

# Y Norman Zhou

## List of Publications by Year in descending order

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107  
papers

4,335  
citations

126907

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107  
docs citations

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times ranked

4347  
citing authors

#	ARTICLE	IF	CITATIONS
1	Laser welding-brazing of NiTi/304 stainless steel wires with beam defocus and large offset. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 835, 142660.	5.6	15
2	Water-Enabled Electricity Generation: A Perspective. <i>Advanced Energy and Sustainability Research</i> , 2022, 3, .	5.8	17
3	The influence of in-situ alloying of electro-spark deposited coatings on the multiscale morphological and mechanical properties of laser welded Al-Si coated 22MnB5. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 839, 142830.	5.6	18
4	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. <i>Journal of Manufacturing Processes</i> , 2022, 78, 242-253.	5.9	25
5	The failure mechanism of resistance spot welded third-generation medium-Mn steel during shear-tension loading. <i>Journal of Manufacturing Processes</i> , 2022, 79, 520-531.	5.9	16
6	Effect of torch angle and position on bead geometry and joint strength during arc brazing of thin-gauge dual-phase steel. <i>International Journal of Advanced Manufacturing Technology</i> , 2022, 121, 543-557.	3.0	11
7	Mechanical properties and failure behavior of resistance spot welded medium-Mn steel under static and quasi-static shear-tension loading. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2022, 66, 1609-1622.	2.5	3
8	Effect of heat input modes on microstructure, mechanical properties and porosity of laser welded NiTi-316L joints: A comparative study. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 848, 143426.	5.6	4
9	Soft Biomaterials Based Flexible Artificial Synapse for Neuromorphic Computing. <i>Advanced Electronic Materials</i> , 2022, 8, .	5.1	8
10	Laser engineering of ITO/ZnO/ITO structures for photodetector applications. <i>Journal of Laser Applications</i> , 2022, 34, 032006.	1.7	3
11	A Battery-Like Self-Selecting Biomemristor from Earth-Abundant Natural Biomaterials. <i>ACS Applied Bio Materials</i> , 2021, 4, 1976-1985.	4.6	30
12	Electrocatalytic Hydrolysis-Modulated Multistate Resistive Switching Behaviors in Memristors. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2021, 218, 2000655.	1.8	5
13	A True Random Number Generator Based on Ionic Liquid Modulated Memristors. <i>ACS Applied Electronic Materials</i> , 2021, 3, 2380-2388.	4.3	17
14	Synaptic devices based neuromorphic computing applications in artificial intelligence. <i>Materials Today Physics</i> , 2021, 18, 100393.	6.0	110
15	A Simple High Power, Fast Response Streaming Potential/Current-Based Electric Nanogenerator Using a Layer of Al <sub>2</sub> O <sub>3</sub> Nanoparticles. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 27169-27178.	8.0	22
16	Multifunctional Self-Powered Electronics Based on a Reusable Low-Cost Polypropylene Fabric Triboelectric Nanogenerator. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 34266-34273.	8.0	18
17	Study on weld formation and segregation mechanism for dissimilar pulse laser welding of NiTi and Cu wires. <i>Optics and Laser Technology</i> , 2021, 140, 107071.	4.6	10
18	Femtosecond laser irradiation induced heterojunctions between carbon nanofibers and silver nanowires for a flexible strain sensor. <i>Journal of Materials Science and Technology</i> , 2021, 84, 139-146.	10.7	17

