

Tobias Kraus

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

126 papers	3,719 citations	33 h-index	57 g-index
137 ext. papers	4,421 ext. citations	7.9 avg, IF	5.66 L-index

#	Paper	IF	Citations
126	Dynamic Light Scattering on Nanoparticles in Microgravity in a Drop Tower. <i>Microgravity Science and Technology</i> , 2022 , 34, 1	1.6	1
125	Stabilization of ultrathin nanowires by self-assembly into bundles. <i>Acta Materialia</i> , 2022 , 117799	8.4	1
124	Nanoscale Faceting and Ligand Shell Structure Dominate the Self-Assembly of Non-Polar Nanoparticles into Superlattices.. <i>Advanced Materials</i> , 2022 , e2109093	24	2
123	Large-Scale Synthesis of Hybrid Conductive Polymer-Gold Nanoparticles Using "Sacrificial" Weakly Binding Ligands for Printing Electronics. <i>Inorganic Chemistry</i> , 2021 , 60, 17103-17113	5.1	3
122	Computational design and optimization of electro-physiological sensors. <i>Nature Communications</i> , 2021 , 12, 6351	17.4	3
121	An Outer Membrane Vesicle-Based Permeation Assay (OMPA) for Assessing Bacterial Bioavailability. <i>Advanced Healthcare Materials</i> , 2021 , e2101180	10.1	0
120	Analysis of complex particle mixtures by asymmetrical flow field-flow fractionation coupled to inductively coupled plasma time-of-flight mass spectrometry. <i>Journal of Chromatography A</i> , 2021 , 1641, 461981	4.5	6
119	Particle encapsulation techniques for atom probe tomography of precipitates in microalloyed steels. <i>Ultramicroscopy</i> , 2021 , 223, 113219	3.1	2
118	Design and Fabrication of Transparent and Stretchable Zinc Ion Batteries. <i>ACS Applied Energy Materials</i> , 2021 , 4, 6166-6179	6.1	7
117	Colloidal Analysis of Particles Extracted from Microalloyed Steels. <i>Particle and Particle Systems Characterization</i> , 2021 , 38, 2000236	3.1	1
116	Reprint of: A MACEing silicon: Towards single-step etching of defined porous nanostructures for biomedicine. <i>Progress in Materials Science</i> , 2021 , 120, 100817	42.2	3
115	In Situ Observation of Gold Nanoparticles Self-assembly at the Solid-Liquid Interface Using Liquid-Phase STEM. <i>Microscopy and Microanalysis</i> , 2021 , 27, 2226-2227	0.5	
114	A MACEing silicon: Towards single-step etching of defined porous nanostructures for biomedicine. <i>Progress in Materials Science</i> , 2021 , 116, 100636	42.2	38
113	The effect of THF and the chelating modifier DTHFP on the copolymerisation of β -myrcene and styrene: kinetics, microstructures, morphologies, and mechanical properties. <i>Polymer Chemistry</i> , 2021 , 12, 4632-4642	4.9	2
112	Curled cation structures accelerate the dynamics of ionic liquids. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 21042-21064	3.6	3
111	Bundling of Nanowires Induced by Unbound Ligand. <i>Journal of Physical Chemistry C</i> , 2021 , 125, 3590-3598	3.8	4
110	Plasmon-Coupled Gold Nanoparticles in Stretched Shape-Memory Polymers for Mechanical/Thermal Sensing. <i>ACS Applied Nano Materials</i> , 2021 , 4, 3911-3921	5.6	4

