**, 9, 44715-44723	9.5	36
170	Environmental assessment of laser assisted manufacturing: case studies on laser shock peening and laser assisted turning. *Journal of Cleaner Production*, **2010**, 18, 1311-1319	10.3	36
169	Alpha Lead Oxide (□PbO): A New 2D Material with Visible Light Sensitivity. *Small*, **2018**, 14, e1703346	11	35
168	Ultraviolet laser crystallized ZnO:Al films on sapphire with high Hall mobility for simultaneous enhancement of conductivity and transparency. *Applied Physics Letters*, **2014**, 104, 201907	3.4	35
167	Laser engineered multilayer coating of biphasic calcium phosphate/titanium nanocomposite on metal substrates. *ACS Applied Materials & Interfaces*, **2011**, 3, 339-50	9.5	35
166	Defects Mediated Corrosion in Graphene Coating Layer. *ACS Applied Materials & Interfaces*, **2017**, 9, 11902-11908	9.5	34
165	Highly Sensitive Flexible Piezoresistive Sensor with 3D Conductive Network. *ACS Applied Materials & Interfaces*, **2020**, 12, 35291-35299	9.5	34
164	Controlled precipitation by thermal engineered laser shock peening and its effect on dislocation pinning: Multiscale dislocation dynamics simulation and experiments. *Acta Materialia*, **2013**, 61, 1957-1967	8.4	34
163	Forming Limit and Fracture Mode of Microscale Laser Dynamic Forming. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2010**, 132,	3.3	34
162	Ultrastrong nanocrystalline stainless steel and its Hall-Petch relationship in the nanoscale. *Scripta Materialia*, **2018**, 155, 26-31	5.6	33
161	Ultrafast and scalable laser liquid synthesis of tin oxide nanotubes and its application in lithium ion batteries. *Nanoscale*, **2014**, 6, 5853-8	7.7	33
160	Highly conductive and transparent alumina-doped ZnO films processed by direct pulsed laser recrystallization at room temperature. *Applied Physics Letters*, **2011**, 99, 051904	3.4	33
159	Process synthesis of laser forming by genetic algorithm. *International Journal of Machine Tools and Manufacture*, **2004**, 44, 1619-1628	9.4	33

158	Pulsed Laser Modulated Shock Transition from Liquid Metal Nanoparticles to Mechanically and Thermally Robust Solid-Liquid Patterns. *Advanced Materials*, **2019**, 31, e1807811	24	33
157	Bilayer lipid membrane (BLM) based ion selective electrodes at the meso-, micro-, and nano-scales. *Biosensors and Bioelectronics*, **2009**, 24, 1843-9	11.8	32
156	Low-temperature crystallized pyrochlore bismuth zinc niobate thin films by excimer laser annealing. *Applied Physics Letters*, **2005**, 87, 232905	3.4	32
155	Tunable random lasing behavior in plasmonic nanostructures. *Nano Convergence*, **2017**, 4, 1	9.2	31
154	Super-strengthening and stabilizing with carbon nanotube harnessed high density nanotwins in metals by shock loading. *Scientific Reports*, **2015**, 5, 15405	4.9	31
153	Ultrafast direct fabrication of flexible substrate-supported designer plasmonic nanoarrays. *Nanoscale*, **2016**, 8, 172-82	7.7	29
152	Multiscale dislocation dynamics analyses of laser shock peening in silicon single crystals. *International Journal of Plasticity*, **2006**, 22, 2171-2194	7.6	29
151	Additive Printed All-Cellulose Membranes with Hierarchical Structure for Highly Efficient Separation of Oil/Water Nanoemulsions. *ACS Applied Materials & Interfaces*, **2019**, 11, 44375-44382	9.5	28
150	Microstructure and mechanical properties of copper subjected to cryogenic laser shock peening. *Journal of Applied Physics*, **2011**, 110, 083504	2.5	28
149	Artificial control of in-plane anisotropic photoelectricity in monolayer MoS2. *Applied Materials Today*, **2019**, 15, 203-211	6.6	27
