Matthias Karg

List of Publications by Year
in descending order

103 papers	5,373 citations	70961 41 h-index	82410 72 g-index
109 all docs	109 docs citations	109 times ranked	6754 citing authors

#	Article	IF	Citations
1	Nanogels and Microgels: From Model Colloids to Applications, Recent Developments, and Future Trends. Langmuir, 2019, 35, 6231-6255.	1.6	395
2	Nanorod-Coated PNIPAM Microgels: Thermoresponsive Optical Properties. Small, 2007, 3, 1222-1229.	5.2	250
3	Encapsulation and Growth of Gold Nanoparticles in Thermoresponsive Microgels. Advanced Materials, 2008, 20, 1666-1670.	11.1	247
4	A Solidâ€State Plasmonic Solar Cell via Metal Nanoparticle Selfâ€Assembly. Advanced Materials, 2012, 24, 4750-4755.	11.1	212
5	Distance and Wavelength Dependent Quenching of Molecular Fluorescence by Au@SiO₂ Coreâ€“Shell Nanoparticles. ACS Nano, 2013, 7, 6636-6648.	7.3	211
6	Plasmonic nanomeshes: their ambivalent role as transparent electrodes in organic solar cells. Scientific Reports, 2017, 7, 42530.	1.6	202
7	New â€œsmartâ€• poly(NIPAM) microgels and nanoparticle microgel hybrids: Properties and advances in characterisation. Current Opinion in Colloid and Interface Science, 2009, 14, 438-450.	3.4	192
8	General Pathway toward Crystalline-Core Micelles with Tunable Morphology and Corona Segregation. ACS Nano, 2011, 5, 9523-9534.	7.3	176
9	Temperature, pH, and Ionic Strength Induced Changes of the Swelling Behavior of PNIPAMâˆ’Poly(allylacetic acid) Copolymer Microgels. Langmuir, 2008, 24, 6300-6306.	1.6	173
10	A Versatile Approach for the Preparation of Thermosensitive PNIPAM Coreâ€“Shell Microgels with Nanoparticle Cores. ChemPhysChem, 2006, 7, 2298-2301.	1.0	141
11	Colloidal self-assembly concepts for light management in photovoltaics. Materials Today, 2015, 18, 185-205.	8.3	129
12	Smart inorganic/organic hybrid microgels: Synthesis and characterisation. Journal of Materials Chemistry, 2009, 19, 8714.	6.7	121
13	Single-Photon Emission and Quantum Characterization of Zinc Oxide Defects. Nano Letters, 2012, 12, 949-954.	4.5	118
14	Multiresponsive Hybrid Colloids Based on Gold Nanorods and Poly(NIPAM-co-allylacetic acid) Microgels: Temperature- and pH-Tunable Plasmon Resonance. Langmuir, 2009, 25, 3163-3167.	1.6	114
15	Large-Area Organization of pNIPAM-Coated Nanostars as SERS Platforms for Polycyclic Aromatic Hydrocarbons Sensing in Gas Phase. Langmuir, 2012, 28, 9168-9173.	1.6	94
16	Multi-Shell Hollow Nanogels with Responsive Shell Permeability. Scientific Reports, 2016, 6, 22736.	1.6	89
17	Surface Plasmon Spectroscopy of Goldâˆ’Poly-<i>N</i>-isopropylacrylamide Coreâˆ’Shell Particles. Langmuir, 2011, 27, 820-827.	1.6	87
18	Poly-<i>N</i>-isopropylacrylamide Nanogels and Microgels at Fluid Interfaces. Accounts of Chemical Research, 2020, 53, 414-424.	7.6	87

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19	Plasmonic Library Based on Substrate-Supported Gradiential Plasmonic Arrays. ACS Nano, 2014, 8, 9410-9421.	7.3	84
20	Versatile Phase Transfer of Gold Nanoparticles from Aqueous Media to Different Organic Media. Chemistry - A European Journal, 2011, 17, 4648-4654.	1.7	78
21	LCST and UCST in One: Double Thermoresponsive Behavior of Block Copolymers of Poly(ethylene) Tj ETQq1 1 0.784314 rgBT /Overlock	1.6	74
