

Benjamin J Wiley

List of Publications by Year in descending order

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135
papers

26,617
citations

10979

71
h-index

12933

131
g-index

148
all docs

148
docs citations

148
times ranked

26739
citing authors

#	ARTICLE	IF	CITATIONS
1	Transparent Air Filters with Active Thermal Sterilization. Nano Letters, 2022, 22, 524-532.	4.5	47
2	Technical Note: Controlling the attenuation of 3D-printed physical phantoms for computed tomography with a single material. Medical Physics, 2022, , .	1.6	1
3	Eight-Fold Intensification of Electrochemical Azidooxygenation with a Flow-Through Electrode. ACS Sustainable Chemistry and Engineering, 2022, 10, 7648-7657.	3.2	7
4	Flaw sensitivity and tensile fatigue of a high-strength hydrogel. International Journal of Fatigue, 2022, 163, 107071.	2.8	0
5	Single-Crystal Electrochemistry Uncovers the Role of Citrate in the Anisotropic Growth of Ag Nanostructures. ECS Meeting Abstracts, 2022, MA2022-01, 1182-1182.	0.0	0
6	Colorful Conductive Threads for Wearable Electronics: Transparent Cu@Ag Nanonets. Advanced Science, 2022, 9, .	5.6	16
7	Isotropic Iodide Adsorption Causes Anisotropic Growth of Copper Microplates. Chemistry of Materials, 2021, 33, 881-891.	3.2	24
8	High-strength Hydrogel Attachment through Nanofibrous Reinforcement. Advanced Healthcare Materials, 2021, 10, e2001119.	3.9	3
9	Limitations of identical location SEM as a method of degradation studies on surfactant capped nanoparticle electrocatalysts. Journal of Catalysis, 2021, 394, 58-66.	3.1	16
10	Unwrap Them First: Operando Potential-induced Activation Is Required when Using PVP-Capped Ag Nanocubes as Catalysts of CO ₂ Electroreduction. Chimia, 2021, 75, 163-168.	0.3	1
11	Understanding the Solution-Phase Growth of Cu and Ag Nanowires and Nanocubes from First Principles. Langmuir, 2021, 37, 4419-4431.	1.6	11
12	Boron Nitride Nanotubes for Heat Dissipation in Polycaprolactone Composites. ACS Applied Nano Materials, 2021, 4, 4774-4780.	2.4	11
13	High-Aspect-Ratio Ag Nanowire Mat Electrodes for Electrochemical CO ₂ Production from CO ₂ . ACS Catalysis, 2021, 11, 11945-11959.	5.5	20
14	The Roles of Citrate and Defects in the Anisotropic Growth of Ag Nanostructures. Chemistry of Materials, 2021, 33, 8301-8311.	3.2	16
15	Environment Matters: CO ₂ RR Electrocatalyst Performance Testing in a Gas-Fed Zero-Gap Electrolyzer. ACS Catalysis, 2020, 10, 13096-13108.	5.5	55
16	Bromide Causes Facet-Selective Atomic Addition in Gold Nanorod Syntheses. Chemistry of Materials, 2020, 32, 6410-6415.	3.2	27
17	A Synthetic Hydrogel Composite with the Mechanical Behavior and Durability of Cartilage. Advanced Functional Materials, 2020, 30, 2003451.	7.8	171
18	The resistance of Cu nanowire-nanowire junctions and electro-optical modeling of Cu nanowire networks. Applied Physics Letters, 2020, 116, .	1.5	9