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19	Formation of metal–semiconductor nanowire heterojunctions by nanosecond laser irradiation. <i>AIP Advances</i> , 2021, 11, .	1.3	3
20	Threshold Switching in Single Metal–Oxide Nanobelt Devices Emulating an Artificial Nociceptor. <i>Advanced Electronic Materials</i> , 2020, 6, 1900595.	5.1	35
21	A Self-Powered Nanogenerator for the Electrical Protection of Integrated Circuits from Trace Amounts of Liquid. <i>Nano-Micro Letters</i> , 2020, 12, 5.	27.0	20
22	Maskless Patterning of Metal Outflow in Alternating Metal/Ceramic Multiple Nanolayers by Femtosecond Laser Irradiation. <i>Journal of Physical Chemistry C</i> , 2020, 124, 1178-1189.	3.1	5
23	Heterogeneous stimuli induced nonassociative learning behavior in ZnO nanowire memristor. <i>Nanotechnology</i> , 2020, 31, 125201.	2.6	14
24	Exhaling-Driven Hydroelectric Nanogenerators for Stand-Alone Nonmechanical Breath Analyzing. <i>Advanced Materials Technologies</i> , 2020, 5, 1900819.	5.8	27
25	Laser-induced Joining of Nanoscale Materials: Processing, Properties, and Applications. <i>Nano Today</i> , 2020, 35, 100959.	11.9	25
26	From Memristive Materials to Neural Networks. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 54243-54265.	8.0	56
27	Moisture-Enabled Electricity Generation: From Physics and Materials to Self-Powered Applications. <i>Advanced Materials</i> , 2020, 32, e2003722.	21.0	175
28	Passive Filters for Nonvolatile Storage Based on Capacitive-Coupled Memristive Effects in Nanolayered Organic–Inorganic Heterojunction Devices. <i>ACS Applied Nano Materials</i> , 2020, 3, 5045-5052.	5.0	18
29	Biomemristors as the next generation bioelectronics. <i>Nano Energy</i> , 2020, 75, 104938.	16.0	110
30	Contact engineering of single core/shell SiC/SiO <sub>2</sub> nanowire memory unit with high current tolerance using focused femtosecond laser irradiation. <i>Nanoscale</i> , 2020, 12, 5618-5626.	5.6	11
31	A Unified Capacitive-Coupled Memristive Model for the Nonpinched Current–Voltage Hysteresis Loop. <i>Nano Letters</i> , 2019, 19, 6461-6465.	9.1	128
32	Synaptic learning behavior of a TiO <sub>2</sub> nanowire memristor. <i>Nanotechnology</i> , 2019, 30, 425202.	2.6	38
33	Two-photon absorption induced nanowelding for assembling ZnO nanowires with enhanced photoelectrical properties. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	16
34	Highly focused femtosecond laser directed selective boron doping in single SiC nanowire device for n-p conversion. <i>Applied Physics Letters</i> , 2019, 115, .	3.3	7
35	Ultrathin TiO <sub>x</sub> Interface-Mediated ZnO–Nanowire Memristive Devices Emulating Synaptic Behaviors. <i>Advanced Electronic Materials</i> , 2019, 5, 1900142.	5.1	9
36	Self-powered, flexible and remote-controlled breath monitor based on TiO <sub>2</sub> nanowire networks. <i>Nanotechnology</i> , 2019, 30, 325503.	2.6	24

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37	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
38	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
39	Photocatalytic Degradation of Microcystins by TiO <sub>2</sub> Using UV-LED Controlled Periodic Illumination. Catalysts, 2019, 9, 181.	3.5	22
40	Plasmon-Induced Heterointerface Thinning for Schottky Barrier Modification of Core/Shell SiC/SiO <sub>2</sub> Nanowires. ACS Applied Materials & Interfaces, 2019, 11, 9326-9332.	8.0	16
41	Utilizing UV-LED pulse width modulation on TiO <sub>2</sub> advanced oxidation processes to enhance the decomposition efficiency of pharmaceutical micropollutants. Chemical Engineering Journal, 2019, 361, 439-449.	12.7	50
42	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
43	Oxygen vacancy migration/diffusion induced synaptic plasticity in a single titanate nanobelt. Nanoscale, 2018, 10, 6069-6079.	5.6	30
44	Self-Powered Wearable Electronics Based on Moisture Enabled Electricity Generation. Advanced Materials, 2018, 30, e1705925.	21.0	207
45	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
46	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
47	Photocatalysis with easily recoverable linear engineered TiO <sub>2</sub> nanomaterials to prevent the formation of disinfection byproducts in drinking water. Journal of Environmental Chemical Engineering, 2018, 6, 197-207.	6.7	15
48	Investigation of impact and spreading of molten nanosized gold droplets on solid surfaces. Applied Optics, 2018, 57, 2080.	1.8	6
49	Microstructure and Tensile-Shear Properties of Resistance Spot-Welded Medium Mn Steel. Metals, 2018, 8, 48.	2.3	39
50	Solar photocatalysis with modified TiO <sub>2</sub> photocatalysts: effects on NOM and disinfection byproduct formation potential. Environmental Science: Water Research and Technology, 2018, 4, 1361-1376.	2.4	15
51	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
52	Reliable and Low-Power Multilevel Resistive Switching in TiO <sub>2</sub> Nanorod Arrays Structured with a TiO <sub>2</sub> Seed Layer. ACS Applied Materials & Interfaces, 2017, 9, 4808-4817.	8.0	86
53	Nanoscale Wire Bonding of Individual Ag Nanowires on Au Substrate at Room Temperature. Nano-Micro Letters, 2017, 9, 26.	27.0	16
54	Photocatalytic degradation using one-dimensional TiO <sub>2</sub> and Ag-TiO <sub>2</sub> nanobelts under UV-LED controlled periodic illumination. Journal of Environmental Chemical Engineering, 2017, 5, 4365-4373.	6.7	12

