

Mathias Brust

List of Publications by Year in descending order

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113
papers

17,472
citations

31902

53
h-index

27345

106
g-index

123
all docs

123
docs citations

123
times ranked

19562
citing authors

#	ARTICLE	IF	CITATIONS
1	Synthesis of thiol-derivatised gold nanoparticles in a two-phase Liquid-Liquid system. Journal of the Chemical Society Chemical Communications, 1994, .	2.0	5,935
2	Aligned two- and three-dimensional structures by directional freezing of polymers and nanoparticles. Nature Materials, 2005, 4, 787-793.	13.3	721
3	Spontaneous ordering of bimodal ensembles of nanoscopic gold clusters. Nature, 1998, 396, 444-446.	13.7	719
4	Novel gold-dithiol nano-networks with non-metallic electronic properties. Advanced Materials, 1995, 7, 795-797.	11.1	718
5	Rational and Combinatorial Design of Peptide Capping Ligands for Gold Nanoparticles. Journal of the American Chemical Society, 2004, 126, 10076-10084.	6.6	670
6	Uptake and Intracellular Fate of Surface-Modified Gold Nanoparticles. ACS Nano, 2008, 2, 1639-1644.	7.3	615
7	Self-Assembled Gold Nanoparticle Thin Films with Nonmetallic Optical and Electronic Properties. Langmuir, 1998, 14, 5425-5429.	1.6	587
8	Some recent advances in nanostructure preparation from gold and silver particles: a short topical review. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2002, 202, 175-186.	2.3	570
9	Gold—an introductory perspective. Chemical Society Reviews, 2008, 37, 1759.	18.7	384
10	Size-Controlled Synthesis of Near-Monodisperse Gold Nanoparticles in the 1-4 nm Range Using Polymeric Stabilizers. Journal of the American Chemical Society, 2005, 127, 16398-16399.	6.6	331
11	Kinase-Catalyzed Modification of Gold Nanoparticles: A New Approach to Colorimetric Kinase Activity Screening. Journal of the American Chemical Society, 2006, 128, 2214-2215.	6.6	269
12	Extremely Stable Water-Soluble Ag Nanoparticles. Chemistry of Materials, 2005, 17, 4630-4635.	3.2	245
13	Bionanoconjugation via Click Chemistry: The Creation of Functional Hybrids of Lipases and Gold Nanoparticles. Bioconjugate Chemistry, 2006, 17, 1373-1375.	1.8	239
14	Preparation of Acrylate-Stabilized Gold and Silver Hydrosols and Gold-Polymer Composite Films. Langmuir, 2003, 19, 4831-4835.	1.6	229
15	Thioalkylated tetraethylene glycol: a new ligand for water soluble monolayer protected gold clusters. Chemical Communications, 2002, , 2294-2295.	2.2	225
16	Rheology of Human Blood Plasma: Viscoelastic Versus Newtonian Behavior. Physical Review Letters, 2013, 110, 078305.	2.9	221
17	The Fate of Sulfur-Bound Hydrogen on Formation of Self-Assembled Thiol Monolayers on Gold: ¹ H NMR Spectroscopic Evidence from Solutions of Gold Clusters. Journal of the American Chemical Society, 2002, 124, 1132-1133.	6.6	190
18	Design of Polymeric Stabilizers for Size-Controlled Synthesis of Monodisperse Gold Nanoparticles in Water. Langmuir, 2007, 23, 885-895.	1.6	158

