

# Kirk J Ziegler

## List of Publications by Year in descending order

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74  
papers

3,539  
citations

136950

32  
h-index

133252

59  
g-index

74  
all docs

74  
docs citations

74  
times ranked

4914  
citing authors

#	ARTICLE	IF	CITATIONS
1	Highly Luminescent Silicon Nanocrystals with Discrete Optical Transitions. <i>Journal of the American Chemical Society</i> , 2001, 123, 3743-3748.	13.7	466
2	Controlled Oxidative Cutting of Single-Walled Carbon Nanotubes. <i>Journal of the American Chemical Society</i> , 2005, 127, 1541-1547.	13.7	354
3	Synthesis of Organic Monolayer-Stabilized Copper Nanocrystals in Supercritical Water. <i>Journal of the American Chemical Society</i> , 2001, 123, 7797-7803.	13.7	203
4	Synthesis of Metal and Metal Oxide Nanowire and Nanotube Arrays within a Mesoporous Silica Template. <i>Chemistry of Materials</i> , 2003, 15, 3518-3522.	6.7	190
5	Transport of engineered nanoparticles in saturated porous media. <i>Journal of Nanoparticle Research</i> , 2010, 12, 2371-2380.	1.9	173
6	Synthesis of Germanium Nanocrystals in High Temperature Supercritical Fluid Solvents. <i>Nano Letters</i> , 2004, 4, 969-974.	9.1	106
7	Cutting single-walled carbon nanotubes. <i>Nanotechnology</i> , 2005, 16, S539-S544.	2.6	101
8	Supercritical Fluid Synthesis of Metal and Semiconductor Nanomaterials. <i>Chemistry - A European Journal</i> , 2003, 9, 2144-2150.	3.3	100
9	High mobility of SDBS-dispersed single-walled carbon nanotubes in saturated and unsaturated porous media. <i>Journal of Hazardous Materials</i> , 2011, 186, 1766-1772.	12.4	95
10	Buffering the Aqueous Phase pH in Water-in-CO <sub>2</sub> Microemulsions. <i>Journal of Physical Chemistry B</i> , 1999, 103, 5703-5711.	2.6	94
11	Bistable nanoelectromechanical devices. <i>Applied Physics Letters</i> , 2004, 84, 4074-4076.	3.3	74
12	Solvatochromic shifts of single-walled carbon nanotubes in nonpolar microenvironments. <i>Physical Chemistry Chemical Physics</i> , 2010, 12, 6990.	2.8	72
13	Cutting of Single-Walled Carbon Nanotubes by Ozonolysis. <i>Journal of Physical Chemistry B</i> , 2006, 110, 11624-11627.	2.6	67
14	Anomalous Properties of Poly(methyl methacrylate) Thin Films in Supercritical Carbon Dioxide. <i>Macromolecules</i> , 2002, 35, 1928-1935.	4.8	66
15	Length-Dependent Extraction of Single-Walled Carbon Nanotubes. <i>Nano Letters</i> , 2005, 5, 2355-2359.	9.1	62
16	Swelling the Micelle Core Surrounding Single-Walled Carbon Nanotubes with Water-Immiscible Organic Solvents. <i>Journal of the American Chemical Society</i> , 2008, 130, 16330-16337.	13.7	59
17	Nitric/Nitrous Acid Equilibria in Supercritical Water. <i>Journal of Physical Chemistry A</i> , 1999, 103, 1678-1688.	2.5	53
18	Conductive films of ordered nanowire arrays. <i>Journal of Materials Chemistry</i> , 2004, 14, 585.	6.7	52