148	Fluorescence Lifetime Imaging of Nanoflares for mRNA Detection in Living Cells. *Analytical Chemistry*, **2016**, 88, 1979-83	7.8	27
147	Laser dynamic forming of functional materials laminated composites on patterned three-dimensional surfaces with applications on flexible microelectromechanical systems. *Applied Physics Letters*, **2009**, 95, 091108	3.4	27
146	Dislocation pinning effects induced by nano-precipitates during warm laser shock peening: Dislocation dynamic simulation and experiments. *Journal of Applied Physics*, **2011**, 110, 023518	2.5	27
145	Deformation induced martensite in NiTi and its shape memory effects generated by low temperature laser shock peening. *Journal of Applied Physics*, **2012**, 112, 033515	2.5	27
144	Dislocation behavior in silicon crystal induced by laser shock peening: A multiscale simulation approach. *Scripta Materialia*, **2005**, 53, 1013-1018	5.6	27
143	Plastic Deformation in Silicon Crystal Induced by Heat-Assisted Laser Shock Peening. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2008**, 130,	3.3	26
142	Mechanism of fatigue performance enhancement in a laser sintered superhard nanoparticles reinforced nanocomposite followed by laser shock peening. *Journal of Applied Physics*, **2013**, 113, 133509	2.5	25
141	A review on microstructures and properties of high entropy alloys manufactured by selective laser melting. *International Journal of Extreme Manufacturing*, **2020**, 2, 032003	7.9	24

140	Cryogenic ultrahigh strain rate deformation induced hybrid nanotwinned microstructure for high strength and high ductility. *Journal of Applied Physics*, **2014**, 115, 213519	2.5	24
139	Scalable patterning on shape memory alloy by laser shock assisted direct imprinting. *Applied Surface Science*, **2012**, 258, 10042-10046	6.7	24
138	Magnetic Field Effects on Laser Drilling. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2013**, 135,	3.3	24
137	Direct laser writing of nanodiamond films from graphite under ambient conditions. *Scientific Reports*, **2014**, 4, 6612	4.9	23
136	Water flattens graphene wrinkles: laser shock wrapping of graphene onto substrate-supported crystalline plasmonic nanoparticle arrays. *Nanoscale*, **2015**, 7, 19885-93	7.7	22
135	Graphene-Metal-Metastructure Monolith via Laser Shock-Induced Thermochemical Stitching of MOF Crystals. *Matter*, **2020**, 2, 1535-1549	12.7	22
134	Roll to roll manufacturing of fast charging, mechanically robust 0D/2D nanolayered Si-graphene anode with well-interfaced and defect engineered structures. *Energy Storage Materials*, **2019**, 22, 450-460	19.4	22
133	Laser additive manufacturing bulk graphene-copper nanocomposites. *Nanotechnology*, **2017**, 28, 445705	3.4	22
132	Room temperature deposition of alumina-doped zinc oxide on flexible substrates by direct pulsed laser recrystallization. *Applied Physics Letters*, **2012**, 100, 151902	3.4	22
131	Lasing behavior of surface functionalized carbon quantum dot/RhB composites. *Nanoscale*, **2017**, 9, 5049-5054	7.7	21
130	Highly transparent conductive electrode with ultra-low HAZE by grain boundary modification of aqueous solution fabricated alumina-doped zinc oxide nanocrystals. *APL Materials*, **2015**, 3, 062803	5.7	20
129	Laser sintering of separated and uniformly distributed multiwall carbon nanotubes integrated iron nanocomposites. *Journal of Applied Physics*, **2014**, 115, 113513	2.5	20
128	Effects of Temperature on Laser Shock Induced Plastic Deformation: The Case of Copper. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2010**, 132,	3.3	19
