Y Norman Zhou

List of Publications by Year
in descending order

107 papers	4,335 citations	126907 33 h-index	123424 61 g-index
107 all docs	107 docs citations	107 times ranked	4347 citing authors

#	Article	IF	Citations
1	Joining of Silver Nanomaterials at Low Temperatures: Processes, Properties, and Applications. ACS Applied Materials & Interfaces, 2015, 7, 12597-12618.	8.0	276
2	Generation of oxygen vacancies in visible light activated one-dimensional iodine TiO₂ photocatalysts. RSC Advances, 2014, 4, 36959-36966.	3.6	233
3	Selfâ€Powered Wearable Electronics Based on Moisture Enabled Electricity Generation. Advanced Materials, 2018, 30, e1705925.	21.0	207
4	Effects of Heat Input and Martensite on HAZ Softening in Laser Welding of Dual Phase Steels. ISIJ International, 2008, 48, 809-814.	1.4	197
5	Preparation of PVP coated Cu NPs and the application for low-temperature bonding. Journal of Materials Chemistry, 2011, 21, 15981.	6.7	183
6	Moistureâ€Enabled Electricity Generation: From Physics and Materials to Selfâ€Powered Applications. Advanced Materials, 2020, 32, e2003722.	21.0	175
7	Hydrothermal growth of free standing TiO2 nanowire membranes for photocatalytic degradation of pharmaceuticals. Journal of Hazardous Materials, 2011, 189, 278-285.	12.4	150
8	Silver Nanoparticle Paste for Low-Temperature Bonding of Copper. Journal of Electronic Materials, 2011, 40, 1394-1402.	2.2	137
9	A Unified Capacitive-Coupled Memristive Model for the Nonpinched Currentâ€“Voltage Hysteresis Loop. Nano Letters, 2019, 19, 6461-6465.	9.1	128
10	Biomemristors as the next generation bioelectronics. Nano Energy, 2020, 75, 104938.	16.0	110
11	Synaptic devices based neuromorphic computing applications in artificial intelligence. Materials Today Physics, 2021, 18, 100393.	6.0	110
12	Reliable and Low-Power Multilevel Resistive Switching in TiO₂ Nanorod Arrays Structured with a TiO_x Seed Layer. ACS Applied Materials & Interfaces, 2017, 9, 4808-4817.	8.0	86
13	Self-Powered, Rapid-Response, and Highly Flexible Humidity Sensors Based on Moisture-Dependent Voltage Generation. ACS Applied Materials & Interfaces, 2019, 11, 14249-14255.	8.0	74
14	Multiple Memory Shape Memory Alloys. Advanced Engineering Materials, 2013, 15, 386-393.	3.5	70
15	Effect of the size of silver nanoparticles on SERS signal enhancement. Journal of Nanoparticle Research, 2017, 19, 1.	1.9	70
16	Palladium Nanoparticles Loaded on Carbon Modified TiO2 Nanobelts for Enhanced Methanol Electrooxidation. Nano-Micro Letters, 2013, 5, 202-212.	27.0	69
17	Room-temperature pressureless bonding with silver nanowire paste: towards organic electronic and heat-sensitive functional devices packaging. Journal of Materials Chemistry, 2012, 22, 12997.	6.7	66
18	Highly localized heat generation by femtosecond laser induced plasmon excitation in Ag nanowires. Applied Physics Letters, 2013, 102, .	3.3	60

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19	Plasmonicâ€Radiationâ€Enhanced Metal Oxide Nanowire Heterojunctions for Controllable Multilevel Memory. Advanced Functional Materials, 2016, 26, 5979-5986.	14.9	59
20	Thiocarboxylate functionalization of silver nanoparticles: effect of chain length on the electrical conductivity of nanoparticles and their polymer composites. Journal of Materials Chemistry, 2012, 22, 20048.	6.7	58
21	From Memristive Materials to Neural Networks. ACS Applied Materials & Interfaces, 2020, 12, 54243-54265.	8.0	56
22	Scalable High-Performance Ultraminiature Graphene Micro-Supercapacitors by a Hybrid Technique Combining Direct Writing and Controllable Microdroplet Transfer. ACS Applied Materials & Interfaces, 2018, 10, 5404-5412.	8.0	54
