

# Gary J Cheng

## List of Publications by Year in descending order

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245  
papers

7,643  
citations

47006  
47  
h-index

76900  
74  
g-index

252  
all docs

252  
docs citations

252  
times ranked

8225  
citing authors

#	ARTICLE	IF	CITATIONS
1	Double-negative-index ceramic aerogels for thermal superinsulation. <i>Science</i> , 2019, 363, 723-727.	12.6	429
2	Stable mid-infrared polarization imaging based on quasi-2D tellurium at room temperature. <i>Nature Communications</i> , 2020, 11, 2308.	12.8	259
3	Fatigue performance improvement in AISI 4140 steel by dynamic strain aging and dynamic precipitation during warm laser shock peening. <i>Acta Materialia</i> , 2011, 59, 1014-1025.	7.9	230
4	Laser Sintering of Liquid Metal Nanoparticles for Scalable Manufacturing of Soft and Flexible Electronics. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 28232-28241.	8.0	189
5	3D stereolithography printing of graphene oxide reinforced complex architectures. <i>Nanotechnology</i> , 2015, 26, 434003.	2.6	177
6	Single-layer graphene oxide reinforced metal matrix composites by laser sintering: Microstructure and mechanical property enhancement. <i>Acta Materialia</i> , 2014, 80, 183-193.	7.9	158
7	Large-scale nanoshaping of ultrasmooth 3D crystalline metallic structures. <i>Science</i> , 2014, 346, 1352-1356.	12.6	153
8	Precipitation strengthening of stress-aged Al–Cu alloys. <i>Acta Materialia</i> , 2000, 48, 2239-2246.	7.9	120
9	Bimodal nanocrystallization of NiTi shape memory alloy by laser shock peening and post-deformation annealing. <i>Acta Materialia</i> , 2011, 59, 7219-7227.	7.9	120
10	3D-printed hierarchical porous cellulose/alginate/carbon black hydrogel for high-efficiency solar steam generation. <i>Chemical Engineering Journal</i> , 2022, 430, 132765.	12.7	111
11	3D nanostructured inkjet printed graphene via UV-pulsed laser irradiation enables paper-based electronics and electrochemical devices. <i>Nanoscale</i> , 2016, 8, 15870-15879.	5.6	108
12	Mesoporous nitrogen-doped carbon hollow spheres as high-performance anodes for lithium-ion batteries. <i>Journal of Power Sources</i> , 2016, 324, 233-238.	7.8	108
13	Analytical and finite element model pull-in study of rigid and deformable electrostatic microactuators. <i>Journal of Micromechanics and Microengineering</i> , 2004, 14, 57-68.	2.6	104
14	[INVITED] A review: Warm laser shock peening and related laser processing technique. <i>Optics and Laser Technology</i> , 2016, 78, 15-24.	4.6	99
15	Bioceramic coating of hydroxyapatite on titanium substrate with Nd-YAG laser. <i>Materials Science and Engineering C</i> , 2005, 25, 541-547.	7.3	97
16	Ultrahigh dense and gradient nano-precipitates generated by warm laser shock peening for combination of high strength and ductility. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 609, 195-203.	5.6	97
17	Large-Area Direct Laser Shock Imprinting of a 3D Biomimic Hierarchical Metal Surface for Triboelectric Nanogenerators. <i>Advanced Materials</i> , 2018, 30, 1705840.	21.0	93
18	Microstructure and mechanical property characterizations of metal foil after microscale laser dynamic forming. <i>Journal of Applied Physics</i> , 2007, 101, 063108.	2.5	89