127	Multiple-pulse laser dynamic forming of metallic thin films for microscale three dimensional shapes. *Journal of Applied Physics*, **2010**, 108, 013107	2.5	19
126	Warm Laser Shock Peening Driven Nanostructures and Their Effects on Fatigue Performance in Aluminum Alloy 6160. *Advanced Engineering Materials*, **2010**, 12, NA-NA	3.5	17
125	Controlled self-assembly of plasmon-based photonic nanocrystals for high performance photonic technologies. *Nano Today*, **2021**, 37, 101072	17.9	17
124	Strain-Engineered Anisotropic Optical and Electrical Properties in 2D Chiral-Chain Tellurium. *Advanced Materials*, **2020**, 32, e2002342	24	15
123	Ultrahigh electrocatalytic activity with trace amounts of platinum loadings on free-standing mesoporous titanium nitride nanotube arrays for hydrogen evolution reactions. *Nanoscale*, **2020**, 12, 15393-15401	7.7	15

122	Composite bending-dominated hollow nanolattices: A stiff, cyclable mechanical metamaterial. *Materials Today*, **2018**, 21, 467-474	21.8	15
121	Superplastic Formation of Metal Nanostructure Arrays with Ultrafine Gaps. *Advanced Materials*, **2016**, 28, 9152-9162	24	15
120	Parallel Nanoshaping of Brittle Semiconductor Nanowires for Strained Electronics. *Nano Letters*, **2016**, 16, 7536-7544	11.5	15
119	A model on liquid penetration into soft material with application to needle-free jet injection. *Journal of Biomechanical Engineering*, **2010**, 132, 101005	2.1	15
118	Finite Element Analysis of the Variation in Residual Stress Distribution in Laser Shock Peening of Steels. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2012**, 134,	3.3	15
117	Magnetic field assisted growth of highly dense □Fe2O3 single crystal nanosheets and their application in water treatment. *RSC Advances*, **2014**, 4, 18621-18626	3.7	14
116	Large Scale Laser Crystallization of Solution-based Alumina-doped Zinc Oxide (AZO) Nanoinks for Highly Transparent Conductive Electrode. *Scientific Reports*, **2015**, 5, 15517	4.9	14
115	Laser shock-based platform for controllable forming of nanowires. *Nano Letters*, **2012**, 12, 3224-30	11.5	14
114	An Acoustic Meta-Skin Insulator. *Advanced Materials*, **2020**, 32, e2002251	24	14
113	Direct Ink Writing of Hierarchically Porous Cellulose/Alginate Monolithic Hydrogel as a Highly Effective Adsorbent for Environmental Applications. *ACS Applied Polymer Materials*, **2021**, 3, 699-709	4.3	14
112	Asymmetric 3D Elastic-Plastic Strain-Modulated Electron Energy Structure in Monolayer Graphene by Laser Shocking. *Advanced Materials*, **2019**, 31, e1900597	24	13
111	Laser direct writing of crystalline Fe2O3 atomic sheets on steel surface in aqueous medium. *Applied Surface Science*, **2015**, 351, 148-154	6.7	13
110	Controlled and Stabilized Light□Matter Interaction in Graphene: Plasmonic Film with Large-Scale 10-nm Lithography. *Advanced Optical Materials*, **2016**, 4, 1811-1823	8.1	13
109	Surface form memory in NiTi shape memory alloys by laser shock indentation. *Journal of Materials Science*, **2012**, 47, 2088-2094	4.3	13
108	Enhanced Multiphoton Emission from CdTe/ZnS Quantum Dots Decorated on Single-Layer Graphene. *Journal of Physical Chemistry C*, **2015**, 119, 6331-6336	3.8	13
107	Laser assisted embedding of nanoparticles into metallic materials. *Applied Surface Science*, **2012**, 258, 2289-2296	6.7	13
106	Microstructure-properties relationship in two Al-Mg-Si alloys through a combination of extrusion and aging. *Jom*, **2007**, 59, 58-61	2.1	13
105	3D-printed hierarchical porous cellulose/alginate/carbon black hydrogel for high-efficiency solar steam generation. *Chemical Engineering Journal*, **2022**, 430, 132765	14.7	13