109	Hybrid Dielectric Films of Inkjet-Printable Core-Shell Nanoparticles. <i>Advanced Materials</i> , 2021 , 33, e2103087	17.6	3
108	Ionic glue. <i>Nature Chemistry</i> , 2021 , 13, 925-926	17.6	1
107	In situ investigation of temperature induced agglomeration in non-polar magnetic nanoparticle dispersions by small angle X-ray scattering. <i>Nanoscale</i> , 2021 , 13, 6916-6920	7.7	0
106	Reversible magnetism switching of iron oxide nanoparticle dispersions by controlled agglomeration. <i>Nanoscale Advances</i> , 2021 , 3, 2822-2829	5.1	4
105	Electronic Multiscale Hybrid Materials: Sinter-Free Inks, Printed Transparent Grids, and Soft Devices. <i>Proceedings (mdpi)</i> , 2020 , 56, 24	0.3	
104	Molecular Origin of Electrical Conductivity in Gold-Polythiophene Hybrid Particle Films. <i>Journal of Physical Chemistry Letters</i> , 2020 , 11, 10538-10547	6.4	3
103	Ether functionalisation, ion conformation and the optimisation of macroscopic properties in ionic liquids. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 23038-23056	3.6	13
102	Electron microscopy of nanoparticle superlattice formation at a solid-liquid interface in nonpolar liquids. <i>Science Advances</i> , 2020 , 6, eaba1404	14.3	13
101	Reversible Conductive Inkjet Printing of Healable and Recyclable Electrodes on Cardboard and Paper. <i>Small</i> , 2020 , 16, e2000928	11	4
100	Influence of core size and capping ligand of gold nanoparticles on the desorption/ionization efficiency of small biomolecules in AP-SALDI-MS. <i>Analytical Science Advances</i> , 2020 , 1, 210-220	1.1	4
99	Flexible Pseudocapacitive Electrochromics via Inkjet Printing of Additive-Free Tungsten Oxide Nanocrystal Ink. <i>Advanced Energy Materials</i> , 2020 , 10, 2000142	21.8	45
98	Kinetic Control over Self-Assembly of Semiconductor Nanoplatelets. <i>Nano Letters</i> , 2020 , 20, 4102-4110	11.5	30
97	PhysioSkin: Rapid Fabrication of Skin-Conformal Physiological Interfaces 2020 ,		16
96	High-Resolution Inkjet Printing of Quantum Dot Light-Emitting Microdiode Arrays. <i>Advanced Optical Materials</i> , 2020 , 8, 1901429	8.1	69
95	An Interaction-Mediating Strategy towards enhanced solubility and redox properties of organics for aqueous flow batteries. <i>Nano Energy</i> , 2020 , 69, 104464	17.1	15
94	Ultrathin Homogenous AuNP Monolayers as Tunable Functional Substrates for Surface-Assisted Laser Desorption/Ionization of Small Biomolecules. <i>Journal of the American Society for Mass Spectrometry</i> , 2020 , 31, 47-57	3.5	2
93	Influence of core size and capping ligand of gold nanoparticles on the desorption/ionization efficiency of small biomolecules in AP-SALDI-MS. <i>Analytical Science Advances</i> , 2020 , 1, 209-209	1.1	0
92	When Like Destabilizes Like: Inverted Solvent Effects in Apolar Nanoparticle Dispersions. <i>ACS Nano</i> , 2020 , 14, 5278-5287	16.7	12

91	Entropy Can Bundle Nanowires in Good Solvents. <i>Nano Letters</i> , 2019 , 19, 6993-6999	11.5	5
90	Influence of Water on Tribolayer Growth When Lubricating Steel with a Fluorinated Phosphonium Dicyanamide Ionic Liquid. <i>Lubricants</i> , 2019 , 7, 27	3.1	8
89	Drying of electrically conductive hybrid polymer-gold nanorods studied with in situ microbeam GISAXS. <i>Nanoscale</i> , 2019 , 11, 6538-6543	7.7	6
88	Gyroidal Niobium Sulfide/Carbon Hybrid Monoliths for Electrochemical Energy Storage. <i>Batteries and Supercaps</i> , 2019 , 2, 668-672	5.6	5
87	On the geometric stability of an inorganic nanowire and an organic ligand shell. <i>Journal of the Mechanics and Physics of Solids</i> , 2019 , 123, 3-19	5	7
86	Colloidal Solubility and Agglomeration of Apolar Nanoparticles in Different Solvents. <i>Nano Letters</i> , 2019 , 19, 5246-5252	11.5	19
85	Determination of the Surface Facets of Gold Nanorods in Wet-Coated Thin Films with Grazing-Incidence Wide Angle X-Ray Scattering. <i>Particle and Particle Systems Characterization</i> , 2019 , 36, 1900323	3.1	2
84	Soft Inkjet Circuits 2019 ,		12
83	Self-Assembled Block Copolymer Electrolytes: Enabling Superior Ambient Cationic Conductivity and Electrochemical Stability. <i>Chemistry of Materials</i> , 2019 , 31, 277-285	9.6	24
82	Single-Particle Mass Spectrometry of Titanium and Niobium Carbonitride Precipitates in Steels. <i>Analytical Chemistry</i> , 2019 , 91, 943-950	7.8	16
81	An improved method for the matrix dissolution extraction of nanoparticles from microalloyed steel. <i>Journal of Materials Science</i> , 2019 , 54, 5813-5824	4.3	5
80	An Ambient Temperature Electrolyte with Superior Lithium Ion Conductivity based on a Self-Assembled Block Copolymer. <i>Chemistry - A European Journal</i> , 2018 , 24, 8061-8065	4.8	21
79	Rapid nanoparticle self-assembly at elevated temperatures. <i>Nanoscale</i> , 2018 , 10, 8009-8013	7.7	2
78	Ligand-Dependent Nanoparticle Assembly and Its Impact on the Printing of Transparent Electrodes. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 6079-6083	9.5	11
77	A Translucent Nanocomposite with Liquid Inclusions of a Responsive Nanoparticle Dispersion. <i>Advanced Materials</i> , 2018 , 30, e1803159	24	8
76	Ordered Mesoporous TiO ₂ Gyroids: Effects of Pore Architecture and Nb-Doping on Photocatalytic Hydrogen Evolution under UV and Visible Irradiation. <i>Advanced Energy Materials</i> , 2018 , 8, 1802566	21.8	32
75	Colloidal Stability of Apolar Nanoparticles: Role of Ligand Length. <i>Langmuir</i> , 2018 , 34, 12982-12989	4	26
74	Colloidal Stability of Apolar Nanoparticles: The Role of Particle Size and Ligand Shell Structure. <i>ACS Nano</i> , 2018 , 12, 5969-5977	16.7	66