23	Concurrent photocatalytic and filtration processes using doped TiO2 coated quartz fiber membranes in a photocatalytic membrane reactor. Chemical Engineering Journal, 2017, 330, 531-540.	12.7	53
24	Reinforcement of Ag nanoparticle paste with nanowires for low temperature pressureless bonding. Journal of Materials Science, 2012, 47, 6801-6811.	3.7	51
25	Enhanced degradation of persistent pharmaceuticals found in wastewater treatment effluents using TiO2 nanobelt photocatalysts. Journal of Nanoparticle Research, 2013, 15, 1.	1.9	51
26	Highly electrically conductive adhesives using silver nanoparticle (Ag NP)-decorated graphene: the effect of NPs sintering on the electrical conductivity improvement. Journal of Materials Science: Materials in Electronics, 2015, 26, 590-600.	2.2	50
27	Utilizing UV-LED pulse width modulation on TiO2 advanced oxidation processes to enhance the decomposition efficiency of pharmaceutical micropollutants. Chemical Engineering Journal, 2019, 361, 439-449.	12.7	50
28	Selfâ€Oriented Nanojoining of Silver Nanowires via Surface Selective Activation. Particle and Particle Systems Characterization, 2013, 30, 420-426.	2.3	49
29	Thermal stability and reaction properties of passivated Al/CuO nano-thermite. Journal of Physics and Chemistry of Solids, 2011, 72, 620-625.	4.0	48
30	Polymer-Protected Cu-Ag Mixed NPs for Low-Temperature Bonding Application. Journal of Electronic Materials, 2012, 41, 1886-1892.	2.2	40
31	In situ nanojoining of Y- and T-shaped silver nanowires structures using femtosecond laser radiation. Nanotechnology, 2016, 27, 125201.	2.6	40
32	Microstructure and Tensile-Shear Properties of Resistance Spot-Welded Medium Mn Steel. Metals, 2018, 8, 48.	2.3	39
33	Synaptic learning behavior of a TiO₂ nanowire memristor. Nanotechnology, 2019, 30, 425202.	2.6	38
34	Metallurgical and Mechanical Properties of Fusion Zones of TRIP Steels in Laser Welding. ISIJ International, 2008, 48, 483-488.	1.4	35
35	Threshold Switching in Single Metalâ€Oxide Nanobelt Devices Emulating an Artificial Nociceptor. Advanced Electronic Materials, 2020, 6, 1900595.	5.1	35
36	Decoupling of the softening processes during rapid tempering of a martensitic steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 615, 395-404.	5.6	34

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37	Functionalization of silver nanowire surfaces with copper oxide for surface-enhanced Raman spectroscopic bio-sensing. Journal of Materials Chemistry, 2012, 22, 15495.	6.7	33
38	Characterization of thermochemical properties of Al nanoparticle and NiO nanowire composites. Nanoscale Research Letters, 2013, 8, 184.	5.7	32
39	Electrical Conductive Adhesives Enhanced with Highâ€<scp>A</scp>spectâ€<scp>R</scp>atio Silver Nanobelts. Macromolecular Materials and Engineering, 2014, 299, 739-747.	3.6	31
40	Dissimilar Laser Joining of NiTi SMA and MP35N Wires. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3533-3544.	2.2	31
41	Oxygen vacancy migration/diffusion induced synaptic plasticity in a single titanate nanobelt. Nanoscale, 2018, 10, 6069-6079.	5.6	30
42	Cooperative Bilayer of Lattice-Disordered Nanoparticles as Room-Temperature Sinterable Nanoarchitecture for Device Integrations. ACS Applied Materials & Interfaces, 2019, 11, 16972-16980.	8.0	30
43	A Battery-Like Self-Selecting Biomemristor from Earth-Abundant Natural Biomaterials. ACS Applied Bio Materials, 2021, 4, 1976-1985.	4.6	30