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19	Eliminating Capillary Coalescence of Nanowire Arrays with Applied Electric Fields. ACS Applied Materials & Interfaces, 2010, 2, 1992-1998.	8.0	52
20	Modification and enhancement of cryogenic quenching heat transfer by a nanoporous surface. International Journal of Heat and Mass Transfer, 2015, 80, 636-643.	4.8	51
21	Improving Performance via Blocking Layers in Dye-Sensitized Solar Cells Based on Nanowire Photoanodes. ACS Applied Materials & Interfaces, 2015, 7, 12824-12831.	8.0	49
22	Interactive Forces between Sodium Dodecyl Sulfate-Suspended Single-Walled Carbon Nanotubes and Agarose Gels. Journal of the American Chemical Society, 2013, 135, 17758-17767.	13.7	45
23	A Mechanistic Study of the Selective Retention of SDS-Suspended Single-Wall Carbon Nanotubes on Agarose Gels. Journal of Physical Chemistry C, 2011, 115, 9361-9369.	3.1	43
24	Selective desorption of high-purity (6,5) SWCNTs from hydrogels through surfactant modulation. Chemical Communications, 2016, 52, 2928-2931.	4.1	42
25	Comparing Electron Recombination via Interfacial Modifications in Dye-Sensitized Solar Cells. ACS Applied Materials & Interfaces, 2014, 6, 20978-20984.	8.0	41
26	Improving the Effectiveness of Interfacial Trapping in Removing Single-Walled Carbon Nanotube Bundles. Journal of the American Chemical Society, 2008, 130, 14721-14728.	13.7	40
27	Boiling and quenching heat transfer advancement by nanoscale surface modification. Scientific Reports, 2017, 7, 6117.	3.3	39
28	Developing implantable optical biosensors. Trends in Biotechnology, 2005, 23, 440-444.	9.3	37
29	Pore Size Engineering in Mesoporous Silicas Using Supercritical CO <sub>2</sub> . Langmuir, 2005, 21, 4163-4167.	3.5	35
30	Mitigation of the impact of single-walled carbon nanotubes on a freshwater green alga: <i>Pseudokirchneriella subcapitata</i> . Nanotoxicology, 2012, 6, 161-172.	3.0	34
31	Interfacial Trapping of Single-Walled Carbon Nanotube Bundles. Journal of the American Chemical Society, 2007, 129, 15124-15125.	13.7	32
32	An Interfacial and Bulk Charge Transport Model for Dye-Sensitized Solar Cells Based on Photoanodes Consisting of Core-Shell Nanowire Arrays. Journal of the American Chemical Society, 2011, 133, 18663-18672.	13.7	32
33	Controlled synthesis of tin-doped indium oxide (ITO) nanowires. Journal of Crystal Growth, 2015, 413, 31-36.	1.5	29
34	Electron-induced cutting of single-walled carbon nanotubes. Carbon, 2009, 47, 178-185.	10.3	28
35	Statistically Accurate Length Measurements of Single-Walled Carbon Nanotubes. Journal of Nanoscience and Nanotechnology, 2007, 7, 2917-2921.	0.9	27
36	Supercritical fluid preparation of copper nanotubes and nanowires using mesoporous templates. Journal of Physics Condensed Matter, 2003, 15, 8303-8314.	1.8	26

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37	Strongly Bound Sodium Dodecyl Sulfate Surrounding Single-Wall Carbon Nanotubes. <i>Langmuir</i> , 2017, 33, 5006-5014.	3.5	26
38	pH Switching for the Selective Extraction of Metal Ions into Supercritical CO <sub>2</sub> . <i>Langmuir</i> , 2003, 19, 3145-3150.	3.5	24
39	Long-Term Improvements to Photoluminescence and Dispersion Stability by Flowing SDS-SWNT Suspensions through Microfluidic Channels. <i>Journal of the American Chemical Society</i> , 2009, 131, 12721-12728.	13.7	23
40	Relationship between ethane and ethylene diffusion inside ZIF-11 crystals confined in polymers to form mixed-matrix membranes. <i>Journal of Membrane Science</i> , 2020, 593, 117440.	8.2	23
41	Diels-Alder reactions between maleic anhydride and furan derivatives in supercritical CO <sub>2</sub> . <i>Green Chemistry</i> , 2005, 7, 105-110.	9.0	22
42	Aqueous suspension methods of carbon-based nanomaterials and biological effects on model aquatic organisms. <i>Environmental Toxicology and Chemistry</i> , 2012, 31, 210-214.	4.3	22
43	Microscopic diffusion of pure and mixed methane and carbon dioxide in ZIF-11 by high field diffusion NMR. <i>Microporous and Mesoporous Materials</i> , 2017, 248, 158-163.	4.4	22
44	Radio frequency heating of metallic and semiconducting single-walled carbon nanotubes. <i>Nanoscale</i> , 2019, 11, 9617-9625.	5.6	22
45	Coating Individual Single-Walled Carbon Nanotubes with Nylon 6,10 through Emulsion Polymerization. <i>ACS Applied Materials &amp; Interfaces</i> , 2009, 1, 1821-1826.	8.0	19
46	Direct Fabrication of High-Aspect Ratio Anodic Aluminum Oxide with Continuous Pores on Conductive Glass. <i>Journal of the Electrochemical Society</i> , 2011, 158, E1.	2.9	19
47	Evaluation of Critical Parameters in the Separation of Single-Wall Carbon Nanotubes through Selective Adsorption onto Hydrogels. <i>Journal of Physical Chemistry C</i> , 2014, 118, 15495-15505.	3.1	18
48	Alignment and Morphology Control of Ordered Mesoporous Silicas in Anodic Aluminum Oxide Channels by Electrophoretic Deposition. <i>Chemistry of Materials</i> , 2009, 21, 1841-1846.	6.7	17
49	Ethylene diffusion in crystals of zeolitic imidazole Framework-11 embedded in polymers to form mixed-matrix membranes. <i>Microporous and Mesoporous Materials</i> , 2019, 274, 163-170.	4.4	17
50	Producing pH switches in biphasic water-CO <sub>2</sub> systems. <i>Journal of Supercritical Fluids</i> , 2003, 27, 109-117.	3.2	15
51	Balancing surface area with electron recombination in nanowire-based dye-sensitized solar cells. <i>Solar Energy</i> , 2016, 132, 214-220.	6.1	15
52	Fabricating vertically aligned sub-20 nm Si nanowire arrays by chemical etching and thermal oxidation. <i>Nanotechnology</i> , 2016, 27, 165303.	2.6	15
53	Swelling the Hydrophobic Core of Surfactant-Suspended Single-Walled Carbon Nanotubes: A SANS Study. <i>Langmuir</i> , 2011, 27, 11372-11380.	3.5	14
54	Water-in-CO <sub>2</sub> Emulsions: Reaction Vessels for the Production of Tetra-Ethyl Pyrone. <i>Langmuir</i> , 2004, 20, 4386-4390.	3.5	13