73	Supraparticles: Functionality from Uniform Structural Motifs. <i>ACS Nano</i> , 2018 , 12, 5093-5120	16.7	116
72	Direct Nanoimprinting of a Colloidal Self-Organizing Nanowire Ink for Flexible, Transparent Electrodes. <i>Advanced Materials Technologies</i> , 2017 , 2, 1700034	6.8	21
71	Spinning Hierarchical Gold Nanowire Microfibers by Shear Alignment and Intermolecular Self-Assembly. <i>ACS Nano</i> , 2017 , 11, 4934-4942	16.7	27
70	Oriented Gold Nanorods and Gold Nanorod Chains within Smectic Liquid Crystal Topological Defects. <i>ACS Nano</i> , 2017 , 11, 6728-6738	16.7	38
69	Anisotropic nanoparticles as templates for the crystalline structure of an injection-molded isotactic polypropylene/TiO ₂ nanocomposite. <i>Polymer</i> , 2017 , 130, 161-169	3.9	12
68	The role of ligands in coinage-metal nanoparticles for electronics. <i>Beilstein Journal of Nanotechnology</i> , 2017 , 8, 2625-2639	3	14
67	Lamellar structures in fluorinated phosphonium ionic liquids: the roles of fluorination and chain length. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 27251-27258	3.6	19
66	Increased fluorescence of PbS quantum dots in photonic crystals by excitation enhancement. <i>Applied Physics Letters</i> , 2017 , 111, 031111	3.4	9
65	Hierarchical bioinspired adhesive surfaces-a review. <i>Bioinspiration and Biomimetics</i> , 2016 , 11, 051001	2.6	79
64	Functional Coatings Based on Preceramic Polymers. <i>Advanced Engineering Materials</i> , 2016 , 18, 746-753	3.5	8
63	Pressure-controlled formation of crystalline, Janus, and core-shell supraparticles. <i>Nanoscale</i> , 2016 , 8, 13377-84	7.7	38
62	Fabrication of silicon nanowire arrays by near-field laser ablation and metal-assisted chemical etching. <i>Nanotechnology</i> , 2016 , 27, 075301	3.4	31
61	Templated Self-Assembly of Ultrathin Gold Nanowires by Nanoimprinting for Transparent Flexible Electronics. <i>Nano Letters</i> , 2016 , 16, 2921-5	11.5	133
60	Enhancement of the antimicrobial properties of orthorhombic molybdenum trioxide by thermal induced fracturing of the hydrates. <i>Materials Science and Engineering C</i> , 2016 , 58, 1064-70	8.3	16
59	Synthesis and Conjugation of Alkyne-Functional Hyperbranched Polyglycerols. <i>Macromolecular Chemistry and Physics</i> , 2016 , 217, 2252-2261	2.6	6
58	Ultrathin gold nanowires for transparent electronics: Soft sintering and temperature stability. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016 , 213, 2336-2340	1.6	8
57	Structure diagram of binary Lennard-Jones clusters. <i>Journal of Chemical Physics</i> , 2016 , 145, 024302	3.9	5
56	PbS quantum dot based hybrid-organic photodetectors for X-ray sensing. <i>Organic Electronics</i> , 2016 , 33, 201-206	3.5	28