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19	Flash ablation metallization of conductive thermoplastics. Additive Manufacturing, 2020, 36, 101409.	1.7	12
20	Alkaline Water Electrolysis at 25 A cm^{-2} with a Microfibrous Flow-Through Electrode. Advanced Energy Materials, 2020, 10, 2001174.	10.2	66
21	Silver nanowire inks for direct-write electronic tattoo applications. Nanoscale, 2019, 11, 14294-14302.	2.8	63
22	3D Conductive Polymer Printed Metasurface Antenna for Fresnel Focusing. Designs, 2019, 3, 46.	1.3	5
23	Selective Electroplating for 3D-Printed Electronics. Advanced Materials Technologies, 2019, 4, 1900126.	3.0	32
24	Metal Nanowire Felt as a Flow-Through Electrode for High-Productivity Electrochemistry. ACS Nano, 2019, 13, 6998-7009.	7.3	30
25	One-step electrodeposition of copper on conductive 3D printed objects. Additive Manufacturing, 2019, 27, 318-326.	1.7	61
26	Accelerating electrochemistry with metal nanowires. Current Opinion in Electrochemistry, 2019, 16, 19-27.	2.5	28
27	One-Dimensional Metal Nanostructures: From Colloidal Syntheses to Applications. Chemical Reviews, 2019, 119, 8972-9073.	23.0	240
28	Electrochemical investigations of metal nanostructure growth with single crystals. Nanoscale, 2019, 11, 21709-21723.	2.8	12
29	Impact of Morphology on Printed Contact Performance in Carbon Nanotube Thin-Film Transistors. Advanced Functional Materials, 2019, 29, 1805727.	7.8	28
30	Three-dimensionally-printed anthropomorphic physical phantom for mammography and digital breast tomosynthesis with custom materials, lesions, and uniform quality control region. Journal of Medical Imaging, 2019, 6, 1.	0.8	27
31	Controlling the position-dependent contrast of 3D printed physical phantoms with a single material. , 2019, , .		1
32	Using inkjet 3D printing to create contrast-enhanced textured physical phantoms for CT. , 2019, , .		4
33	Modulating the Growth Rate, Aspect Ratio, and Yield of Copper Nanowires with Alkylamines. Chemistry of Materials, 2018, 30, 2809-2818.	3.2	49
34	In-Place Printing of Carbon Nanotube Transistors at Low Temperature. ACS Applied Nano Materials, 2018, 1, 1863-1869.	2.4	32
35	Multigram Synthesis of Cu-Ag Core-Shell Nanowires Enables the Production of a Highly Conductive Polymer Filament for 3D Printing Electronics. Particle and Particle Systems Characterization, 2018, 35, 1700385.	1.2	73
36	Stretchable Conductive Composites from Cu-Ag Nanowire Felt. ACS Nano, 2018, 12, 3689-3698.	7.3	57

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37	Exploring Silver Contact Morphologies in Printed Carbon Nanotube Thin-Film Transistors. , 2018, , .		0
38	Single-Crystal Electrochemistry Reveals Why Metal Nanowires Grow. Journal of the American Chemical Society, 2018, 140, 14740-14746.	6.6	76
39	The Limits of Primary Radiation Forces in Bulk Acoustic Standing Waves for Concentrating Nanoparticles. Particle and Particle Systems Characterization, 2018, 35, 1700470.	1.2	10
40	Emergence of winner-takes-all connectivity paths in random nanowire networks. Nature Communications, 2018, 9, 3219.	5.8	88
41	3D printed anthropomorphic physical phantom for mammography and DBT with high contrast custom materials, lesions and uniform chest wall region. , 2018, , .		2
42	Third generation anthropomorphic physical phantom for mammography and DBT: incorporating voxelized 3D printing and uniform chest wall QC region. Proceedings of SPIE, 2017, , .	0.8	6
43	Microwave metamaterials made by fused deposition 3D printing of a highly conductive copper-based filament. Applied Physics Letters, 2017, 110, .	1.5	58
44	Fully Printed Memristors from Cu@SiO ₂ Core-Shell Nanowire Composites. Journal of Electronic Materials, 2017, 46, 4596-4603.	1.0	24
45	3D Printing of a Double Network Hydrogel with a Compression Strength and Elastic Modulus Greater than those of Cartilage. ACS Biomaterials Science and Engineering, 2017, 3, 863-869.	2.6	112
46	Ethylenediamine Promotes Cu Nanowire Growth by Inhibiting Oxidation of Cu(111). Journal of the American Chemical Society, 2017, 139, 277-284.	6.6	69
47	Effect of Morphology on the Electrical Resistivity of Silver Nanostructure Films. ACS Applied Materials & Interfaces, 2017, 9, 1870-1876.	4.0	85
48	3D printing electronic components and circuits with conductive thermoplastic filament. Additive Manufacturing, 2017, 18, 156-163.	1.7	197
49	Fully printed memristors from Cu-SiO ₂ core-shell nanowire composites. , 2017, , .		0
50	Computational microwave imaging using 3D printed conductive polymer frequency-diverse metasurface antennas. IET Microwaves, Antennas and Propagation, 2017, 11, 1962-1969.	0.7	47
51	High-speed, solution-coatable memory based on Cu@SiO ₂ core-shell nanowires. Nanoscale Horizons, 2016, 1, 313-316.	4.1	13
52	Carbamide promoted polyol synthesis and transmittance properties of silver nanocubes. Inorganic Chemistry Frontiers, 2016, 3, 547-555.	3.0	7
53	How Copper Nanowires Grow and How To Control Their Properties. Accounts of Chemical Research, 2016, 49, 442-451.	7.6	109
54	Assembly of Colloidal Molecules, Polymers, and Crystals in Acoustic and Magnetic Fields. Advanced Materials, 2015, 27, 4725-4731.	11.1	31