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19	Flyweight, Superelastic, Electrically Conductive, and Flame-Retardant 3D Multi-Nanolayer Graphene/Ceramic Metamaterial. <i>Advanced Materials</i> , 2017, 29, 1605506.	21.0	89
20	Crystalline Nanojoining Silver Nanowire Percolated Networks on Flexible Substrate. <i>ACS Nano</i> , 2015, 9, 10018-10031.	14.6	84
21	A reusable laser wrapped graphene-Ag array based SERS sensor for trace detection of genomic DNA methylation. <i>Biosensors and Bioelectronics</i> , 2017, 92, 755-762.	10.1	81
22	Highly Sensitive Flexible Piezoresistive Sensor with 3D Conductive Network. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 35291-35299.	8.0	81
23	Observation of Optical and Electrical In-Plane Anisotropy in High-Mobility Few-Layer $\text{ZrTe}_5$ . <i>Nano Letters</i> , 2016, 16, 7364-7369.	9.1	80
24	Cooling Effects in Multiscan Laser Forming. <i>Journal of Manufacturing Processes</i> , 2001, 3, 60-72.	5.9	77
25	Shock engineering the additive manufactured graphene-metal nanocomposite with high density nanotwins and dislocations for ultra-stable mechanical properties. <i>Acta Materialia</i> , 2018, 150, 360-372.	7.9	77
26	The mechanisms of thermal engineered laser shock peening for enhanced fatigue performance. <i>Acta Materialia</i> , 2012, 60, 4997-5009.	7.9	74
27	Three-Dimensional Printing of Complex Structures: Man Made or toward Nature?. <i>ACS Nano</i> , 2014, 8, 9710-9715.	14.6	72
28	Ultrastrong nanocrystalline stainless steel and its Hall-Petch relationship in the nanoscale. <i>Scripta Materialia</i> , 2018, 155, 26-31.	5.2	72
29	A review on microstructures and properties of high entropy alloys manufactured by selective laser melting. <i>International Journal of Extreme Manufacturing</i> , 2020, 2, 032003.	12.7	69
30	Three-dimensional-linked carbon fiber-carbon nanotube hybrid structure for enhancing thermal conductivity of silicon carbonitride matrix composites. <i>Carbon</i> , 2016, 108, 38-46.	10.3	61
31	Nanoscale Laser Metallurgy and Patterning in Air Using MOFs. <i>Journal of the American Chemical Society</i> , 2019, 141, 5481-5489.	13.7	61
32	Single-Layer Graphene as a Barrier Layer for Intense UV Laser-Induced Damages for Silver Nanowire Network. <i>ACS Nano</i> , 2015, 9, 11121-11133.	14.6	59
33	Laser sintered graphene nickel nanocomposites. <i>Journal of Materials Processing Technology</i> , 2016, 231, 143-150.	6.3	59
34	Alpha Lead Oxide ( $\alpha\text{-PbO}$ ): A New 2D Material with Visible Light Sensitivity. <i>Small</i> , 2018, 14, e1703346.	10.0	58
35	Direct Ink Writing of Hierarchically Porous Cellulose/Alginate Monolithic Hydrogel as a Highly Effective Adsorbent for Environmental Applications. <i>ACS Applied Polymer Materials</i> , 2021, 3, 699-709.	4.4	58
36	Borophene via Micromechanical Exfoliation. <i>Advanced Materials</i> , 2021, 33, e2102039.	21.0	56

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37	Microstructure Integrated Modeling of Multiscan Laser Forming. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2002, 124, 379-388.	2.2	55
38	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	55
39	Graphene laminated gold bipyramids as sensitive detection platforms for antibiotic molecules. Chemical Communications, 2015, 51, 15494-15497.	4.1	55
40	Pulsed Laser Modulated Shock Transition from Liquid Metal Nanoparticles to Mechanically and Thermally Robust Solidâ€“Liquid Patterns. Advanced Materials, 2019, 31, e1807811.	21.0	55
41	An eXtended Finite Element Method (XFEM) study on the effect of reinforcing particles on the crack propagation behavior in a metalâ€“matrix composite. International Journal of Fatigue, 2012, 44, 151-156.	5.7	54
42	Tunable random lasing behavior in plasmonic nanostructures. Nano Convergence, 2017, 4, 1.	12.1	54
43	Straining effects in MoS <sub>2</sub> monolayer on nanostructured substrates: temperature-dependent photoluminescence and exciton dynamics. Nanoscale, 2018, 10, 5717-5724.	5.6	54
44	Stability, Antimicrobial Activity, and Cytotoxicity of Poly(amidoamine) Dendrimers on Titanium Substrates. ACS Applied Materials & Interfaces, 2011, 3, 2885-2894.	8.0	52
45	Controlled self-assembly of plasmon-based photonic nanocrystals for high performance photonic technologies. Nano Today, 2021, 37, 101072.	11.9	51
46	Warm Laser Shock Peening Driven Nanostructures and Their Effects on Fatigue Performance in Aluminum Alloy 6160. Advanced Engineering Materials, 2010, 12, 291-297.	3.5	50
47	Graphene/PbS-Quantum Dots/Graphene Sandwich Structures Enabled by Laser Shock Imprinting for High Performance Photodetectors. ACS Applied Materials & Interfaces, 2017, 9, 44715-44723.	8.0	49
48	Graphene-Metal-Metastructure Monolith via Laser Shock-Induced Thermochemical Stitching of MOF Crystals. Matter, 2020, 2, 1535-1549.	10.0	49
49	Defects Mediated Corrosion in Graphene Coating Layer. ACS Applied Materials & Interfaces, 2017, 9, 11902-11908.	8.0	48
50	Nucleation of highly dense nanoscale precipitates based on warm laser shock peening. Journal of Applied Physics, 2010, 108, .	2.5	47
51	Laser-Induced High-Strain-Rate Superplastic 3-D Microforming of Metallic Thin Films. Journal of Microelectromechanical Systems, 2010, 19, 273-281.	2.5	47
52	Nanoscale Strainability of Graphene by Laser Shock-Induced Three-Dimensional Shaping. Nano Letters, 2012, 12, 4577-4583.	9.1	47
53	Environmental assessment of laser assisted manufacturing: case studies on laser shock peening and laser assisted turning. Journal of Cleaner Production, 2010, 18, 1311-1319.	9.3	46
54	Microstructure and mechanical properties of copper subjected to cryogenic laser shock peening. Journal of Applied Physics, 2011, 110, .	2.5	46