55	Gold nanorods with conjugated polymer ligands: sintering-free conductive inks for printed electronics. <i>Chemical Science</i> , 2016 , 7, 4190-4196	9.4	55
54	Ultrathin Gold Nanowires for Transparent Electronics: Breaking Barriers. <i>Procedia Engineering</i> , 2016 , 141, 152-156		12
53	Multivalent bonds in self-assembled bundles of ultrathin gold nanowires. <i>Physical Chemistry Chemical Physics</i> , 2016 , 18, 27165-27169	3.6	24
52	Colloidal Mechanisms of Gold Nanoparticle Loss in Asymmetric Flow Field-Flow Fractionation. <i>Analytical Chemistry</i> , 2016 , 88, 10065-10073	7.8	18
51	Sintering of ultrathin gold nanowires for transparent electronics. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 7838-42	9.5	44
50	Versatile Particle-Based Route to Engineer Vertically Aligned Silicon Nanowire Arrays and Nanoscale Pores. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 23717-24	9.5	45
49	Protein Identity and Environmental Parameters Determine the Final Physicochemical Properties of Protein-Coated Metal Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2015 , 119, 25482-25492	3.8	28
48	X-ray imaging with scintillator-sensitized hybrid organic photodetectors. <i>Nature Photonics</i> , 2015 , 9, 843-848	9.9	184
47	Maximizing Transfection Efficiency of Vertically Aligned Silicon Nanowire Arrays. <i>Advanced Functional Materials</i> , 2015 , 25, 7215-7225	15.6	81
46	Ageing of Alkylthiol-Stabilized Gold Nanoparticles. <i>Particle and Particle Systems Characterization</i> , 2015 , 32, 458-466	3.1	4
45	Formation Mechanism for Stable Hybrid Clusters of Proteins and Nanoparticles. <i>ACS Nano</i> , 2015 , 9, 6696-705	10.5	56
44	Microwave Heating of Poly(N-isopropylacrylamide)-Conjugated Gold Nanoparticles for Temperature-Controlled Display of Concanavalin A. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 27755-64	9.5	16
43	Convective Assembly of a Particle Monolayer. <i>Langmuir</i> , 2015 , 31, 13655-63	4	19
42	Dense arrays of uniform submicron pores in silicon and their applications. <i>ACS Applied Materials & Interfaces</i> , 2015 , 7, 1160-9	9.5	45
41	On the behaviour of nanoparticles in oil-in-water emulsions with different surfactants. <i>Soft Matter</i> , 2014 , 10, 1696-704	3.6	28
40	Self-assembly of gold nanoparticles at the oil-vapor interface: from mono- to multilayers. <i>Langmuir</i> , 2014 , 30, 13176-81	4	9
39	Robust, ultrasmall organosilica nanoparticles without silica shells. <i>Journal of Nanoparticle Research</i> , 2014 , 16, 1	2.3	2
38	Thermoresponsive and Photoluminescent Hybrid Silicon Nanoparticles by Surface-Initiated Group Transfer Polymerization of Diethyl Vinylphosphonate. <i>Angewandte Chemie</i> , 2014 , 126, 12702-12705	3.6	13