44	Improvement of Bondability by Depressing the Inhomogeneous Distribution of Nanoparticles in a Sintering Bonding Process with Silver Nanoparticles. Journal of Electronic Materials, 2012, 41, 1924-1930.	2.2	27
45	Exhalingâ€Ðriven Hydroelectric Nanogenerators for Standâ€Alone Nonmechanical Breath Analyzing. Advanced Materials Technologies, 2020, 5, 1900819.	5.8	27
46	Metal–Metal Bonding Process Using Cu+Ag Mixed Nanoparticles. Materials Transactions, 2013, 54, 879-883.	1.2	25
47	Sintering Bonding Process with Ag Nanoparticle Paste and Joint Properties in High Temperature Environment. Journal of Nanomaterials, 2016, 2016, 1-8.	2.7	25
48	Laser-induced Joining of Nanoscale Materials: Processing, Properties, and Applications. Nano Today, 2020, 35, 100959.	11.9	25
49	The effect of laser impingement angle on the optimization of melt pool geometry to improve process stability during high-speed laser welding of thin-gauge automotive steels. Journal of Manufacturing Processes, 2022, 78, 242-253.	5.9	25
50	Predicting Transient Softening in the Sub-Critical Heat-Affected Zone of Dual-Phase and Martensitic Steel Welds. ISIJ International, 2013, 53, 110-118.	1.4	24
51	Sintering mechanisms and mechanical properties of joints bonded using silver nanoparticles for electronic packaging applications. Welding in the World, Le Soudage Dans Le Monde, 2015, 59, 427-432.	2.5	24
52	Self-powered, flexible and remote-controlled breath monitor based on TiO₂nanowire networks. Nanotechnology, 2019, 30, 325503.	2.6	24
53	Plasmonic engineering of metal-oxide nanowire heterojunctions in integrated nanowire rectification units. Applied Physics Letters, 2016, 108, .	3.3	23
54	Nanostructure of immiscible Mgâ€“Fe dissimilar weld without interfacial intermetallic transition layer. Materials and Design, 2016, 92, 445-449.	7.0	22

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55	Photocatalytic Degradation of Microcystins by TiO2 Using UV-LED Controlled Periodic Illumination. Catalysts, 2019, 9, 181.	3.5	22
56	A Simple High Power, Fast Response Streaming Potential/Current-Based Electric Nanogenerator Using a Layer of Al₂O₃ Nanoparticles. ACS Applied Materials & Interfaces, 2021, 13, 27169-27178.	8.0	22
57	Settleable engineered titanium dioxide nanomaterials for the removal of natural organic matter from drinking water. Chemical Engineering Journal, 2018, 334, 638-649.	12.7	21
58	Fusion Zone Microstructure Evolution of Al-Alloyed TRIP Steel in Diode Laser Welding. Materials Transactions, 2008, 49, 746-753.	1.2	20
59	A Self-Powered Nanogenerator for the Electrical Protection of Integrated Circuits from Trace Amounts of Liquid. Nano-Micro Letters, 2020, 12, 5.	27.0	20
60	Ambient Temperature Ultrasonic Bonding of Si-Dice Using Sn-3.5wt.%Ag. Journal of Electronic Materials, 2008, 37, 324-330.	2.2	19
61	Improving the electrical contact at a Pt/TiO₂nanowire interface by selective application of focused femtosecond laser irradiation. Nanotechnology, 2017, 28, 405302.	2.6	19
62	Passive Filters for Nonvolatile Storage Based on Capacitive-Coupled Memristive Effects in Nanolayered Organicâ€“Inorganic Heterojunction Devices. ACS Applied Nano Materials, 2020, 3, 5045-5052.	5.0	18
63	Multifunctional Self-Powered Electronics Based on a Reusable Low-Cost Polypropylene Fabric Triboelectric Nanogenerator. ACS Applied Materials & Interfaces, 2021, 13, 34266-34273.	8.0	18
64	The influence of in-situ alloying of electro-spark deposited coatings on the multiscale morphological and mechanical properties of laser welded Alâ€“Si coated 22MnB5. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 839, 142830.	5.6	18