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55	Copper as a Robust and Transparent Electrocatalyst for Water Oxidation. <i>Angewandte Chemie - International Edition</i> , 2015, 54, 2073-2078.	7.2	209
56	Effects of length dispersity and film fabrication on the sheet resistance of copper nanowire transparent conductors. <i>Nanoscale</i> , 2015, 7, 14496-14504.	2.8	37
57	Synthesis and Purification of Silver Nanowires To Make Conducting Films with a Transmittance of 99%. <i>Nano Letters</i> , 2015, 15, 6722-6726.	4.5	332
58	On the road to metallic nanoparticles by rational design: bridging the gap between atomic-level theoretical modeling and reality by total scattering experiments. <i>Nanoscale</i> , 2015, 7, 17902-17922.	2.8	24
59	Synthesis of Cu@Ag, Cu@Au, and Cu@Pt Core@Shell Nanowires and Their Use in Transparent Conducting Films. <i>Chemistry of Materials</i> , 2015, 27, 7788-7794.	3.2	137
60	Photocatalytic Growth of Copper Nanowires from Cu ₂ O Seeds. <i>Chemistry of Materials</i> , 2015, 27, 570-573.	3.2	18
61	Copper Nanowires: The Role of Cuprous Oxide Seeds in the One-Pot and Seeded Syntheses of Copper Nanowires (Small 9/2014). <i>Small</i> , 2014, 10, 1770-1770.	5.2	2
62	A rapid synthesis of high aspect ratio copper nanowires for high-performance transparent conducting films. <i>Chemical Communications</i> , 2014, 50, 2562-2564.	2.2	201
63	Metal Nanowire Networks: The Next Generation of Transparent Conductors. <i>Advanced Materials</i> , 2014, 26, 6670-6687.	11.1	677
64	Optically transparent hydrogen evolution catalysts made from networks of copper@platinum core@shell nanowires. <i>Energy and Environmental Science</i> , 2014, 7, 1461-1467.	15.6	74
65	Solution-processed copper@nickel nanowire anodes for organic solar cells. <i>Nanoscale</i> , 2014, 6, 5980.	2.8	170
66	Copper Nanowire Networks with Transparent Oxide Shells That Prevent Oxidation without Reducing Transmittance. <i>ACS Nano</i> , 2014, 8, 9673-9679.	7.3	130
67	Real-Time Visualization of Diffusion-Controlled Nanowire Growth in Solution. <i>Nano Letters</i> , 2014, 14, 4671-4676.	4.5	35
68	Oxidative etching for controlled synthesis of metal nanocrystals: atomic addition and subtraction. <i>Chemical Society Reviews</i> , 2014, 43, 6288.	18.7	229
69	The Role of Cuprous Oxide Seeds in the One-Pot and Seeded Syntheses of Copper Nanowires. <i>Small</i> , 2014, 10, 1771-1778.	5.2	63
70	From Core@Shell to Alloys: The Preparation and Characterization of Solution-Synthesized AuPd Nanoparticle Catalysts. <i>Journal of Physical Chemistry C</i> , 2013, 117, 17557-17566.	1.5	30
71	Optically Transparent Water Oxidation Catalysts Based on Copper Nanowires. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 13708-13711.	7.2	67
72	Integrating Simulations and Experiments To Predict Sheet Resistance and Optical Transmittance in Nanowire Films for Transparent Conductors. <i>ACS Nano</i> , 2013, 7, 7654-7663.	7.3	341