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55	Artificial control of in-plane anisotropic photoelectricity in monolayer MoS <sub>2</sub> . Applied Materials Today, 2019, 15, 203-211.	4.3	45
56	Process Design of Laser Forming for Three-Dimensional Thin Plates. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2004, 126, 217-225.	2.2	44
57	Ultrahigh Sensitivity Flexible Pressure Sensors Based on 3D-Printed Hollow Microstructures for Electronic Skins. Advanced Materials Technologies, 2021, 6, 2000984.	5.8	44
58	Deformation Behaviors and Critical Parameters in Microscale Laser Dynamic Forming. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2009, 131, .	2.2	43
59	Additive Printed All-Cellulose Membranes with Hierarchical Structure for Highly Efficient Separation of Oil/Water Nanoemulsions. ACS Applied Materials & Interfaces, 2019, 11, 44375-44382.	8.0	43
60	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.	7.9	41
61	Water flattens graphene wrinkles: laser shock wrapping of graphene onto substrate-supported crystalline plasmonic nanoparticle arrays. Nanoscale, 2015, 7, 19885-19893.	5.6	41
62	Ultrafast direct fabrication of flexible substrate-supported designer plasmonic nanoarrays. Nanoscale, 2016, 8, 172-182.	5.6	40
63	Strain-Engineered Anisotropic Optical and Electrical Properties in 2D Chiral Chain Tellurium. Advanced Materials, 2020, 32, e2002342.	21.0	40
64	Forming Limit and Fracture Mode of Microscale Laser Dynamic Forming. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2010, 132, .	2.2	38
65	Deformation induced martensite in NiTi and its shape memory effects generated by low temperature laser shock peening. Journal of Applied Physics, 2012, 112, .	2.5	38
66	Super-strengthening and stabilizing with carbon nanotube harnessed high density nanotwins in metals by shock loading. Scientific Reports, 2015, 5, 15405.	3.3	38
67	Bilayer lipid membrane (BLM) based ion selective electrodes at the meso-, micro-, and nano-scales. Biosensors and Bioelectronics, 2009, 24, 1843-1849.	10.1	37
68	Low-temperature crystallized pyrochlore bismuth zinc niobate thin films by excimer laser annealing. Applied Physics Letters, 2005, 87, 232905.	3.3	36
69	Multiscale dislocation dynamics analyses of laser shock peening in silicon single crystals. International Journal of Plasticity, 2006, 22, 2171-2194.	8.8	36
70	Laser Engineered Multilayer Coating of Biphasic Calcium Phosphate/Titanium Nanocomposite on Metal Substrates. ACS Applied Materials & Interfaces, 2011, 3, 339-350.	8.0	36
71	Ultraviolet laser crystallized ZnO:Al films on sapphire with high Hall mobility for simultaneous enhancement of conductivity and transparency. Applied Physics Letters, 2014, 104, .	3.3	36
72	Ultrafast and scalable laser liquid synthesis of tin oxide nanotubes and its application in lithium ion batteries. Nanoscale, 2014, 6, 5853-5858.	5.6	36

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73	Dislocation pinning effects induced by nano-precipitates during warm laser shock peening: Dislocation dynamic simulation and experiments. Journal of Applied Physics, 2011, 110, .	2.5	35
74	Highly conductive and transparent alumina-doped ZnO films processed by direct pulsed laser recrystallization at room temperature. Applied Physics Letters, 2011, 99, .	3.3	34
75	Cryogenic ultrahigh strain rate deformation induced hybrid nanotwinned microstructure for high strength and high ductility. Journal of Applied Physics, 2014, 115, .	2.5	34
76	Fluorescence Lifetime Imaging of Nanoflares for mRNA Detection in Living Cells. Analytical Chemistry, 2016, 88, 1979-1983.	6.5	34
77	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.	8.0	34
78	Process synthesis of laser forming by genetic algorithm. International Journal of Machine Tools and Manufacture, 2004, 44, 1619-1628.	13.4	33
79	Dislocation behavior in silicon crystal induced by laser shock peening: A multiscale simulation approach. Scripta Materialia, 2005, 53, 1013-1018.	5.2	33
80	Scalable patterning on shape memory alloy by laser shock assisted direct imprinting. Applied Surface Science, 2012, 258, 10042-10046.	6.1	33
81	Mechanism of fatigue performance enhancement in a laser sintered superhard nanoparticles reinforced nanocomposite followed by laser shock peening. Journal of Applied Physics, 2013, 113, .	2.5	32
82	Magnetic Field Effects on Laser Drilling. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2013, 135, .	2.2	32
83	Asymmetric 3D Elasticâ€“Plastic Strainâ€“Modulated Electron Energy Structure in Monolayer Graphene by Laser Shocking. Advanced Materials, 2019, 31, e1900597.	21.0	32
84	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.	18.0	31
85	Laser Shock Tuning Dynamic Interlayer Coupling in Grapheneâ€“Boron Nitride MoirÃ© Superlattices. Nano Letters, 2019, 19, 283-291.	9.1	31
86	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.	5.6	31
87	Ultrafast Laser Manufacture of Stable, Efficient Ultrafine Noble Metal Catalysts Mediated with MOF Derived High Density Defective Metal Oxides. Small, 2020, 16, e2000749.	10.0	31
88	Plastic Deformation in Silicon Crystal Induced by Heat-Assisted Laser Shock Peening. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2008, 130, .	2.2	30
89	Laser additive manufacturing bulk grapheneâ€“copper nanocomposites. Nanotechnology, 2017, 28, 445705.	2.6	30
90	Overview of Laser Applications in Manufacturing and Materials Processing in Recent Years. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	2.2	29