65	A True Random Number Generator Based on Ionic Liquid Modulated Memristors. ACS Applied Electronic Materials, 2021, 3, 2380-2388.	4.3	17
66	Femtosecond laser irradiation induced heterojunctions between carbon nanofibers and silver nanowires for a flexible strain sensor. Journal of Materials Science and Technology, 2021, 84, 139-146.	10.7	17
67	Waterâ€Enabled Electricity Generation: A Perspective. Advanced Energy and Sustainability Research, 2022, 3, .	5.8	17
68	Nanoscale Wire Bonding of Individual Ag Nanowires on Au Substrate at Room Temperature. Nano-Micro Letters, 2017, 9, 26.	27.0	16
69	Two-photon absorption induced nanowelding for assembling ZnO nanowires with enhanced photoelectrical properties. Applied Physics Letters, 2019, 115, .	3.3	16
70	Plasmon-Induced Heterointerface Thinning for Schottky Barrier Modification of Core/Shell SiC/SiO₂ Nanowires. ACS Applied Materials & Interfaces, 2019, 11, 9326-9332.	8.0	16
71	Preparation of Oxidation-Resistant Ag-Cu Alloy Nanoparticles by Polyol Method for Electronic Packaging. Journal of Electronic Materials, 2019, 48, 1286-1293.	2.2	16
72	The failure mechanism of resistance spot welded third-generation medium-Mn steel during shear-tension loading. Journal of Manufacturing Processes, 2022, 79, 520-531.	5.9	16

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73	Photocatalysis with easily recoverable linear engineered TiO2 nanomaterials to prevent the formation of disinfection byproducts in drinking water. Journal of Environmental Chemical Engineering, 2018, 6, 197-207.	6.7	15
74	Solar photocatalysis with modified TiO₂ photocatalysts: effects on NOM and disinfection byproduct formation potential. Environmental Science: Water Research and Technology, 2018, 4, 1361-1376.	2.4	15
75	Laser welding-brazing of NiTi/304 stainless steel wires with beam defocus and large offset. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 835, 142660.	5.6	15
76	Heterogeneous stimuli induced nonassociative learning behavior in ZnO nanowire memristor. Nanotechnology, 2020, 31, 125201.	2.6	14
77	Investigation of splashing phenomena during the impact of molten sub-micron gold droplets on solid surfaces. Soft Matter, 2016, 12, 295-301.	2.7	13
78	Effect of PVP on the low temperature bonding process using polyol prepared Ag nanoparticle paste for electronic packaging application. Journal of Physics: Conference Series, 2012, 379, 012024.	0.4	12
79	Local composition and microstructure control for multiple pseudoelastic plateau and hybrid self-biasing shape memory alloys. Materials and Design, 2016, 92, 802-813.	7.0	12
80	Photocatalytic degradation using one-dimensional TiO 2 and Ag-TiO 2 nanobelts under UV-LED controlled periodic illumination. Journal of Environmental Chemical Engineering, 2017, 5, 4365-4373.	6.7	12
81	The mechanism of pore segregation in the sintered nano Ag for high temperature power electronics applications. Materials Letters, 2018, 228, 168-171.	2.6	12
82	Sn Bumping Without Photoresist Mould and Si Dice Stacking for 3-D Packaging. IEEE Transactions on Advanced Packaging, 2010, 33, 912-917.	1.6	11
83	Contact engineering of single core/shell SiC/SiO₂ nanowire memory unit with high current tolerance using focused femtosecond laser irradiation. Nanoscale, 2020, 12, 5618-5626.	5.6	11
84	Effect of torch angle and position on bead geometry and joint strength during arc brazing ofÂthin-gaugeÂdual-phase steel. International Journal of Advanced Manufacturing Technology, 2022, 121, 543-557.	3.0	11
85	Self-generated Local Heating Induced Nanojoining for Room Temperature Pressureless Flexible Electronic Packaging. Scientific Reports, 2015, 5, 9282.	3.3	10