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73	Reversible Sliding in Networks of Nanowires. <i>Nano Letters</i> , 2013, 13, 2381-2386.	4.5	71
74	Plasmonic Waveguide Modes of Film-Coupled Metallic Nanocubes. <i>Nano Letters</i> , 2013, 13, 5866-5872.	4.5	238
75	The effect of nanowire length and diameter on the properties of transparent, conducting nanowire films. <i>Nanoscale</i> , 2012, 4, 1996.	2.8	413
76	Synthesis of Oxidation-Resistant Cupronickel Nanowires for Transparent Conducting Nanowire Networks. <i>Nano Letters</i> , 2012, 12, 3193-3199.	4.5	297
77	Controlled-reflectance surfaces with film-coupled colloidal nanoantennas. <i>Nature</i> , 2012, 492, 86-89.	13.7	639
78	Size effects on elasticity, yielding, and fracture of silver nanowires: <i>In situ</i> experiments. <i>Physical Review B</i> , 2012, 85, .	1.1	266
79	Binary colloidal structures assembled through Ising interactions. <i>Nature Communications</i> , 2012, 3, 794.	5.8	110
80	Imaginary Magnetic Tweezers for Massively Parallel Surface Adhesion Spectroscopy. <i>Nano Letters</i> , 2011, 11, 1681-1684.	4.5	20
81	Solution-Processed Flexible Polymer Solar Cells with Silver Nanowire Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2011, 3, 4075-4084.	4.0	351
82	Strain-Release Assembly of Nanowires on Stretchable Substrates. <i>ACS Nano</i> , 2011, 5, 1556-1563.	7.3	94
83	Synthesis and Catalytic Properties of Au-Pd Nanoflowers. <i>ACS Nano</i> , 2011, 5, 6119-6127.	7.3	163
84	The Synthesis and Coating of Long, Thin Copper Nanowires to Make Flexible, Transparent Conducting Films on Plastic Substrates. <i>Advanced Materials</i> , 2011, 23, 4798-4803.	11.1	480
85	Stretchable microfluidic electric circuit applied for radio frequency antenna. , 2011, , .		9
86	Stretchable Microfluidic Radiofrequency Antennas. <i>Advanced Materials</i> , 2010, 22, 2749-2752.	11.1	385
87	The Growth Mechanism of Copper Nanowires and Their Properties in Flexible, Transparent Conducting Films. <i>Advanced Materials</i> , 2010, 22, 3558-3563.	11.1	622
88	Nanofabrication at High Throughput and Low Cost. <i>ACS Nano</i> , 2010, 4, 3554-3559.	7.3	57
89	Programmable diagnostic devices made from paper and tape. <i>Lab on A Chip</i> , 2010, 10, 2499.	3.1	320
90	Infochemistry and infofuses for the chemical storage and transmission of coded information. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 9147-9150.	3.3	40

