Georg Garnweitner

List of Publications by Year
in descending order

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97 papers	3,499 citations	201674 27 h-index	138484 58 g-index
99 all docs	99 docs citations	99 times ranked	3876 citing authors

#	Article	IF	Citations
1	Organic Reaction Pathways in the Nonaqueous Synthesis of Metal Oxide Nanoparticles. Chemistry - A European Journal, 2006, 12, 7282-7302.	3.3	439
2	Nonaqueous and Halide-Free Route to Crystalline BaTiO3, SrTiO3, and (Ba,Sr)TiO3Nanoparticles via a Mechanism Involving Câ^'C Bond Formation. Journal of the American Chemical Society, 2004, 126, 9120-9126.	13.7	265
3	Tailoring the Surface and Solubility Properties of Nanocrystalline Titania by a Nonaqueous In Situ Functionalization Process. Chemistry of Materials, 2004, 16, 1202-1208.	6.7	223
4	A General Nonaqueous Route to Binary Metal Oxide Nanocrystals Involving a Câ^'C Bond Cleavage. Journal of the American Chemical Society, 2005, 127, 5608-5612.	13.7	209
5	Largeâ€Scale Synthesis of Organophilic Zirconia Nanoparticles and their Application in Organicâ€"Inorganic Nanocomposites for Efficient Volume Holography. Small, 2007, 3, 1626-1632.	10.0	175
6	Non-Aqueous Synthesis of High-Purity Metal Oxide Nanopowders Using an Ether Elimination Process. Advanced Materials, 2004, 16, 2196-2200.	21.0	157
7	Non-aqueous routes to crystalline metal oxide nanoparticles: Formation mechanisms and applications. Progress in Solid State Chemistry, 2005, 33, 59-70.	7.2	140
8	Nonaqueous synthesis of metal oxide nanoparticles:Review and indium oxide as case study for the dependence of particle morphology on precursors and solvents. Journal of Sol-Gel Science and Technology, 2006, 40, 259-266.	2.4	136
9	Nonaqueous and Surfactant-Free Synthesis Routes to Metal Oxide Nanoparticles. Journal of the American Ceramic Society, 2006, 89, 1801-1808.	3.8	134
10	Organic chemistry in inorganic nanomaterials synthesis. Journal of Materials Chemistry, 2008, 18, 1171-1182.	6.7	119
11	Dispersion Behavior of Zirconia Nanocrystals and Their Surface Functionalization with Vinyl Group-Containing Ligands. Langmuir, 2007, 23, 9178-9187.	3.5	117
12	Synthesis of Luminescent ZrO₂:Eu³⁺ Nanoparticles and Their Holographic Subâ€Micrometer Patterning in Polymer Composites. Advanced Functional Materials, 2009, 19, 1819-1825.	14.9	114
13	Nonaqueous synthesis of crystalline anatase nanoparticles in simple ketones and aldehydes as oxygen-supplying agents. Chemical Communications, 2005, , 397.	4.1	81
14	Hierarchical Structure Formation of Nanoparticulate Spray-Dried Composite Aggregates. ACS Nano, 2015, 9, 10749-10757.	14.6	65
15	Phase-controlled synthesis of ZrO₂nanoparticles for highly transparent dielectric thin films. CrystEngComm, 2014, 16, 3366-3375.	2.6	63
16	Formation Mechanisms of Iron Oxide Nanoparticles in Different Nonaqueous Media. Crystal Growth and Design, 2012, 12, 1469-1475.	3.0	52
17	Effect of the Anionic Counterpart: Molybdate vs. Tungstate in Energy Storage for Pseudo-Capacitor Applications. Nanomaterials, 2021, 11, 580.	4.1	46
18	Rapid Microfluidic Preparation of Niosomes for Targeted Drug Delivery. International Journal of Molecular Sciences, 2019, 20, 4696.	4.1	42