22	Selfâ€Assembly of Tunable Nanocrystal Superlattices Using Polyâ€(NIPAM) Spacers. Advanced Functional Materials, 2011, 21, 4668-4676.	7.8	73
23	Patchy Wormlike Micelles with Tailored Functionality by Crystallization-Driven Self-Assembly: A Versatile Platform for Mesostructured Hybrid Materials. Macromolecules, 2016, 49, 2761-2771.	2.2	73
24	Compression of hard coreâ€“soft shell nanoparticles at liquidâ€“liquid interfaces: influence of the shell thickness. Soft Matter, 2017, 13, 158-169.	1.2	72
25	Surface aggregate structure of nonionic surfactants on silica nanoparticles. Soft Matter, 2009, 5, 2928.	1.2	71
26	Chiral Surface Lattice Resonances. Advanced Materials, 2020, 32, e2001330.	11.1	68
27	Bottomâ€Up Meets Topâ€Down: Patchy Hybrid Nonwovens as an Efficient Catalysis Platform. Angewandte Chemie - International Edition, 2017, 56, 405-408.	7.2	67
28	Coreâ€“Shellâ€“Shell and Hollow Doubleâ€Shell Microgels with Advanced Temperature Responsiveness. Macromolecular Rapid Communications, 2015, 36, 159-164.	2.0	66
29	Optically anisotropic substrates via wrinkle-assisted convective assembly of gold nanorods on macroscopic areas. Faraday Discussions, 2015, 181, 243-260.	1.6	62
30	Timeâ€Controlled Colloidal Superstructures: Longâ€Range Plasmon Resonance Coupling in Particle Monolayers. Advanced Materials, 2015, 27, 7332-7337.	11.1	61
31	Reversible Tuning of Visible Wavelength Surface Lattice Resonances in Selfâ€Assembled Hybrid Monolayers. Advanced Optical Materials, 2017, 5, 1600971.	3.6	61
32	Multifunctional inorganic/organic hybrid microgels. Colloid and Polymer Science, 2012, 290, 673-688.	1.0	60
33	Thermoresponsive poly-(N-isopropylmethacrylamide) microgels: Tailoring particle size by interfacial tension control. Polymer, 2013, 54, 5499-5510.	1.8	59
34	How Hollow Are Thermoresponsive Hollow Nanogels?. Macromolecules, 2014, 47, 8700-8708.	2.2	56
35	Interaction of gold nanoparticles with thermoresponsive microgels: influence of the cross-linker density on optical properties. Physical Chemistry Chemical Physics, 2013, 15, 15623.	1.3	52
36	Wrinkle-assisted linear assembly of hard-core/soft-shell particles: impact of the soft shell on the local structure. Nanoscale, 2012, 4, 2491.	2.8	51

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37	2D assembly of goldâ€“PNIPAM coreâ€“shell nanocrystals. Physical Chemistry Chemical Physics, 2011, 13, 5576.	1.3	50
38	Well defined hybrid PNIPAM core-shell microgels: size variation of the silica nanoparticle core. Colloid and Polymer Science, 2011, 289, 699-709.	1.0	50
39	Influence of Temperature on the Colloidal Stability of Polymerâ€Coated Gold Nanoparticles in Cell Culture Media. Small, 2016, 12, 1723-1731.	5.2	49
40	Plasmonic goldâ€“poly(N-isopropylacrylamide) coreâ€“shell colloids with homogeneous density profiles: a small angle scattering study. Physical Chemistry Chemical Physics, 2015, 17, 1354-1367.	1.3	45
41	Tunable 2D binary colloidal alloys for soft nanotemplating. Nanoscale, 2018, 10, 22189-22195.	2.8	44
42	Seeded precipitation polymerization for the synthesis of gold-hydrogel core-shell particles: the role of surface functionalization and seed concentration. Colloid and Polymer Science, 2016, 294, 37-47.	1.0	42