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91	Size-dependent joule heating of gold nanoparticles using capacitively coupled radiofrequency fields. <i>Nano Research</i> , 2009, 2, 400-405.	5.8	133
92	Mid-IR Plasmonics: Near-Field Imaging of Coherent Plasmon Modes of Silver Nanowires. <i>Nano Letters</i> , 2009, 9, 2553-2558.	4.5	98
93	Chemical Synthesis of Novel Plasmonic Nanoparticles. <i>Annual Review of Physical Chemistry</i> , 2009, 60, 167-192.	4.8	616
94	A microfluidic apparatus for the study of ice nucleation in supercooled water drops. <i>Lab on A Chip</i> , 2009, 9, 2293.	3.1	151
95	Integrated Fabrication and Magnetic Positioning of Metallic and Polymeric Nanowires Embedded in Thin Epoxy Slabs. <i>ACS Nano</i> , 2009, 3, 3315-3325.	7.3	30
96	Thin, lightweight, foldable thermochromic displays on paper. <i>Lab on A Chip</i> , 2009, 9, 2775.	3.1	167
97	Direct Coupling of Plasmonic and Photonic Nanowires for Hybrid Nanophotonic Components and Circuits. <i>Nano Letters</i> , 2009, 9, 4515-4519.	4.5	301
98	Integration of photonic and silver nanowire plasmonic waveguides. <i>Nature Nanotechnology</i> , 2008, 3, 660-665.	15.6	313
99	Morphological Evolution of Single-Crystal Ag Nanospheres during the Galvanic Replacement Reaction with HAuCl_4 . <i>Journal of Physical Chemistry C</i> , 2008, 112, 7872-7876.	1.5	91
100	FLASH: A rapid method for prototyping paper-based microfluidic devices. <i>Lab on A Chip</i> , 2008, 8, 2146.	3.1	616
101	Optical Near-Field Mapping of Plasmonic Nanoprisms. <i>Nano Letters</i> , 2008, 8, 3357-3363.	4.5	233
102	On the Polyol Synthesis of Silver Nanostructures: Glycolaldehyde as a Reducing Agent. <i>Nano Letters</i> , 2008, 8, 2077-2081.	4.5	324
103	Fabrication of Surface Plasmon Resonators by Nanoskiving Single-Crystalline Gold Microplates. <i>Nano Letters</i> , 2008, 8, 3023-3028.	4.5	81
104	Time-resolved spectroscopy of silver nanocubes: Observation and assignment of coherently excited vibrational modes. <i>Journal of Chemical Physics</i> , 2007, 126, 094709.	1.2	72
105	Synthesis and Mechanistic Study of Palladium Nanobars and Nanorods. <i>Journal of the American Chemical Society</i> , 2007, 129, 3665-3675.	6.6	570
106	Synthesis and Optical Properties of Silver Nanobars and Nanorice. <i>Nano Letters</i> , 2007, 7, 1032-1036.	4.5	590
107	One-Dimensional Nanostructures of Metals: A Large-Scale Synthesis and Some Potential Applications. <i>Langmuir</i> , 2007, 23, 4120-4129.	1.6	351
108	Nanocrystals with Unconventional Shapes: A Class of Promising Catalysts. <i>Angewandte Chemie - International Edition</i> , 2007, 46, 7157-7159.	7.2	250