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91	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, .	2.2	28
92	Controlled and Stabilized Light-Matter Interaction in Graphene: Plasmonic Film with Large-Scale 10-nm Lithography. Advanced Optical Materials, 2016, 4, 1811-1823.	7.3	28
93	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.	3.3	27
94	Direct Laser Writing of Nanodiamond Films from Graphite under Ambient Conditions. Scientific Reports, 2014, 4, 6612.	3.3	27
95	Composite bending-dominated hollow nanolattices: A stiff, cyclable mechanical metamaterial. Materials Today, 2018, 21, 467-474.	14.2	26
96	An Acoustic Meta-Skin Insulator. Advanced Materials, 2020, 32, e2002251.	21.0	26
97	Ultrafast femtosecond pressure modulation of structure and exciton kinetics in 2D halide perovskites for enhanced light response and stability. Nature Communications, 2021, 12, 4879.	12.8	26
98	Room temperature deposition of alumina-doped zinc oxide on flexible substrates by direct pulsed laser recrystallization. Applied Physics Letters, 2012, 100, .	3.3	24
99	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.	5.1	24
100	Enhanced Multiphoton Emission from CdTe/ZnS Quantum Dots Decorated on Single-Layer Graphene. Journal of Physical Chemistry C, 2015, 119, 6331-6336.	3.1	24
101	Superplastic Formation of Metal Nanostructure Arrays with Ultrafine Gaps. Advanced Materials, 2016, 28, 9152-9162.	21.0	24
102	Addressing the Reliability and Electron Transport Kinetics in Halide Perovskite Film via Pulsed Laser Engineering. Advanced Functional Materials, 2020, 30, 1906781.	14.9	24
103	Highly sensitive and wide-range flexible pressure sensor based on carbon nanotubes-coated polydimethylsiloxane foam. Materials Letters, 2022, 308, 131151.	2.6	23
104	Multiple-pulse laser dynamic forming of metallic thin films for microscale three dimensional shapes. Journal of Applied Physics, 2010, 108, .	2.5	22
105	Laser sintering of separated and uniformly distributed multiwall carbon nanotubes integrated iron nanocomposites. Journal of Applied Physics, 2014, 115, .	2.5	22
106	Carbon Black/Graphene Nanosheet Composites for Three-Dimensional Flexible Piezoresistive Sensors. ACS Applied Nano Materials, 2022, 5, 7142-7149.	5.0	22
107	Laser Shock-Based Platform for Controllable Forming of Nanowires. Nano Letters, 2012, 12, 3224-3230.	9.1	21
108	Parallel Nanoshaping of Brittle Semiconductor Nanowires for Strained Electronics. Nano Letters, 2016, 16, 7536-7544.	9.1	21



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109	Lasing behavior of surface functionalized carbon quantum dot/RhB composites. <i>Nanoscale</i> , 2017, 9, 5049-5054.	5.6	21
110	A Model on Liquid Penetration Into Soft Material With Application to Needle-Free Jet Injection. <i>Journal of Biomechanical Engineering</i> , 2010, 132, 101005.	1.3	19
111	Finite Element Analysis of the Variation in Residual Stress Distribution in Laser Shock Peening of Steels. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2012, 134, .	2.2	19
112	A 3D-Printed, Sensitive, Stable, and Flexible Piezoresistive Sensor for Health Monitoring. <i>Advanced Engineering Materials</i> , 2021, 23, 2100379.	3.5	19
113	Self-packaged high-resolution liquid metal nano-patterns. <i>Matter</i> , 2022, 5, 1016-1030.	10.0	19
114	Photoplastic Transformation Based on Dynamic Covalent Chemistry. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 23623-23631.	8.0	18
115	Scalable Nanoshaping of Hierarchical Metallic Patterns with Multiplex Laser Shock Imprinting Using Soft Optical Disks. <i>Small</i> , 2019, 15, e1900481.	10.0	18
116	Controllable near-infrared reflectivity and infrared emissivity with substitutional iron-doped orthorhombic YMnO <sub>3</sub> coatings. <i>Solar Energy</i> , 2020, 206, 778-786.	6.1	18
117	Soap film inspired mechanical metamaterials approaching theoretical bound of stiffness across full density range. <i>Materials Horizons</i> , 2021, 8, 987-996.	12.2	18
118	Laser assisted embedding of nanoparticles into metallic materials. <i>Applied Surface Science</i> , 2012, 258, 2289-2296.	6.1	17
119	Large Scale Laser Crystallization of Solution-based Alumina-doped Zinc Oxide (AZO) Nanoinks for Highly Transparent Conductive Electrode. <i>Scientific Reports</i> , 2015, 5, 15517.	3.3	17
120	Laser direct writing of crystalline Fe <sub>2</sub> O <sub>3</sub> atomic sheets on steel surface in aqueous medium. <i>Applied Surface Science</i> , 2015, 351, 148-154.	6.1	17
121	Ultrafast Laser Shock-Induced Confined Metaphase Transformation for Direct Writing of Black Phosphorus Thin Films. <i>Advanced Materials</i> , 2018, 30, 1704405.	21.0	17
122	A promising inorganic YFeO <sub>3</sub> pigments with high near-infrared reflectance and infrared emission. <i>Solar Energy</i> , 2021, 226, 180-191.	6.1	17
123	Liquid metal nanolayer-linked MOF nanocomposites by laser shock evaporation. <i>Matter</i> , 2021, 4, 3977-3990.	10.0	17
124	Surface form memory in NiTi shape memory alloys by laser shock indentation. <i>Journal of Materials Science</i> , 2012, 47, 2088-2094.	3.7	16
125	Magnetic field assisted growth of highly dense $\text{Fe}_2\text{O}_3$ single crystal nanosheets and their application in water treatment. <i>RSC Advances</i> , 2014, 4, 18621-18626.	3.6	16
126	Enhancement of osteoblast activity on nanostructured NiTi/hydroxyapatite coatings on additive manufactured NiTi metal implants by nanosecond pulsed laser sintering. <i>International Journal of Nanomedicine</i> , 2018, Volume 13, 8217-8230.	6.7	16