37	Thermoresponsive and photoluminescent hybrid silicon nanoparticles by surface-initiated group transfer polymerization of diethyl vinylphosphonate. <i>Angewandte Chemie - International Edition</i> , 2014 , 53, 12494-7	16.4	11
36	Micro- and Nanopatterning of Biomaterial Surfaces 2013 , 285-309		1
35	Ligand-dominated temperature dependence of agglomeration kinetics and morphology in alkyl-thiol-coated gold nanoparticles. <i>Physical Review E</i> , 2013 , 87, 062313	2.4	16
34	Templated silver nanocube arrays for single-molecule SERS detection. <i>RSC Advances</i> , 2013 , 3, 4288	3.7	23
33	Fabrication of metal nanoparticle arrays by controlled decomposition of polymer particles. <i>Nanotechnology</i> , 2013 , 24, 085304	3.4	17
32	Dendritic gold nanowire growth observed in liquid with transmission electron microscopy. <i>Langmuir</i> , 2013 , 29, 8427-32	4	58
31	Colloidal Surface Assemblies: Nanotechnology Meets Bioinspiration. <i>Advanced Functional Materials</i> , 2013 , 23, 4529-4541	15.6	59
30	Size and shape evolution of PS particle layers during etching. <i>Bioinspired, Biomimetic and Nanobiomaterials</i> , 2013 , 2, 130-140	1.3	4
29	Nanorod-Depolarized Dynamic Light Scattering in a Gelling Liquid. <i>Journal of Physical Chemistry C</i> , 2012 , 116, 16766-16775	3.8	3
28	Crystallization mechanisms in convective particle assembly. <i>Langmuir</i> , 2012 , 28, 8300-8	4	37
27	Nanoparticle clusters with Lennard-Jones geometries. <i>Nano Letters</i> , 2012 , 12, 3279-82	11.5	61
26	Switching between crystallization and amorphous agglomeration of alkyl thiol-coated gold nanoparticles. <i>Physical Review Letters</i> , 2012 , 109, 128302	7.4	34
25	Mechanism and determinants of nanoparticle penetration through human skin. <i>Nanoscale</i> , 2011 , 3, 4989-99	7.7	110
24	Role of the meniscus shape in large-area convective particle assembly. <i>Langmuir</i> , 2011 , 27, 8621-33	4	59
23	Colloidal Polymer Patterning 2011 , 169-198		
22	Analysis of polyethylene-particle filled SiCN precursor and the resulting porous ceramics with emphasis on using micro computed tomography. <i>Journal of the Ceramic Society of Japan</i> , 2011 , 119, 477-482	1	10
21	Gold nanoparticle penetration and reduced metabolism in human skin by toluene. <i>Pharmaceutical Research</i> , 2011 , 28, 2931-44	4.5	69
20	Combined multiphoton imaging-pixel analysis for semiquantitation of skin penetration of gold nanoparticles. <i>International Journal of Pharmaceutics</i> , 2011 , 413, 279-82	6.5	42

19	Biphasic synthesis of Au@SiO ₂ core-shell particles with stepwise ligand exchange. <i>Langmuir</i> , 2011 , 27, 727-32	4	31
18	Precision patterning with luminescent nanocrystal-functionalized beads. <i>Langmuir</i> , 2010 , 26, 14294-300	4	11
17	Templated Self-Assembly of Particles 2010 , 187-210		3
16	The scale-up of material microstructuring: from scanning probes to self-assembly. <i>Monatshefte für Chemie</i> , 2010 , 141, 1267-1272	1.4	
15	Synthesis of Monodisperse Silica Nanoparticles Dispersable in Non-Polar Solvents. <i>Advanced Engineering Materials</i> , 2010 , 12, 374-378	3.5	15
14	Temperature-induced particle self-assembly. <i>Journal of Physics and Chemistry of Solids</i> , 2010 , 71, 95-99	3.9	3
13	cBN particle filled SiCN precursor coatings. <i>Advances in Applied Ceramics</i> , 2009 , 108, 476-482	2.3	27
12	Particle-Filled PHPS Silazane-Based Coatings on Steel. <i>International Journal of Applied Ceramic Technology</i> , 2009 , 6, 373-380	2	52
11	Advanced coatings on the basis of Si(C)N precursors for protection of steel against oxidation. <i>Journal of the European Ceramic Society</i> , 2009 , 29, 2061-2068	6	126
10	Matrix effects on the surface plasmon resonance of dry supported gold nanocrystals. <i>Optics Letters</i> , 2008 , 33, 806-8	3	4
9	Controlled particle placement through convective and capillary assembly. <i>Langmuir</i> , 2007 , 23, 11513-21	4	282
8	Nanoparticle printing with single-particle resolution. <i>Nature Nanotechnology</i> , 2007 , 2, 570-6	28.7	360
7	Microfabricated platforms for the study of neuronal and cellular networks. <i>Journal of Physics: Conference Series</i> , 2006 , 34, 1-6	0.3	4
6	Characterization of a microfluidic dispensing system for localised stimulation of cellular networks. <i>Lab on A Chip</i> , 2006 , 6, 218-29	7.2	20
5	Microfluidics/CMOS orthogonal capabilities for cell biology. <i>Biomedical Microdevices</i> , 2006 , 8, 159-66	3.7	10
4	Printing chemical gradients. <i>Langmuir</i> , 2005 , 21, 7796-804	4	82
3	Closing the Gap Between Self-Assembly and Microsystems Using Self-Assembly, Transfer, and Integration of Particles. <i>Advanced Materials</i> , 2005 , 17, 2438-2442	24	61
2	Scaled-Out Multilayer Gas/Liquid Microreactor with Integrated Velocimetry Sensors. <i>Industrial & Engineering Chemistry Research</i> , 2005 , 44, 8997-9013	3.9	94

1	An integrated multiphase flow sensor for microchannels. <i>Experiments in Fluids</i> , 2004 , 36, 819-832	2.5	37
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