43	Thermoresponsive coreâ€“shell microgels with silica nanoparticle cores: size, structure, and volume phase transition of the polymer shell. Physical Chemistry Chemical Physics, 2008, 10, 6708.	1.3	39
44	Mechanotunable Plasmonic Properties of Colloidal Assemblies. Advanced Materials Interfaces, 2020, 7, 1901678.	1.9	39
45	Magnetic and Electric Resonances in Particle-to-Film-Coupled Functional Nanostructures. ACS Applied Materials & Interfaces, 2018, 10, 3133-3141.	4.0	34
46	Modulation of the ligand-based fluorescence of 3d metal complexes upon spin state change. Journal of Materials Chemistry C, 2015, 3, 7925-7935.	2.7	33
47	Laser Flash Photolysis of Au-PNIPAM Coreâ€“Shell Nanoparticles: Dynamics of the Shell Response. Langmuir, 2016, 32, 12497-12503.	1.6	32
48	Surface Lattice Resonances in Self-Assembled Gold Nanoparticle Arrays: Impact of Lattice Period, Structural Disorder, and Refractive Index on Resonance Quality. Langmuir, 2020, 36, 13601-13612.	1.6	32
49	Structure of biodiesel based bicontinuous microemulsions for environmentally compatible decontamination: A small angle neutron scattering and freeze fracture electron microscopy study. Journal of Colloid and Interface Science, 2008, 325, 250-258.	5.0	29
50	Presenting Precision Glycomacromolecules on Gold Nanoparticles for Increased Lectin Binding. Polymers, 2017, 9, 716.	2.0	29
51	Effect of Defects on the Behavior of ZnO Nanoparticle FETs. Journal of Physical Chemistry C, 2011, 115, 8312-8315.	1.5	28
52	Au Nanoparticle Monolayers Covered with Solâ€“Gel Oxide Thin Films: Optical and Morphological Study. Langmuir, 2011, 27, 13739-13747.	1.6	27
53	Strategies for the selective loading of patchy worm-like micelles with functional nanoparticles. Nanoscale, 2018, 10, 18257-18268.	2.8	26
54	MoirÃ© and honeycomb lattices through self-assembly of hard-core/soft-shell microgels: experiment and simulation. Physical Chemistry Chemical Physics, 2019, 21, 19153-19162.	1.3	26

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55	Functional Materials Design through Hydrogel Encapsulation of Inorganic Nanoparticles: Recent Developments and Challenges. Macromolecular Chemistry and Physics, 2016, 217, 242-255.	1.1	25
56	Stable in Bulk and Aggregating at the Interface: Comparing Coreâ€“Shell Nanoparticles in Suspension and at Fluid Interfaces. Langmuir, 2018, 34, 886-895.	1.6	24
57	In-Plane Surface Lattice and Higher Order Resonances in Self-Assembled Plasmonic Monolayers: From Substrate-Supported to Free-Standing Thin Films. ACS Applied Materials & Interfaces, 2019, 11, 16096-16106.	4.0	24
58	Temperature dependence of the surfactant film bending elasticity in a bicontinuous sugar surfactant based microemulsion: a quasielastic scattering study. Physical Chemistry Chemical Physics, 2011, 13, 3092-3099.	1.3	23
59	Smart hydrogels based on double responsive triblock terpolymers. Soft Matter, 2009, , .	1.2	22
60	Monodisperse hollow silica spheres: An in-depth scattering analysis. Nano Research, 2016, 9, 1366-1376.	5.8	22
61	Ordered Particle Arrays via a Langmuir Transfer Process: Access to Any Two-Dimensional Bravais Lattice. Langmuir, 2019, 35, 973-979.	1.6	20
62	Dynamics and Wetting Behavior of Coreâ€“Shell Soft Particles at a Fluidâ€“Fluid Interface. Langmuir, 2018, 34, 15370-15382.	1.6	18