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127	Additive printing of recyclable anti-counterfeiting patterns with sol-gel cellulose nanocrystal inks. <i>Nanoscale</i> , 2021, 13, 11808-11816.	5.6	16
128	Ultrastrong medium entropy alloy with simultaneous strength-ductility improvement via heterogeneous nanocrystalline structures. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 823, 141631.	5.6	16
129	Microstructure-properties relationship in two Al-Mg-Si alloys through a combination of extrusion and aging. <i>Jom</i> , 2007, 59, 58-61.	1.9	15
130	Experiment, thermal simulation, and characterizations on transmission laser coating of hydroxyapatite on metal implant. <i>Journal of Biomedical Materials Research - Part A</i> , 2010, 92A, 70-79.	4.0	15
131	Experimental study and computer simulation of fracture toughness of sheet metal after laser forming. <i>International Journal of Advanced Manufacturing Technology</i> , 2005, 26, 1222-1230.	3.0	14
132	Bionic Optical Leaf for Photoreduction of CO <sub>2</sub> from Noble Metal Atom Mediated Graphene Nanobubble Arrays. <i>ACS Nano</i> , 2022, 16, 1909-1918.	14.6	14
133	Combined research and curriculum development of nontraditional manufacturing. <i>European Journal of Engineering Education</i> , 2005, 30, 363-376.	2.3	13
134	Nanoscale size dependence on pulsed laser sintering of hydroxyapatite/titanium particles on metal implants. <i>Journal of Applied Physics</i> , 2010, 108, 113112.	2.5	13
135	Plasmonic tuning of silver nanowires by laser shock induced lateral compression. <i>Nanoscale</i> , 2013, 5, 6311.	5.6	13
136	Precise selective scribing of thin-film solar cells by a picosecond laser. <i>Applied Physics A: Materials Science and Processing</i> , 2014, 116, 671-681.	2.3	13
137	Understanding femtosecond laser internal scribing of diamond by atomic simulation: Phase transition, structure and property. <i>Carbon</i> , 2021, 175, 352-363.	10.3	13
138	Additive roll printing activated cold welding of 2D crystals and 1D nanowires layers for flexible transparent conductor and planer energy storage. <i>Extreme Mechanics Letters</i> , 2016, 9, 531-545.	4.1	12
139	Spectral plasmonic effect in the nano-cavity of dye-doped nanosphere-based photonic crystals. <i>Nanotechnology</i> , 2016, 27, 165703.	2.6	12
140	Enhanced Energy Transfer from Nitrogen Vacancy Centers to Three-Dimensional Graphene Heterostructures by Laser Nanoshaping. <i>Advanced Optical Materials</i> , 2021, 9, 2001830.	7.3	12
141	Fatigue Life Prediction After Laser Forming. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2005, 127, 157-164.	2.2	11
142	Multiphysics simulation on electromagnetic peening of predrilled holes. <i>International Journal of Mechanical Sciences</i> , 2009, 51, 825-836.	6.7	11
143	Scalable nano-patterning of graphenes using laser shock. <i>Nanotechnology</i> , 2011, 22, 475303.	2.6	11
144	3D microscale laser dynamic forming: Multiscale modeling and experimental validation. <i>Journal of Applied Physics</i> , 2011, 109, .	2.5	11