86	Study on weld formation and segregation mechanism for dissimilar pulse laser welding of NiTi and Cu wires. Optics and Laser Technology, 2021, 140, 107071.	4.6	10
87	Ultrathin TiO_x Interfaceâ€Mediated ZnOâ€Nanowire Memristive Devices Emulating Synaptic Behaviors. Advanced Electronic Materials, 2019, 5, 1900142.	5.1	9
88	Characteristics of Sn8Zn3Bi solder joints and crack resistance with various PCB and lead coatings. Microelectronics Reliability, 2008, 48, 631-637.	1.7	8
89	Ultrasonic bonding of flexible PCB to rigid PCB using an Sn interlayer. Soldering and Surface Mount Technology, 2009, 21, 4-10.	1.5	8
90	Formation and Characterization of Femtosecond-Laser-Induced Subcluster Segregated Nanoalloys. Journal of Physical Chemistry C, 2014, 118, 24746-24751.	3.1	8

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91	A comparative study of silver nanoparticles synthesized by arc discharge and femtosecond laser ablation in aqueous solution. Applied Physics A: Materials Science and Processing, 2016, 122, 1.	2.3	8
92	Soft Biomaterials Based Flexible Artificial Synapse for Neuromorphic Computing. Advanced Electronic Materials, 2022, 8, .	5.1	8
93	Experimental validation of a one-dimensional model for monolithic shape memory alloys with multiple pseudoelastic plateaus. Journal of Intelligent Material Systems and Structures, 2016, 27, 2102-2111.	2.5	7
94	Highly focused femtosecond laser directed selective boron doping in single SiC nanowire device for n-p conversion. Applied Physics Letters, 2019, 115, .	3.3	7
95	Investigation of impact and spreading of molten nanosized gold droplets on solid surfaces. Applied Optics, 2018, 57, 2080.	1.8	6
96	Maskless Patterning of Metal Outflow in Alternating Metal/Ceramic Multiple Nanolayers by Femtosecond Laser Irradiation. Journal of Physical Chemistry C, 2020, 124, 1178-1189.	3.1	5
97	Electrocatalytic Hydrolysisâ€Modulated Multistate Resistive Switching Behaviors in Memristors. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000655.	1.8	5
98	Palladium Nanoparticles Loaded on Carbon Modified TiO2 Nanobelts for Enhanced Methanol Electrooxidation. Nano-Micro Letters, 2013, 5, 202.	27.0	5
99	Highly-stable silver nanobelts joined via diffusion-free attachment. Nanotechnology, 2016, 27, 295606.	2.6	4
100	Effect of heat input modes on microstructure, mechanical properties and porosity of laser welded NiTi-316L joints: A comparative study. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 848, 143426.	5.6	4
101	Formation of metalâ€“semiconductor nanowire heterojunctions by nanosecond laser irradiation. AIP Advances, 2021, 11, .	1.3	3
102	Mechanical properties and failure behavior of resistance spot welded medium-Mn steel under static and quasi-static shear-tension loading. Welding in the World, Le Soudage Dans Le Monde, 2022, 66, 1609-1622.	2.5	3
103	Laser engineering of ITO/ZnO/ITO structures for photodetector applications. Journal of Laser Applications, 2022, 34, 032006.	1.7	3
104	Interfacial Nano-Mechanical Properties of Copper Joints Bonded with Silver Nanopaste near Room Temperature. Materials Transactions, 2015, 56, 1010-1014.	1.2	2
105	Bonding of Cu wires by solid state sintering of Ag nanoparticles at low temperatures. Materials Research Society Symposia Proceedings, 2009, 1207, 1.	0.1	1
106	TiO₂membranes for concurrent photocatalytic organic degradation and corrosion protection. Proceedings of SPIE, 2015, , .	0.8	1
107	TiO<inf>2</inf> nanowires membranes for the use in photocatalytic filtration processes. , 2014, , .		0