63	Fully Reversible Quantitative Phase Transfer of Gold Nanoparticles Using Bifunctional PNIPAM Ligands. Langmuir, 2017, 33, 253-261.	1.6	17
64	Aligned Linear Arrays of Crystalline Nanoparticles. Journal of Physical Chemistry Letters, 2013, 4, 1994-2001.	2.1	16
65	Pyrolysis and Solvothermal Synthesis for Carbon Dots: Role of Purification and Molecular Fluorophores. Langmuir, 2022, 38, 6148-6157.	1.6	16
66	Synthesis and Optical Properties of Phenanthrolineâ€Derived Schiff Baseâ€Like Dinuclear Ru^{II}â€“Ni^{II} Complexes. Chemistry - A European Journal, 2018, 24, 5100-5111.	1.7	15
67	The Next Generation of Colloidal Probes: A Universal Approach for Soft and Ultraâ€Small Particles. Small, 2019, 15, e1902976.	5.2	15
68	Salt-induced cluster formation of gold nanoparticles followed by stopped-flow SAXS, DLS and extinction spectroscopy. Physical Chemistry Chemical Physics, 2017, 19, 16348-16357.	1.3	15
69	Flow-Induced Ordering in Cubic Gels Formed by P2VP-<i>b</i>-PEO-<i>b</i>-P(GME-<i>co</i>-EGE) Triblock Terpolymer Micelles: A Rheo-SANS Study. Macromolecules, 2010, 43, 10045-10054.	2.2	13
70	Plasmon resonance coupling phenomena in self-assembled colloidal monolayers. Physica Status Solidi (A) Applications and Materials Science, 2017, 214, 1600947.	0.8	12
71	Translational and rotational diffusion coefficients of gold nanorods functionalized with a high molecular weight, thermoresponsive ligand: a depolarized dynamic light scattering study. Soft Matter, 2021, 17, 4019-4026.	1.2	12
72	Poly-NIPAM Microgels with Different Cross-Linker Densities. , 2013, , 63-76.		11

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73	Binary plasmonic honeycomb structures: High-resolution EDX mapping and optical properties. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2016, 510, 198-204.	2.3	11
74	Plasmonic and colloidal stability behaviours of Au-acrylic coreâ€“shell nanoparticles with thin pH-responsive shells. Nanoscale, 2018, 10, 18565-18575.	2.8	11
75	Bottomâ€up trifft auf Topâ€down: Patchâ€artig strukturierte Hybridfasermatten als effiziente Katalyseplattform. Angewandte Chemie, 2017, 129, 416-419.	1.6	10
76	Role of Absorbing Nanocrystal Cores in Soft Photonic Crystals: A Spectroscopy and SANS Study. Langmuir, 2018, 34, 854-867.	1.6	10
77	Silver Nanoparticle Gradient Arrays: Fluorescence Enhancement of Organic Dyes. Langmuir, 2019, 35, 8776-8783.	1.6	9
78	The fuzzy sphere morphology is responsible for the increase in light scattering during the shrinkage of thermoresponsive microgels. Soft Matter, 2022, 18, 807-825.	1.2	9
79	Morphology Control of Multicompartment Micelles in Water through Hierarchical Self-Assembly of Amphiphilic Terpolymers. Macromolecules, 2022, 55, 1354-1364.	2.2	9
80	Simple and High Yield Synthesis of Metal-Polymer Nanocomposites: The Role of Theta-Centrifugation as an Essential Purification Step. Polymers, 2017, 9, 659.	2.0	8
81	Splitting and separation of colloidal streams in sinusoidal microchannels. Lab on A Chip, 2018, 18, 3163-3171.	3.1	8
82	Synthesis of Nano/Microsized MIL-101Cr Through Combination of Microwave Heating and Emulsion Technology for Mixed-Matrix Membranes. Frontiers in Chemistry, 2019, 7, 777.	1.8	8