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145	Charge carrier transport and collection enhancement of copper indium diselenide photoactive nanoparticle-ink by laser crystallization. Applied Physics Letters, 2014, 105, .	3.3	11
146	Dry Etching with Nanoparticles: Formation of High Aspectâ€Ratio Pores and Channels Using Magnetic Gold Nanoclusters. Advanced Materials, 2018, 30, 1703091.	21.0	11
147	Laser-Shock-Induced Nanoscale Kink-Bands in WSe2 2D Crystals. ACS Nano, 2019, 13, 10587-10595.	14.6	11
148	Isolated atomic catalysts encapsulated in MOF for ultrafast water pollutant treatment. Nano Research, 2021, 14, 1287-1293.	10.4	11
149	A 3D flexible piezoresistive sensor based on surface-filled graphene nanosheets conductive layer. Sensors and Actuators A: Physical, 2021, 332, 113144.	4.1	11
150	Nanoalloy libraries from laser-induced thermionic emission reduction. Science Advances, 2022, 8, eabm6541.	10.3	11
151	Design and fabrication of a hybrid nanofluidic channel. Journal of Micro/ Nanolithography, MEMS, and MOEMS, 2005, 4, 013009.	0.9	10
152	Laser assisted electro-deposition of earth abundant Cu2ZnSnS4 photovoltaic thin film. Manufacturing Letters, 2013, 1, 54-58.	2.2	10
153	Enhancing photo-induced ultrafast charge transfer across heterojunctions of CdS and laser-sintered TiO<sub>2</sub> nanocrystals. Physical Chemistry Chemical Physics, 2014, 16, 10669-10678.	2.8	10
154	Molten salt synthesis of YMnO3 powder with high near-infrared reflectivity. Materials Letters, 2018, 229, 171-173.	2.6	10
155	Fabrication of 3D polymeric photonic arrays and related applications. Materials Today Chemistry, 2020, 15, 100208.	3.5	10
156	Microstructure and texture developments in multiple pulses excimer laser crystallization of GaAs thin films. Journal of Applied Physics, 2009, 105, .	2.5	9
157	Enhanced Laser Shock by an Active Liquid Confinementâ€Hydrogen Peroxide. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2012, 134, .	2.2	9
158	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
159	Enhanced thermoelectric performance of Bi<sub>2</sub>Sb<sub>2</sub>Te<sub>3</sub> thin films by laser crystallization. Extreme Mechanics Letters, 2016, 9, 386-396.	4.1	9
160	Intelligent Energy Field Manufacturing. , 2010, , .		9
161	Magnetically Aligned Ultrafine Cobalt Embedded 3D Porous Carbon Metamaterial by Oneâ€Step Ultrafast Laser Direct Writing. Advanced Science, 2021, 8, e2102477.	11.2	9
162	Ultrahigh Sensitive Flexible Piezoresistive Sensor with Carbonized Metalâ€Organic Framework Fe<sub>3</sub>O<sub>4</sub>@MIL-100(Fe). ACS Applied Electronic Materials, 2022, 4, 1723-1731.	4.3	9

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163	Direction-tunable nanotwins in copper nanowires by laser-assisted electrochemical deposition. Nanotechnology, 2012, 23, 125602.	2.6	8
164	Large scale, highly dense nanoholes on metal surfaces by underwater laser assisted hydrogen etching near nanocrystalline boundary. Applied Surface Science, 2012, 258, 4254-4259.	6.1	8
165	Pulsed laser induced confined vapor deposition for thin layer of dense nanoparticle arrays on various substrates. Applied Surface Science, 2013, 283, 924-929.	6.1	8
166	Welding of Semiconductor Nanowires by Coupling Laser-Induced Peening and Localized Heating. Scientific Reports, 2015, 5, 16052.	3.3	8
167	Parallel Nanoimprint Forming of One-Dimensional Chiral Semiconductor for Strain-Engineered Optical Properties. Nano-Micro Letters, 2020, 12, 160.	27.0	8
168	Ultrafast transformation of $\text{PbI}_2$ in two-step fabrication of halide perovskite films for long-term performance and stability via nanosecond laser shock annealing. Journal of Materials Chemistry C, 2021, 9, 12819-12827.	5.5	8
169	3D MOF Nanoarchitecture Membrane via Ultrafast Laser Nanoforging. Small Methods, 2021, 5, e2100758.	8.6	8
170	Pulsed Laser Coating of Hydroxyapatite/Titanium Nanoparticles on Ti-6Al-4V Substrates: Multiphysics Simulation and Experiments. IEEE Transactions on Nanobioscience, 2011, 10, 177-186.	3.3	7
171	Laser and Photonic Systems Integration: Emerging Innovations and Framework for Research and Education. Human Factors and Ergonomics in Manufacturing, 2013, 23, 483-516.	2.7	7
172	A low-damage copper removal process by femtosecond laser for integrated circuits. Vacuum, 2022, 203, 111273.	3.5	7
173	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	6
174	Deformation Modes in Stainless Steel During Laser Shock Peening. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2009, 131, .	2.2	6
175	Laser Shock Peening of Nanoparticles Integrated Alloys: Numerical Simulation and Experiments. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2010, 132, .	2.2	6
176	Effects of rapid thermal processing and pulse-laser sintering on CdTe nanofilms for photovoltaic applications. , 2012, , .		6
177	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.	2.3	6
178	Transparent and antibacterial $\text{Cu}_2\text{Y}_2\text{O}_5$ thin films by chemical solution deposition. Thin Solid Films, 2014, 570, 547-551.	1.8	6
179	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.	2.3	6
180	Laser Shock-Induced Conformal Transferring of Functional Devices on 3-D Stretchable Substrates. Journal of Microelectromechanical Systems, 2015, 24, 414-421.	2.5	6