104	Ultrafast Laser Manufacture of Stable, Efficient Ultrafine Noble Metal Catalysts Mediated with MOF Derived High Density Defective Metal Oxides. *Small*, **2020**, 16, e2000749	11	13
103	Photoplastic Transformation Based on Dynamic Covalent Chemistry. *ACS Applied Materials & Interfaces*, **2019**, 11, 23623-23631	9.5	12
102	A Single-Atomic Noble Metal Enclosed Defective MOF via Cryogenic UV Photoreduction for CO Oxidation with Ultrahigh Efficiency and Stability. *ACS Applied Materials & Interfaces*, **2020**, 12, 26068-26075	9.5	12
101	Ultrafast Laser-Shock-Induced Confined Metaphase Transformation for Direct Writing of Black Phosphorus Thin Films. *Advanced Materials*, **2018**, 30, 1704405	24	12
100	Precise selective scribing of thin-film solar cells by a picosecond laser. *Applied Physics A: Materials Science and Processing*, **2014**, 116, 671-681	2.6	12
99	Nanoscale size dependence on pulsed laser sintering of hydroxyapatite/titanium particles on metal implants. *Journal of Applied Physics*, **2010**, 108, 113112	2.5	12
98	Experiment, thermal simulation, and characterizations on transmission laser coating of hydroxyapatite on metal implant. *Journal of Biomedical Materials Research - Part A*, **2010**, 92, 70-9	5.4	12
97	Experimental study and computer simulation of fracture toughness of sheet metal after laser forming. *International Journal of Advanced Manufacturing Technology*, **2005**, 26, 1222-1230	3.2	12
96	Borophene via Micromechanical Exfoliation. *Advanced Materials*, **2021**, 33, e2102039	24	12
95	Scalable Nanoshaping of Hierarchical Metallic Patterns with Multiplex Laser Shock Imprinting Using Soft Optical Disks. *Small*, **2019**, 15, e1900481	11	11
94	Laser Shock Tuning Dynamic Interlayer Coupling in Graphene-Boron Nitride Moiré Superlattices. *Nano Letters*, **2019**, 19, 283-291	11.5	11
93	Enhancement of osteoblast activity on nanostructured NiTi/hydroxyapatite coatings on additive manufactured NiTi metal implants by nanosecond pulsed laser sintering. *International Journal of Nanomedicine*, **2018**, 13, 8217-8230	7.3	11
92	Spectral plasmonic effect in the nano-cavity of dye-doped nanosphere-based photonic crystals. *Nanotechnology*, **2016**, 27, 165703	3.4	10
91	Enhancing photo-induced ultrafast charge transfer across heterojunctions of CdS and laser-sintered TiO2 nanocrystals. *Physical Chemistry Chemical Physics*, **2014**, 16, 10669-78	3.6	10
90	Charge carrier transport and collection enhancement of copper indium diselenide photoactive nanoparticle-ink by laser crystallization. *Applied Physics Letters*, **2014**, 105, 111909	3.4	10
89	Scalable nano-patterning of graphenes using laser shock. *Nanotechnology*, **2011**, 22, 475303	3.4	10
88	Multiphysics simulation on electromagnetic peening of predrilled holes. *International Journal of Mechanical Sciences*, **2009**, 51, 825-836	5.5	10
87	Combined research and curriculum development of nontraditional manufacturing. *European Journal of Engineering Education*, **2005**, 30, 363-376	1.5	10

86	Fatigue Life Prediction After Laser Forming. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2005**, 127, 157-164	3.3	10
85	Overview of Laser Applications in Manufacturing and Materials Processing in Recent Years. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2020**, 142,	3.3	10
84	Addressing the Reliability and Electron Transport Kinetics in Halide Perovskite Film via Pulsed Laser Engineering. *Advanced Functional Materials*, **2020**, 30, 1906781	15.6	10