83	Surface Lattice Resonances in Selfâ€Templated Plasmonic Honeycomb and MoirÃ© Lattices. Advanced Materials Interfaces, 2021, 8, 2100317.	1.9	8
84	Macromolecular Decoration of Nanoparticles for Guiding Self&;#x02010;Assembly in 2D and 3D. , 0, , 159-192.		7
85	Versatile Route toward Hydrophobically Polymer-Grafted Gold Nanoparticles from Aqueous Dispersions. Journal of Physical Chemistry B, 2021, 125, 8225-8237.	1.2	6
86	Elucidating the Nucleation Event in the Câ€“C Cross-Coupling Step-Growth Dispersion Polymerization. Macromolecules, 2021, 54, 6085-6089.	2.2	5
87	Structural Insights into Polymethacrylamide-Based LCST Polymers in Solution: A Small-Angle Neutron Scattering Study. Macromolecules, 2021, 54, 7632-7641.	2.2	5
88	Acidochromic Turnâ€on 2,4â€Diarylpyrano[2,â€‰3â€‹<i>b</i>]indole Luminophores with Solubilizing Groups for A Broad Range of Polarity. ChemistrySelect, 2018, 3, 10345-10351.	0.7	4
89	Electrokinetics in Micro-channeled Cantilevers: Extending the Toolbox for Reversible Colloidal Probes and AFM-Based Nanofluidics. Scientific Reports, 2019, 9, 20294.	1.6	4
90	From normal diffusion to superdiffusion: Photothermal heating of plasmonic core-shell microgels. Physical Review E, 2019, 100, 052605.	0.8	4

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91	Magnetic Nanoprobes for Spatio-Mechanical Manipulation in Single Cells. Nanomaterials, 2021, 11, 2267.	1.9	4
92	<i>In situ</i> characterization of crystallization and melting of soft, thermoresponsive microgels by small-angle X-ray scattering. Soft Matter, 2022, 18, 1591-1602.	1.2	4
93	Temperature-Jump Spectroscopy of Goldâ€“Poly(<i>N</i>-isopropylacrylamide) Coreâ€“Shell Microgels. Journal of Physical Chemistry C, 2022, 126, 4118-4131.	1.5	4
94	SAXS Investigation of Coreâ€“Shell Microgels with High Scattering Contrast Cores: Access to Structure Factor and Volume Fraction. Macromolecules, 2022, 55, 2959-2969.	2.2	4
95	Ordering of Polystyrene Nanoparticles on Substrates Pre-Coated with Different Polyelectrolyte Architectures. International Journal of Molecular Sciences, 2013, 14, 12893-12913.	1.8	3
96	Controlling the shell structure of hard core/hydrogel shell microspheres. Colloid and Polymer Science, 2022, 300, 333-340.	1.0	3
97	Temperatureâ€Dependent Gelation Behaviour of Double Responsive P2VPâ€<i>b</i>â€PEOâ€<i>b</i>â€P(GMEâ€<i>co</i>â€EGE) Triblock Terpolymers: A SANS Study. Macromolecular Symposia, 2011, 306-307, 77-88.	0.4	2
98	Synthesis and self-assembly of amphiphilic precision glycomacromolecules. Polymer Chemistry, 2021, 12, 4795-4802.	1.9	2
99	Polymer ligand binding to surface-immobilized gold nanoparticles: a fluorescence-based study on the adsorption kinetics. Soft Matter, 2021, 17, 7487-7497.	1.2	1
100	Tuning Sugarâ€Based Chiral and Flowerâ€Like Microparticles. Small, 2021, 17, 2102938.	5.2	1
101	Amphipolar, Amphiphilic 2,4-diarylpyrano[2,3-b]indoles as Turn-ON Luminophores in Acidic and Basic Media. Molecules, 2022, 27, 2354.	1.7	1
102	Frontispiece: Synthesis and Optical Properties of Phenanthroline-Derived Schiff Base-Like Dinuclear RuII -NiII Complexes. Chemistry - A European Journal, 2018, 24, .	1.7	0
103	Tuning Sugarâ€Based Chiral and Flowerâ€Like Microparticles (Small 38/2021). Small, 2021, 17, 2170198.	5.2	0