#	ARTICLE	IF	CITATIONS
181	Preparation and Effect of Lighting on Structures and Properties of GSH Capped ZnSe QDs. Journal of Fluorescence, 2015, 25, 1663-1669.	2.5	6
182	Quantum Dot Enabled Perovskite Thin Film with Enhanced Crystallization, Stability, and Carrier Diffusion via Pulsed Laser Nanoengineering. Advanced Materials Interfaces, 2020, 7, 2001021.	3.7	6
183	Ultrastrong pure aluminum structure with gradient nanocrystals via selective pulsed laser melting: Computation framework and experiments. Journal of the Mechanics and Physics of Solids, 2021, 151, 104391.	4.8	6
184	Stagnation Pressure in Liquid Needle-Free Injection: Modeling and Experimental Validation. Drug Delivery Letters, 2011, 1, 97-104.	0.5	6
185	Origins of Ultrafast Pulse Laser-Induced Nano Straight Lines with Potential Applications in Detecting Subsurface Defects in Silicon Carbide Wafers. Nanomanufacturing and Metrology, 2022, 5, 167-178.	3.0	6
186	Fatigue Performance Improvement by Dynamic Strain Aging and Dynamic Precipitation in Warm Laser Shock Peening of AISI 4140 Steel. , 2010, , .		5
187	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, .	2.2	5
188	Control of Ablation Depth and Surface Structure in P3 Scribing of Thin-Film Solar Cells by a Picosecond Laser. Journal of Micro and Nano-Manufacturing, 2014, 2, .	0.7	5
189	Numerical simulation of temperature field distribution for laser sintering graphene reinforced nickel matrix nanocomposites. Journal of Alloys and Compounds, 2016, 688, 438-448.	5.5	5
190	Optoelectronic performance enhancement in pulsed laser deposited gallium-doped zinc oxide (GZO) films after UV laser crystallization. Applied Physics A: Materials Science and Processing, 2018, 124, 1.	2.3	5
191	An Ultrawideband GaAs MMIC Microstrip Directional Coupler With High Directivity and Very Flat Coupling. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 2271-2279.	4.6	5
192	Free standing GaN nano membrane by laser lift-off method. Materials Research Society Symposia Proceedings, 2012, 1432, 53.	0.1	4
193	Crystalline photoactive copper indium diselenide thin films by pulsed laser crystallization of nanoparticle-inks at ambient conditions. RSC Advances, 2015, 5, 57550-57558.	3.6	4
194	Molecular-Scale Nanodiamond with High-Density Color Centers Fabricated from Graphite by Laser Shocking. Cell Reports Physical Science, 2020, 1, 100054.	5.6	4
195	Nanoscale-Precision Removal of Copper in Integrated Circuits Based on a Hybrid Process of Plasma Oxidation and Femtosecond Laser Ablation. Micromachines, 2021, 12, 1188.	2.9	4
196	Employing Hybrid Lennard-Jones and Axilrod-Teller Potentials to Parametrize Force Fields for the Simulation of Materialsâ€™ Properties. Materials, 2021, 14, 6352.	2.9	4
197	Understanding the role of monolayer graphene during long range shock strengthening of metal-graphene heterostructure. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 837, 142741.	5.6	4
198	Nanoparticle Heat Transfer and Its Application to Laser Hyperthermia. , 2007, , 1093.		3

#	ARTICLE	IF	CITATIONS
199	Functionalization of micro- and nano-apertures with chromate-selective solvent polymeric membrane. <i>Analytica Chimica Acta</i> , 2010, 659, 243-250.	5.4	3
200	Dense and uniform Au nanospheres on glass through confined nanosecond pulsed laser irradiation. <i>Applied Physics Letters</i> , 2011, 99, 091901.	3.3	3
201	The Effect of External Magnetic Field on the Plasma Induced by Laser Ablation in Vacuum. , 2011, , .		3
202	Direct Integration of Functional Structures on 3-D Microscale Surfaces by Laser Dynamic Forming. <i>Journal of Microelectromechanical Systems</i> , 2013, 22, 1428-1437.	2.5	3
203	The Investigation of Plasma Produced by Intense Nanosecond Laser Ablation in Vacuum Under External Magnetic Field Using a Two-Stage Model. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2013, 135, .	2.2	3
204	High Power 10â€“18 GHz Monolithic Limiter Based on GaAs p-i-n Technology. <i>IEEE Microwave and Wireless Components Letters</i> , 2022, 32, 1107-1110.	3.2	3
205	Feasibility study of a smart motion generator utilizing electromagnetic microactuator arrays. <i>Smart Materials and Structures</i> , 2006, 15, 859-868.	3.5	2
206	Mechanism of Fatigue Performance Enhancement in a Superhard Nanoparticles Integrated Nanocomposites by a Hybrid Manufacturing Technique. , 2013, , .		2
207	Development of ZnO-InP heterojunction solar cells for thin film photovoltaics. , 2014, , .		2
208	Mesoscale elucidation of laser-assisted chemical deposition of Sn nanostructured electrodes. <i>Journal of Applied Physics</i> , 2015, 117, 214301.	2.5	2
209	Silver nanowires interlocked graphene aerogel for ultra-high efficient clearance of oil pollution on water. <i>Sustainable Materials and Technologies</i> , 2021, 29, e00285.	3.3	2
210	Process synthesis of laser forming by genetic algorithm. , 2001, , .		2
211	Characterizations on Microscale Laser Dynamic Forming of Metal Foil. , 2006, , 29.		1
212	Modeling and Analysis of Liquid Penetration into Soft Material with Application to Needle-Free Jet Injection. , 2009, , .		1
213	Multilayer Laser Sintering of HAp/Ti Nanoparticles Onto Metallic Implants. , 2009, , .		1
214	Nucleation of Highly Dense Nanoscale Precipitates Based on an Innovative Process: Warm Laser Shock Peening. , 2010, , .		1
215	Direct writing of Au nanoneedles array on glass by confined laser spinning. <i>Applied Physics Letters</i> , 2012, 101, 091911.	3.3	1
216	Numerical Investigation of Temperature Field During Sintering of Bioceramic Nanoparticles by Pulse Lasers. , 2008, , .		1