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19	Comparative Study of Ligand Binding during the Postsynthetic Stabilization of Metal Oxide Nanoparticles. Langmuir, 2012, 28, 14395-14404.	3.5	37
20	Unspecific ligand binding yielding stable colloidal ITO-nanoparticle dispersions. Chemical Communications, 2012, 48, 1464-1466.	4.1	35
21	Study of the growth process of magnetic nanoparticles obtained via the non-aqueous solâ€“gel method. Journal of Materials Science, 2014, 49, 4705-4714.	3.7	33
22	Microfluidic synthesis of metal oxide nanoparticles via the nonaqueous method. Chemical Engineering Science, 2018, 191, 500-510.	3.8	33
23	In situ investigation of molecular kinetics and particle formation of water-dispersible titania nanocrystals. Physical Chemistry Chemical Physics, 2009, 11, 3767.	2.8	32
24	In-Vitro Application of Magnetic Hybrid Niosomes: Targeted siRNA-Delivery for Enhanced Breast Cancer Therapy. Pharmaceutics, 2021, 13, 394.	4.5	32
25	Facile surface tailoring of metal oxide nanoparticles via a two-step modification approach. RSC Advances, 2015, 5, 60993-60999.	3.6	30
26	Benzylamines as Versatile Agents for the Oneâ€Pot Synthesis and Highly Ordered Stacking of Anatase Nanoplatelets. European Journal of Inorganic Chemistry, 2008, 2008, 890-895.	2.0	29
27	Spontaneous water release inducing nucleation during the nonaqueous synthesis of TiO2 nanoparticles. CrystEngComm, 2012, 14, 8562.	2.6	27
28	A Hybrid Electrochemical Energy Storage Device Using Sustainable Electrode Materials. ChemistrySelect, 2020, 5, 1597-1606.	1.5	27
29	Oriented attachment of ultra-small Mn_(1â^'x)Zn_xFe₂O₄nanoparticles during the non-aqueous solâ€“gel synthesis. CrystEngComm, 2015, 17, 2464-2470.	2.6	26
30	Fabrication of transparent polymer-matrix nanocomposites with enhanced mechanical properties from chemically modified ZrO2 nanoparticles. Journal of Materials Science, 2012, 47, 2665-2674.	3.7	25
31	Comprehensive Characterization of APTES Surface Modifications of Hydrous Boehmite Nanoparticles. Langmuir, 2021, 37, 171-179.	3.5	25
32	Fractal growth of ZrO₂nanoparticles induced by synthesis conditions. CrystEngComm, 2016, 18, 8396-8405.	2.6	24
33	Study of the growth of hydrophilic iron oxide nanoparticles obtained via the non-aqueous solâ€“gel method. Journal of Sol-Gel Science and Technology, 2016, 77, 553-564.	2.4	24
34	In situ affinity purification of his-tagged protein A from Bacillus megaterium cultivation using recyclable superparamagnetic iron oxide nanoparticles. Journal of Biotechnology, 2017, 242, 55-63.	3.8	24
35	Impact of nanoparticle surface modification on the mechanical properties of polystyrene-based nanocomposites. RSC Advances, 2018, 8, 11109-11118.	3.6	24
36	Small-molecule in situ stabilization of TiO2 nanoparticles for the facile preparation of stable colloidal dispersions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 372, 41-47.	4.7	22

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37	Fabrication of carbon-sulphur composites via a vibration mill process as cathode material for lithium sulphur batteries. Energy Storage Materials, 2017, 9, 70-77.	18.0	21
38	Influence of surface modification on structure formation and micromechanical properties of spray-dried silica aggregates. Journal of Colloid and Interface Science, 2016, 464, 183-190.	9.4	19
39	Investigation on the Effects of Nanoparticles on Cutting Fluid Properties and Tribological Characteristics. International Journal of Precision Engineering and Manufacturing - Green Technology, 2019, 6, 433-447.	4.9	19
40	Transferrin-Decorated Niosomes with Integrated InP/ZnS Quantum Dots and Magnetic Iron Oxide Nanoparticles: Dual Targeting and Imaging of Glioma. International Journal of Molecular Sciences, 2021, 22, 4556.	4.1	18
41	Experimental and numerical insights into the formation of zirconia nanoparticles: a population balance model for the nonaqueous synthesis. Reaction Chemistry and Engineering, 2017, 2, 337-348.	3.7	16
42	Stepâ€byâ€step monitoring of a magnetic and SERSâ€active immunosensor assembly for purification and detection of tau protein. Journal of Biophotonics, 2020, 13, e201960090.	2.3	16
43	Parameter studies of the synthesis of titanium dioxide nanoparticles: Effect on particle formation and size. Chemical Engineering and Processing: Process Intensification, 2013, 74, 83-89.	3.6	14
44	Functionalization of magnetic nanoparticles with high-binding capacity for affinity separation of therapeutic proteins. Journal of Nanoparticle Research, 2014, 16, 1.	1.9	14
45	Aluminum zinc oxide nanostructures with customized size and shape by non-aqueous synthesis. CrystEngComm, 2015, 17, 6878-6883.	2.6	14
46	Phase Transitions of Polarised PVDF Films in a Standard Curing Process for Composites. Polymers, 2021, 13, 3900.	4.5	14
47	High integration density capacitors directly integrated in a single copper layer of printed circuit boards. IEEE Transactions on Dielectrics and Electrical Insulation, 2012, 19, 298-304.	2.9	13
48	Influence of TiO2 nanoparticle synthesis on the properties of thin coatings. Thin Solid Films, 2015, 574, 20-27.	1.8	12
49	Structural characterization and magnetic property determination of nanocrystalline Ba₃Fe₂WO₉ and Sr₃Fe₂WO₉ perovskites prepared by a modified aqueous solâ€“gel route. CrystEngComm, 2019, 21, 218-227.	2.6	12
50	Particle-reinforced and functionalized hydrogels for SpineMan, a soft robotics application. Journal of Materials Science, 2019, 54, 4444-4456.	3.7	12
51	Surface Modification of ZrO₂ Nanoparticles as Functional Component in Optical Nanocomposite Devices. Materials Research Society Symposia Proceedings, 2008, 1076, 1.	0.1	11
52	Influence of Pyrogenic Particles on the Micromechanical Behavior of Thin Solâ€“Gel Layers. Langmuir, 2011, 27, 8396-8403.	3.5	10
53	Non-Aqueous Sol-Gel Synthesis of FePt Nanoparticles in the Absence of In Situ Stabilizers. Nanomaterials, 2018, 8, 297.	4.1	10
54	Spray-Dried Hierarchical Aggregates of Iron Oxide Nanoparticles and Their Functionalization for Downstream Processing in Biotechnology. ACS Omega, 2019, 4, 16300-16308.	3.5	9