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55	Improving the electrical contact at a Pt/TiO <sub>2</sub> nanowire interface by selective application of focused femtosecond laser irradiation. <i>Nanotechnology</i> , 2017, 28, 405302.	2.6	19
56	Effect of the size of silver nanoparticles on SERS signal enhancement. <i>Journal of Nanoparticle Research</i> , 2017, 19, 1.	1.9	70
57	Concurrent photocatalytic and filtration processes using doped TiO <sub>2</sub> coated quartz fiber membranes in a photocatalytic membrane reactor. <i>Chemical Engineering Journal</i> , 2017, 330, 531-540.	12.7	53
58	Sintering Bonding Process with Ag Nanoparticle Paste and Joint Properties in High Temperature Environment. <i>Journal of Nanomaterials</i> , 2016, 2016, 1-8.	2.7	25
59	<i>In situ</i> nanojoining of Y- and T-shaped silver nanowires structures using femtosecond laser radiation. <i>Nanotechnology</i> , 2016, 27, 125201.	2.6	40
60	Plasmonic engineering of metal-oxide nanowire heterojunctions in integrated nanowire rectification units. <i>Applied Physics Letters</i> , 2016, 108, .	3.3	23
61	A comparative study of silver nanoparticles synthesized by arc discharge and femtosecond laser ablation in aqueous solution. <i>Applied Physics A: Materials Science and Processing</i> , 2016, 122, 1.	2.3	8
62	Highly-stable silver nanobelts joined via diffusion-free attachment. <i>Nanotechnology</i> , 2016, 27, 295606.	2.6	4
63	Plasmonicâ€Radiationâ€Enhanced Metal Oxide Nanowire Heterojunctions for Controllable Multilevel Memory. <i>Advanced Functional Materials</i> , 2016, 26, 5979-5986.	14.9	59
64	Nanostructure of immiscible Mgâ€Fe dissimilar weld without interfacial intermetallic transition layer. <i>Materials and Design</i> , 2016, 92, 445-449.	7.0	22
65	Local composition and microstructure control for multiple pseudoelastic plateau and hybrid self-biasing shape memory alloys. <i>Materials and Design</i> , 2016, 92, 802-813.	7.0	12
66	Experimental validation of a one-dimensional model for monolithic shape memory alloys with multiple pseudoelastic plateaus. <i>Journal of Intelligent Material Systems and Structures</i> , 2016, 27, 2102-2111.	2.5	7
67	Investigation of splashing phenomena during the impact of molten sub-micron gold droplets on solid surfaces. <i>Soft Matter</i> , 2016, 12, 295-301.	2.7	13
68	Interfacial Nano-Mechanical Properties of Copper Joints Bonded with Silver Nanopaste near Room Temperature. <i>Materials Transactions</i> , 2015, 56, 1010-1014.	1.2	2
69	Joining of Silver Nanomaterials at Low Temperatures: Processes, Properties, and Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 12597-12618.	8.0	276
70	Self-generated Local Heating Induced Nanojoining for Room Temperature Pressureless Flexible Electronic Packaging. <i>Scientific Reports</i> , 2015, 5, 9282.	3.3	10
71	TiO <sub>2</sub> membranes for concurrent photocatalytic organic degradation and corrosion protection. <i>Proceedings of SPIE</i> , 2015, , .	0.8	1
72	Highly electrically conductive adhesives using silver nanoparticle (Ag NP)-decorated graphene: the effect of NPs sintering on the electrical conductivity improvement. <i>Journal of Materials Science: Materials in Electronics</i> , 2015, 26, 590-600.	2.2	50