#	ARTICLE	IF	CITATIONS
217	Stagnation Pressure in Liquid Needle-Free Injection: Modeling and Experimental Validation. Drug Delivery Letters, 2011, 1, 97-104.	0.5	1
218	Experimental study and computer simulation on fracture toughness of sheet metal after laser forming. , 2003, , .		0
219	A Hybrid Rapid Microfluidic Mixer Utilizing Electrokinetic Relay and Asymmetric Flow Geometries for Lab-on-a-Chip Applications. , 2005, , 233.		0
220	Numerical Simulation on Short Pulsed Laser Heating of Semiconductor Thin Films: The Case of GaAs. , 2006, , 241.		0
221	Experiment, Thermal Simulation and Characterizations on Transmission Laser Coating of Hydroxyapatite on Metal Implant. , 2008, , .		0
222	Numerical Simulation on Nanoparticles Integrated Laser Shock Peening of Aluminum Alloy. , 2009, , .		0
223	Laser Induced High-Strain-Rate Superplastic 3D Micro-Forming of Metallic Thin Film. , 2009, , .		0
224	Laser Coating of HAp/Ti Nanoparticles on Metal Implants: Interfacial Bonding Strength, Chemical Analysis and Biocompatibility. , 2010, , .		0
225	Effect of Multiple Pulses on the Deformation Behavior of Ultrathin Metal Foils in 3D Micro-Scale Laser Dynamic Forming. , 2010, , .		0
226	A Dislocation Dynamics Based Constitutive Model and Experimental Validations by 3D Microscale Laser Dynamic Forming of Metallic Thin Films. , 2010, , .		0
227	Nanoscale Size Dependence on Metallic Nanoparticles: Case Study of Titanium Nanoparticles on Pulsed Laser Sintering of Hydroxyapatite/Titanium Nanoparticles. , 2011, , .		0
228	Controlled Nanocrystallization of NiTi Shape Memory Alloy by Laser Shock Peening. , 2011, , .		0
229	Laser Shock Based Controlled Forming of Silver Nanowires. , 2011, , .		0
230	Direct pulsed laser crystallization of copper indium diselenide nanocrystal thin films for photovoltaics. , 2011, , .		0
231	Deposition of Al-Doped Zinc Oxide by Direct Pulsed Laser Recrystallization at Room Temperature on Various Substrates for Solar Cell Applications. , 2012, , .		0
232	Laser Shock Induced Nano-Patterning of Graphene. , 2012, , .		0
233	Nanotwins in Copper Nanowires Controlled by Laser Assisted Electrochemical Deposition. , 2012, , .		0
234	Enhanced Laser Shock by an Active Liquid Confinement. , 2012, , .		0

#	ARTICLE	IF	CITATIONS
235	Effect of Warm Laser Shock Peening on the Tensile Strength and Ductility of Aluminum Alloys. , 2012, , .		0
236	Nanoparticles Embedding Into Metallic Materials by Laser Direct Irradiation. , 2012, , .		0
237	Laser Crystallization of Transparent AZO Films on Sapphire With High Electron Mobility for Photo-Application. , 2014, , .		0
238	Magnetic Field Assisted Growth of High Dense Hematite Nanosheets and Their Application in Water Treatment. , 2014, , .		0
239	Control of Ablation Depth and Surface Structure in P3 Scribing of Thin-Film Solar Cells by a Picosecond Laser. , 2014, , .		0
240	In vitro osteoblast gene expression and differentiation atop of titanium blocks laser coated with multilayer biphasic calcium phosphate/titanium nanocomposites. Biomedical Physics and Engineering Express, 2017, 3, 025022.	1.2	0
241	Fatigue life prediction after laser forming. , 2003, , .		0
242	Effect of Film Thickness and Laser Energy Density on the Structural Characteristics of Laser-Annealed Polycrystalline Gallium Arsenide Films. , 2006, , .		0
243	Forming limit and fracture mode of microscale laser dynamic forming. , 2010, , .		0
244	Laser-Induced Plastic Deformation and Its Applications. , 2010, , 299-318.		0
245	Enhanced Multi-Photon Emission from Single NV Center Coupled to Graphene by Laser-Shaping. , 2015, , .		0