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55	Single step synthesis of Ge@SiO <sub>x</sub> core-shell heterostructured nanowires. <i>Journal of Materials Chemistry</i> , 2009, 19, 954.	6.7	13
56	Controlling the Geometries of Si Nanowires through Tunable Nanosphere Lithography. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 7368-7375.	8.0	13
57	The synthesis of matrices of embedded semiconducting nanowires. <i>Faraday Discussions</i> , 2004, 125, 311.	3.2	12
58	Self-diffusion of heptane inside aggregates of porous alumina particles by pulsed field gradient NMR. <i>Microporous and Mesoporous Materials</i> , 2016, 229, 117-123.	4.4	12
59	Unique Toxicological Behavior from Single-Wall Carbon Nanotubes Separated via Selective Adsorption on Hydrogels. <i>Environmental Science &amp; Technology</i> , 2015, 49, 3913-3921.	10.0	10
60	Relationship between single-file diffusion of mixed and pure gases in dipeptide nanochannels by high field diffusion NMR. <i>Chemical Communications</i> , 2015, 51, 13346-13349.	4.1	9
61	Single-File Diffusion of Gas Mixtures in Nanochannels of the Dipeptide <sc>Ala</sc>-<sc>Val</sc>: High-Field Diffusion NMR Study. <i>Journal of Physical Chemistry C</i> , 2016, 120, 9914-9919.	3.1	9
62	Optimization models for determining nitric acid equilibria in supercritical water. <i>Computers &amp; Chemistry</i> , 1999, 23, 421-434.	1.2	8
63	Tin-Doped Indium Oxide-Titania Core-Shell Nanostructures for Dye-Sensitized Solar Cells. <i>Advances in Condensed Matter Physics</i> , 2014, 2014, 1-6.	1.1	8
64	Single step bonding of thick anodized aluminum oxide templates to silicon wafers for enhanced system-on-a-chip performance. <i>Journal of Power Sources</i> , 2020, 474, 228643.	7.8	8
65	Preparing thick, defect-free films of anatase titania for dye-sensitized solar cells. <i>Thin Solid Films</i> , 2011, 519, 6598-6604.	1.8	6
66	On the rate capability of supercapacitors characterized by a constant-phase element. <i>Journal of Power Sources</i> , 2021, 516, 230700.	7.8	4
67	Conductive nanowires coated with a semiconductive shell as the photoanode in dye-sensitized solar cells. <i>International Journal of Nano and Biomaterials</i> , 2012, 4, 196.	0.1	3
68	Possible role of molecular clustering in single-file diffusion of mixed and pure gases in dipeptide nanochannels. <i>Microporous and Mesoporous Materials</i> , 2018, 269, 83-87.	4.4	3
69	Iron nanoparticle surface treatment of carbon nanotubes to increase fatigue strength of steel composites. <i>Nanocomposites</i> , 2021, 7, 132-140.	4.2	3
70	Artificial Atoms of Silicon. <i>Materials Research Society Symposia Proceedings</i> , 1999, 582, 62.	0.1	1
71	Resistivity of mesopore-confined ionic liquid determined by electrochemical impedance spectroscopy. <i>Electrochimica Acta</i> , 2021, 378, 138112.	5.2	1
72	Isolation of competing morphological patterns during microfluidic electrodeposition: Experimental confirmation of theory. <i>Electrochimica Acta</i> , 2021, 398, 139205.	5.2	1

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73	Supercritical Fluid Synthesis of Metal and Semiconductor Nanomaterials. ChemInform, 2003, 34, no.	0.0	0
74	A facile route to prepare reflective counter electrode for enhanced dye-sensitised solar cell efficiency. International Journal of Nano and Biomaterials, 2016, 6, 205.	0.1	0