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73	Sintering mechanisms and mechanical properties of joints bonded using silver nanoparticles for electronic packaging applications. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2015, 59, 427-432.	2.5	24
74	TiO <sub>2</sub> nanowires membranes for the use in photocatalytic filtration processes. , 2014, , .		0
75	Formation and Characterization of Femtosecond-Laser-Induced Subcluster Segregated Nanoalloys. <i>Journal of Physical Chemistry C</i> , 2014, 118, 24746-24751.	3.1	8
76	Electrical Conductive Adhesives Enhanced with High Aspect Ratio Silver Nanobelts. <i>Macromolecular Materials and Engineering</i> , 2014, 299, 739-747.	3.6	31
77	Generation of oxygen vacancies in visible light activated one-dimensional iodine TiO <sub>2</sub> photocatalysts. <i>RSC Advances</i> , 2014, 4, 36959-36966.	3.6	233
78	Decoupling of the softening processes during rapid tempering of a martensitic steel. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 615, 395-404.	5.6	34
79	Dissimilar Laser Joining of NiTi SMA and MP35N Wires. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 3533-3544.	2.2	31
80	Characterization of thermochemical properties of Al nanoparticle and NiO nanowire composites. <i>Nanoscale Research Letters</i> , 2013, 8, 184.	5.7	32
81	Enhanced degradation of persistent pharmaceuticals found in wastewater treatment effluents using TiO <sub>2</sub> nanobelt photocatalysts. <i>Journal of Nanoparticle Research</i> , 2013, 15, 1.	1.9	51
82	Highly localized heat generation by femtosecond laser induced plasmon excitation in Ag nanowires. <i>Applied Physics Letters</i> , 2013, 102, .	3.3	60
83	Palladium Nanoparticles Loaded on Carbon Modified TiO <sub>2</sub> Nanobelts for Enhanced Methanol Electrooxidation. <i>Nano-Micro Letters</i> , 2013, 5, 202-212.	27.0	69
84	Self-Oriented Nanojoining of Silver Nanowires via Surface Selective Activation. <i>Particle and Particle Systems Characterization</i> , 2013, 30, 420-426.	2.3	49
85	Multiple Memory Shape Memory Alloys. <i>Advanced Engineering Materials</i> , 2013, 15, 386-393.	3.5	70
86	Predicting Transient Softening in the Sub-Critical Heat-Affected Zone of Dual-Phase and Martensitic Steel Welds. <i>ISIJ International</i> , 2013, 53, 110-118.	1.4	24
87	Metal-Metal Bonding Process Using Cu+Ag Mixed Nanoparticles. <i>Materials Transactions</i> , 2013, 54, 879-883.	1.2	25
88	Palladium Nanoparticles Loaded on Carbon Modified TiO <sub>2</sub> Nanobelts for Enhanced Methanol Electrooxidation. <i>Nano-Micro Letters</i> , 2013, 5, 202.	27.0	5
89	Room-temperature pressureless bonding with silver nanowire paste: towards organic electronic and heat-sensitive functional devices packaging. <i>Journal of Materials Chemistry</i> , 2012, 22, 12997.	6.7	66
90	Functionalization of silver nanowire surfaces with copper oxide for surface-enhanced Raman spectroscopic bio-sensing. <i>Journal of Materials Chemistry</i> , 2012, 22, 15495.	6.7	33

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91	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
92	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
93	Reinforcement of Ag nanoparticle paste with nanowires for low temperature pressureless bonding. Journal of Materials Science, 2012, 47, 6801-6811.	3.7	51
94	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
95	Polymer-Protected Cu-Ag Mixed NPs for Low-Temperature Bonding Application. Journal of Electronic Materials, 2012, 41, 1886-1892.	2.2	40
96	Preparation of PVP coated Cu NPs and the application for low-temperature bonding. Journal of Materials Chemistry, 2011, 21, 15981.	6.7	183
97	Silver Nanoparticle Paste for Low-Temperature Bonding of Copper. Journal of Electronic Materials, 2011, 40, 1394-1402.	2.2	137
98	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
99	Hydrothermal growth of free standing TiO <sub>2</sub> nanowire membranes for photocatalytic degradation of pharmaceuticals. Journal of Hazardous Materials, 2011, 189, 278-285.	12.4	150
100	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
101	Ultrasonic bonding of flexible PCB to rigid PCB using an Sn interlayer. Soldering and Surface Mount Technology, 2009, 21, 4-10.	1.5	8
102	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
103	Ambient Temperature Ultrasonic Bonding of Si-Dice Using Sn-3.5wt.%Ag. Journal of Electronic Materials, 2008, 37, 324-330.	2.2	19
104	Characteristics of Sn <sub>8</sub> Zn <sub>3</sub> Bi solder joints and crack resistance with various PCB and lead coatings. Microelectronics Reliability, 2008, 48, 631-637.	1.7	8
105	Fusion Zone Microstructure Evolution of Al-Alloyed TRIP Steel in Diode Laser Welding. Materials Transactions, 2008, 49, 746-753.	1.2	20
106	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
107	Metallurgical and Mechanical Properties of Fusion Zones of TRIP Steels in Laser Welding. ISIJ International, 2008, 48, 483-488.	1.4	35