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55	Formation of a Dimeric Precursor Intermediate during the Nonaqueous Synthesis of Titanium Dioxide Nanocrystals. ChemNanoMat, 2016, 2, 1073-1076.	2.8	8
56	Integrated in situ -purification of recombinant proteins from Bacillus megaterium cultivation using SPION in stirred tank reactors. Biochemical Engineering Journal, 2017, 126, 58-67.	3.6	8
57	Chemical Cross-Linking of Anatase Nanoparticle Thin Films for Enhanced Mechanical Properties. Langmuir, 2018, 34, 6109-6116.	3.5	8
58	Dimensional characterization of cadmium selenide nanocrystals via indirect Fourier transform evaluation of small-angle X-ray scattering data. Nano Research, 2019, 12, 2849-2857.	10.4	8
59	Restricted and Unrestricted Migration Mechanisms of Silica Nanoparticles in Agarose Gels and Their Utilization for the Separation of Binary Mixtures. Journal of Physical Chemistry C, 2020, 124, 5157-5166.	3.1	8
60	SpineMan: Design of a soft robotic spine-like manipulator for safe human-robot interaction. , 2015, , .		7
61	Evaluation of Processes for Mechanical Manufacturing of Composite Materials for Liâ€Sulfur Batteries. Chemie-Ingenieur-Technik, 2018, 90, 513-520.	0.8	7
62	Secondary Particle Formation during the Nonaqueous Synthesis of Metal Oxide Nanocrystals. Langmuir, 2018, 34, 12834-12844.	3.5	7
63	Magnetic Nanoparticle-Based Dianthin Targeting for Controlled Drug Release Using the Endosomal Escape Enhancer SO1861. Nanomaterials, 2021, 11, 1057.	4.1	7
64	All-in-one superparamagnetic and SERS-active niosomes for dual-targeted in vitro detection of breast cancer cells. Sensors & Diagnostics, 2022, 1, 469-484.	3.8	7
65	Thin indium tin oxide nanoparticle films as hole transport layer in inverted organic solar cells. Thin Solid Films, 2016, 616, 419-424.	1.8	6
66	Enhancement of the Mechanical Properties of Nanoparticulate Thin Coatings via Surface Modification and Crossâ€Linking Additive. Chemical Engineering and Technology, 2017, 40, 1561-1568.	1.5	6
67	Crystal engineering for electrochemical applications. CrystEngComm, 2020, 22, 1498-1499.	2.6	6
68	Exchange Bias in Feâ€“Fe₃ Thin Films by Controlled Phase Transition of Blended Nanoparticle Building Blocks. Langmuir, 2020, 36, 2093-2101.	3.5	6
69	Amorphization and modified release of ibuprofen by post-synthetic and solvent-free loading into tailored silica aerogels. Drug Delivery, 2022, 29, 2086-2099.	5.7	6
70	Selective manipulation of superparamagnetic nanoparticles for product purification and microfluidic diagnostics. European Journal of Pharmaceutics and Biopharmaceutics, 2018, 126, 67-74.	4.3	5
71	Actuation principles for the bioinspired soft robotic manipulator spineman. , 2015, , .		4
72	Small-Molecule Stabilization Mechanisms of Metal Oxide Nanoparticles. , 2015, , 73-91.		4