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109	Resonance wavelength-dependent signal of absorptive particles in surface plasmon resonance-based detection. <i>Sensors and Actuators B: Chemical</i> , 2007, 123, 606-613.	4.0	10
110	Synthesis of Silver Nanostructures with Controlled Shapes and Properties. <i>Accounts of Chemical Research</i> , 2007, 40, 1067-1076.	7.6	1,063
111	Synthesis and Electrical Characterization of Silver Nanobeams. <i>Nano Letters</i> , 2006, 6, 2273-2278.	4.5	144
112	Right Bipyramids of Silver: A New Shape Derived from Single Twinned Seeds. <i>Nano Letters</i> , 2006, 6, 765-768.	4.5	365
113	Observation of Plasmon Propagation, Redirection, and Fan-Out in Silver Nanowires. <i>Nano Letters</i> , 2006, 6, 1822-1826.	4.5	376
114	The Role of Thickness Transitions in Convective Assembly. <i>Nano Letters</i> , 2006, 6, 2249-2253.	4.5	84
115	Maneuvering the Surface Plasmon Resonance of Silver Nanostructures through Shape-Controlled Synthesis. <i>Journal of Physical Chemistry B</i> , 2006, 110, 15666-15675.	1.2	944
116	Vibrational spectroscopy and energy relaxation of nanocubes, nanoboxes, and nanocages. , 2006, , .		0
117	Shape-Controlled Synthesis of Metal Nanostructures: The Case of Silver. <i>ChemInform</i> , 2006, 37, no.	0.1	0
118	Synthesis, Stability, and Surface Plasmonic Properties of Rhodium Multipods, and Their Use as Substrates for Surface-Enhanced Raman Scattering. <i>Angewandte Chemie - International Edition</i> , 2006, 45, 1288-1292.	7.2	135
119	Quick formation of single-crystal nanocubes of silver through dual functions of hydrogen gas in polyol synthesis. <i>Chemical Physics Letters</i> , 2005, 411, 479-483.	1.2	31
120	Localized Surface Plasmon Resonance Spectroscopy of Single Silver Nanocubes. <i>Nano Letters</i> , 2005, 5, 2034-2038.	4.5	1,307
121	Large-Scale Synthesis of Silver Nanocubes: The Role of HCl in Promoting Cube Perfection and Monodispersity. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 2154-2157.	7.2	576
122	Corrosion-Based Synthesis of Single-Crystal Pd Nanoboxes and Nanocages and Their Surface Plasmon Properties. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 7913-7917.	7.2	305
123	Gold Nanocages: Engineering Their Structure for Biomedical Applications. <i>Advanced Materials</i> , 2005, 17, 2255-2261.	11.1	565
124	Shape-Controlled Synthesis of Metal Nanostructures: The Case of Silver. <i>Chemistry - A European Journal</i> , 2005, 11, 454-463.	1.7	1,421
125	Ag-Ag _{0.08} V ₂ O ₅ ·nH ₂ O composite films as host materials for Li ⁺ intercalation. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2005, 202, R79-R81.	0.8	11
126	Gold Nanocages: Bioconjugation and Their Potential Use as Optical Imaging Contrast Agents. <i>Nano Letters</i> , 2005, 5, 473-477.	4.5	932

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127	Size-Dependence of Surface Plasmon Resonance and Oxidation for Pd Nanocubes Synthesized via a Seed Etching Process. <i>Nano Letters</i> , 2005, 5, 1237-1242.	4.5	399
128	Understanding the Role of Oxidative Etching in the Polyol Synthesis of Pd Nanoparticles with Uniform Shape and Size. <i>Journal of the American Chemical Society</i> , 2005, 127, 7332-7333.	6.6	428
129	Gold nanocages as contrast agents for spectroscopic optical coherence tomography. <i>Optics Letters</i> , 2005, 30, 3048.	1.7	221
130	Shape-Controlled Synthesis of Silver and Gold Nanostructures. <i>MRS Bulletin</i> , 2005, 30, 356-361.	1.7	272
131	Optical Properties of Pd ⁺ Ag and Pt ⁺ Ag Nanoboxes Synthesized via Galvanic Replacement Reactions. <i>Nano Letters</i> , 2005, 5, 2058-2062.	4.5	508
132	Polyol Synthesis of Silver Nanostructures: Control of Product Morphology with Fe(II) or Fe(III) Species. <i>Langmuir</i> , 2005, 21, 8077-8080.	1.6	354
133	Synthesis and Optical Properties of Nanorattles and Multiple-Walled Nanoshells/Nanotubes Made of Metal Alloys. <i>Journal of the American Chemical Society</i> , 2004, 126, 9399-9406.	6.6	400
134	Polyol Synthesis of Silver Nanoparticles: Use of Chloride and Oxygen to Promote the Formation of Single-Crystal, Truncated Cubes and Tetrahedrons. <i>Nano Letters</i> , 2004, 4, 1733-1739.	4.5	908
135	Three-Dimensional Printing of a Complete Lithium Ion Battery with Fused Filament Fabrication. <i>ACS Applied Energy Materials</i> , 0, , .	2.5	44