83	Additive roll printing activated cold welding of 2D crystals and 1D nanowires layers for flexible transparent conductor and planer energy storage. *Extreme Mechanics Letters*, **2016**, 9, 531-545	3.9	10
82	Direct pulsed laser crystallization of nanocrystals for absorbent layers in photovoltaics: Multiphysics simulation and experiment. *Journal of Applied Physics*, **2013**, 113, 193506	2.5	9
81	3D microscale laser dynamic forming: Multiscale modeling and experimental validation. *Journal of Applied Physics*, **2011**, 109, 103511	2.5	9
80	Ultrahigh Sensitivity Flexible Pressure Sensors Based on 3D-Printed Hollow Microstructures for Electronic Skins. *Advanced Materials Technologies*, **2021**, 6, 2000984	6.8	9
79	Plasmonic tuning of silver nanowires by laser shock induced lateral compression. *Nanoscale*, **2013**, 5, 6311-7	7.7	8
78	Laser assisted electro-deposition of earth abundant Cu2ZnSnS4 photovoltaic thin film. *Manufacturing Letters*, **2013**, 1, 54-58	4.5	8
77	Direction-tunable nanotwins in copper nanowires by laser-assisted electrochemical deposition. *Nanotechnology*, **2012**, 23, 125602	3.4	8
76	Design and fabrication of a hybrid nanofluidic channel. *Journal of Micro/ Nanolithography, MEMS, and MOEMS*, **2005**, 4, 013009	0.7	8
75	Fabrication of 3D polymeric photonic arrays and related applications. *Materials Today Chemistry*, **2020**, 15, 100208	6.2	8
74	Dry Etching with Nanoparticles: Formation of High Aspect-Ratio Pores and Channels Using Magnetic Gold Nanoclusters. *Advanced Materials*, **2018**, 30, 1703091	24	8
73	Ultrafast femtosecond pressure modulation of structure and exciton kinetics in 2D halide perovskites for enhanced light response and stability. *Nature Communications*, **2021**, 12, 4879	17.4	8
72	Controllable near-infrared reflectivity and infrared emissivity with substitutional iron-doped orthorhombic YMnO3 coatings. *Solar Energy*, **2020**, 206, 778-786	6.8	7
71	Molten salt synthesis of YMnO3 powder with high near-infrared reflectivity. *Materials Letters*, **2018**, 229, 171-173	3.3	7
70	Pulsed laser induced confined vapor deposition for thin layer of dense nanoparticle arrays on various substrates. *Applied Surface Science*, **2013**, 283, 924-929	6.7	7
69	Welding of Semiconductor Nanowires by Coupling Laser-Induced Peening and Localized Heating. *Scientific Reports*, **2015**, 5, 16052	4.9	7

68	Large scale, highly dense nanoholes on metal surfaces by underwater laser assisted hydrogen etching near nanocrystalline boundary. *Applied Surface Science*, **2012**, 258, 4254-4259	6.7	7
67	Microstructure and texture developments in multiple pulses excimer laser crystallization of GaAs thin films. *Journal of Applied Physics*, **2009**, 105, 093114	2.5	7
66	Enhanced Laser Shock by an Active Liquid Confinement□Hydrogen Peroxide. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2012**, 134,	3.3	7
65	Laser Shock-Induced Conformal Transferring of Functional Devices on 3-D Stretchable Substrates. *Journal of Microelectromechanical Systems*, **2015**, 24, 414-421	2.5	6
64	Laser-Shock-Induced Nanoscale Kink-Bands in WSe 2D Crystals. *ACS Nano*, **2019**, 13, 10587-10595	16.7	6
63	Transparent and antibacterial Cu2Y2O5 thin films by chemical solution deposition. *Thin Solid Films*, **2014**, 570, 547-551	2.2	6
62	Electropulsing induced crystal orientation change and its effects on electric conductivity of nanofilms of Zn□Al alloys. *Applied Physics A: Materials Science and Processing*, **2013**, 111, 1241-1245	2.6	6
61	Laser Shock Peening of Nanoparticles Integrated Alloys: Numerical Simulation and Experiments. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2010**, 132,	3.3	6