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73	Development of a growth model for aluminum-doped zinc oxide nanocrystal synthesis via the benzylamine route. Journal of Nanoparticle Research, 2019, 21, 1.	1.9	4
74	Crystal engineering of nanomaterials: current insights and prospects. CrystEngComm, 2021, 23, 7916-7927.	2.6	4
75	Micromechanical properties of spray-dried core-shell silica aggregates along with drug release tests. Jcis Open, 2022, 6, 100052.	3.2	4
76	Simple model of the electrophoretic migration of spherical and rod-shaped Au nanoparticles in gels with varied mesh sizes. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 651, 129716.	4.7	4
77	Formation of magnetic nanoparticles studied during the initial synthesis stage. Hyperfine Interactions, 2014, 224, 57-63.	0.5	3
78	Process and Formulation Strategies to Improve Adhesion of Nanoparticulate Coatings on Stainless Steel. Coatings, 2018, 8, 156.	2.6	3
79	Formation of Aluminumâ€Doped Zinc Oxide Nanocrystals via the Benzylamine Route at Low Reaction Kinetics. Chemical Engineering and Technology, 2020, 43, 797-803.	1.5	3
80	Die nichtâ€wÃssrige Solâ€Gelâ€Synthese â€“ eine Alternative fÃ¼r die Herstellung hochqualitativer Metalloxidâ€• Nanopartikel. Chemie-Ingenieur-Technik, 2010, 82, 615-622.	0.8	2
81	Fabrication of Optimized Nanocomposites Employing Chemically Modified Nanoparticles. Chemie-Ingenieur-Technik, 2012, 84, 301-308.	0.8	2
82	New Contact Probe and Method to Measure Electrical Resistances in Battery Electrodes. Energy Technology, 2016, 4, 1550-1557.	3.8	2
83	Particle Surface Modification. Research Topics in Aerospace, 2021, , 119-142.	0.7	2
84	Synthesis and Dispersion of Ultra-Small Binary and Ternary Metal Oxide Nanoparticles for Dielectric Thin Films. Materials Research Society Symposia Proceedings, 2011, 1303, 163.	0.1	1
85	Influence of Process Parameters on the Nonaqueous Synthesis of TiO₂ Nanoparticles. Chemie-Ingenieur-Technik, 2014, 86, 231-237.	0.8	1
86	Verbesserung von Kunstharzbeschichtungen durch Nanopartikel mit maÃŸgeschneiderter OberflÃchenmodifizierung. Chemie-Ingenieur-Technik, 2016, 88, 958-966.	0.8	1
87	Evaluation of the Dispersion Stability of AZO Mesocrystals for Their Processing into Functional Thin Films Using Small Angle X-ray Scattering. Crystals, 2020, 10, 374.	2.2	1
88	Top-Down Formulation of Goethite Nanosuspensions for the Production of Transparent, Inorganic Glass Coatings. Coatings, 2022, 12, 330.	2.6	1
89	Prozesstechnik der nichtwÃssrigen Synthese von Metalloxidnanopartikeln. Chemie-Ingenieur-Technik, 2010, 82, 1471-1471.	0.8	0
90	Herstellung und Einsatz maÃŸgeschneiderter Metalloxid-Nanopartikel. Chemie-Ingenieur-Technik, 2010, 82, 1455-1455.	0.8	0

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91	Ceramic Thin Films for High Integration Density Capacitor Applications. Materials Research Society Symposia Proceedings, 2011, 1303, 151.	0.1	0
92	Nanokomposite mit chemisch optimierten Partikel-Polymer-GrenzflÃchen. Chemie-Ingenieur-Technik, 2012, 84, 1321-1322.	0.8	0
93	Prozesstechnisches VerstÃndnis der nichtwÃssrigen Synthese von Metalloxid-Nanopartikeln. Chemie-Ingenieur-Technik, 2014, 86, 1541-1541.	0.8	0
94	Herstellung von Nanokompositâ€ÐÃ¼nnschichten mit speziellen magnetischen Eigenschaften aus nanopartikulÃren Bausteinen. Chemie-Ingenieur-Technik, 2020, 92, 1810-1820.	0.8	0
95	Crystal growth of nanomaterials. CrystEngComm, 2021, 23, 7874-7875.	2.6	0
96	Polymeric nanocomposites for lithiumâ€“sulfur batteries. , 2022, , 389-424.		0
97	Backscattering-Based Discrimination of Microparticles Using an Optofluidic Multiangle Scattering Chip. ACS Omega, 0, , .	3.5	0