60	Deformation Modes in Stainless Steel During Laser Shock Peening. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2009**, 131,	3.3	6
59	Intelligent Energy Field Manufacturing **2010**,		6
58	Isolated atomic catalysts encapsulated in MOF for ultrafast water pollutant treatment. *Nano Research*, **2021**, 14, 1287-1293	10	6
57	Ultrastrong medium entropy alloy with simultaneous strength-ductility improvement via heterogeneous nanocrystalline structures. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2021**, 823, 141631	5.3	6
56	Soap film inspired mechanical metamaterials approaching theoretical bound of stiffness across full density range. *Materials Horizons*, **2021**, 8, 987-996	14.4	6
55	Enhanced thermoelectric performance of P-type BixSb2□Te3 nanowires with pulsed laser assisted electrochemical deposition. *Extreme Mechanics Letters*, **2016**, 9, 386-396	3.9	5
54	Pulse laser deposition fabricated InP/Al-ZnO heterojunction solar cells with efficiency enhanced by an i-ZnO interlayer. *Applied Physics A: Materials Science and Processing*, **2015**, 121, 1219-1226	2.6	5
53	Continuous Mode Laser Coating of Hydroxyapatite/Titanium Nanoparticles on Metallic Implants: Multiphysics Simulation and Experimental Verification. *Journal of Manufacturing Science and Engineering, Transactions of the ASME*, **2011**, 133,	3.3	5
52	Pulsed laser coating of hydroxyapatite/titanium nanoparticles on Ti-6Al-4V substrates: multiphysics simulation and experiments. *IEEE Transactions on Nanobioscience*, **2011**, 10, 177-86	3.4	5
51	Effects of rapid thermal processing and pulse-laser sintering on CdTe nanofilms for photovoltaic applications **2012**,		5

50	Effect of film thickness and laser energy density on the microstructure of a-GaAs films after excimer laser crystallization. *Journal of Applied Physics*, **2007**, 102, 013519	2.5	5
49	Highly sensitive and wide-range flexible pressure sensor based on carbon nanotubes-coated polydimethylsiloxane foam. *Materials Letters*, **2022**, 308, 131151	3.3	5
48	Understanding femtosecond laser internal scribing of diamond by atomic simulation: Phase transition, structure and property. *Carbon*, **2021**, 175, 352-363	10.4	5
47	Additive printing of recyclable anti-counterfeiting patterns with sol-gel cellulose nanocrystal inks. *Nanoscale*, **2021**, 13, 11808-11816	7.7	5
46	Preparation and Effect of Lighting on Structures and Properties of GSH Capped ZnSe QDs. *Journal of Fluorescence*, **2015**, 25, 1663-9	2.4	4
45	Crystalline photoactive copper indium diselenide thin films by pulsed laser crystallization of nanoparticle-inks at ambient conditions. *RSC Advances*, **2015**, 5, 57550-57558	3.7	4
44	Laser and Photonic Systems Integration: Emerging Innovations and Framework for Research and Education. *Human Factors and Ergonomics in Manufacturing*, **2013**, 23, 483-516	1.4	4
43	Free standing GaN nano membrane by laser lift-off method. *Materials Research Society Symposia Proceedings*, **2012**, 1432, 53		4
42	Fatigue Performance Improvement by Dynamic Strain Aging and Dynamic Precipitation in Warm Laser Shock Peening of AISI 4140 Steel **2010**,		4
41	Stagnation Pressure in Liquid Needle-Free Injection: Modeling and Experimental Validation. *Drug Delivery Letters*, **2011**, 1, 97-104	0.8	4
40	Numerical simulation of temperature field distribution for laser sintering graphene reinforced nickel matrix nanocomposites. *Journal of Alloys and Compounds*, **2016**, 688, 438-448	5.7	4
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