#	ARTICLE	IF	CITATIONS
19	Towards Multistep Nanostructure Synthesis: Programmed Enzymatic Self-Assembly of DNA/Gold Systems. <i>Angewandte Chemie - International Edition</i> , 2003, 42, 191-194.	7.2	157
20	Microarray-Based Detection of Protein Binding and Functionality by Gold Nanoparticle Probes. <i>Analytical Chemistry</i> , 2005, 77, 5770-5774.	3.2	155
21	Negotiation of Intracellular Membrane Barriers by TAT-Modified Gold Nanoparticles. <i>ACS Nano</i> , 2011, 5, 5195-5201.	7.3	139
22	Mercaptocarborane-Capped Gold Nanoparticles: Electron Pools and Ion Traps with Switchable Hydrophilicity. <i>Journal of the American Chemical Society</i> , 2012, 134, 212-221.	6.6	135
23	Self-Assembly of Photoluminescent Copper(I)-Dithiol Multilayer Thin Films and Bulk Materials. <i>Langmuir</i> , 1997, 13, 5602-5607.	1.6	132
24	Intracellular mapping with SERS-encoded gold nanostars. <i>Integrative Biology (United Kingdom)</i> , 2011, 3, 922.	0.6	127
25	Fabrication and Characterization of Self-Assembled Spherical Gold Ultramicroelectrodes. <i>Analytical Chemistry</i> , 1997, 69, 2323-2328.	3.2	125
26	Characterization and Surface Charge Measurement of Self-Assembled CdS Nanoparticle Films. <i>Chemistry of Materials</i> , 1998, 10, 1160-1165.	3.2	114
27	Electrochemical Charge Injection into Immobilized Nanosized Gold Particle Ensembles: A Potential Modulated Transmission and Reflectance Spectroscopy. <i>Langmuir</i> , 1999, 15, 866-871.	1.6	114
28	Cathepsin L Digestion of Nanobioconjugates upon Endocytosis. <i>ACS Nano</i> , 2009, 3, 2461-2468.	7.3	110
29	Formation of Spherical Nanostructures by the Controlled Aggregation of Gold Colloids. <i>Langmuir</i> , 2006, 22, 2938-2941.	1.6	108
30	The plasma protein fibrinogen stabilizes clusters of red blood cells in microcapillary flows. <i>Scientific Reports</i> , 2014, 4, 4348.	1.6	107
31	Fabrication of 2D Gold Nanowires by Self-Assembly of Gold Nanoparticles on Water Surfaces in the Presence of Surfactants. <i>Advanced Materials</i> , 2002, 14, 1126.	11.1	105
32	Nanometer Scale Patterning of Langmuir-Blodgett Films of Gold Nanoparticles by Electron Beam Lithography. <i>Nano Letters</i> , 2002, 2, 43-47.	4.5	104
33	C60 Mediated Aggregation of Gold Nanoparticles. <i>Journal of the American Chemical Society</i> , 1998, 120, 12367-12368.	6.6	102
34	The Peptide Route to Multifunctional Gold Nanoparticles. <i>Bioconjugate Chemistry</i> , 2005, 16, 497-500.	1.8	102
35	Singlet Oxygen Generation by Laser Irradiation of Gold Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2016, 120, 10647-10657.	1.5	101
36	Recyclable Molecular Trapping and SERS Detection in Silver-Loaded Agarose Gels with Dynamic Hot Spots. <i>Analytical Chemistry</i> , 2009, 81, 9233-9238.	3.2	99

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37	Inflicting Controlled Nonthermal Damage to Subcellular Structures by Laser-Activated Gold Nanoparticles. <i>Nano Letters</i> , 2010, 10, 4549-4554.	4.5	98
38	Nanostructured Cellular Networks. <i>Physical Review Letters</i> , 2002, 89, 248303.	2.9	90
39	Emulsion-Templated Gold Beads Using Gold Nanoparticles as Building Blocks. <i>Advanced Materials</i> , 2004, 16, 27-30.	11.1	90
40	Shaping Supramolecular Nanofibers with Nanoparticles Forming Complementary Hydrogen Bonds. <i>Angewandte Chemie - International Edition</i> , 2008, 47, 1861-1865.	7.2	82
41	Templated Gold Nanowire Self-Assembly on Carbon Substrates. <i>Advanced Materials</i> , 2001, 13, 1800-1803.	11.1	78
42	Preventing Plasmon Coupling between Gold Nanorods Improves the Sensitivity of Photoacoustic Detection of Labeled Stem Cells <i>in Vivo</i> . <i>ACS Nano</i> , 2016, 10, 7106-7116.	7.3	78
43	Langmuir-Blodgett Films of Alkane Chalcogenide (S,Se,Te) Stabilized Gold Nanoparticles. <i>Nano Letters</i> , 2001, 1, 189-191.	4.5	76
44	Molecular Recognition by Calix[4]arene-Modified Gold Nanoparticles in Aqueous Solution. <i>Angewandte Chemie - International Edition</i> , 2005, 44, 2913-2916.	7.2	76
45	A Multidentate Peptide for Stabilization and Facile Bioconjugation of Gold Nanoparticles. <i>Bioconjugate Chemistry</i> , 2009, 20, 619-624.	1.8	72
46	High-Resolution Sizing of Monolayer-Protected Gold Clusters by Differential Centrifugal Sedimentation. <i>ACS Nano</i> , 2013, 7, 8881-8890.	7.3	71
47	Atomic Force Microscope Tip Nanoprinting of Gold Nanoclusters. <i>Langmuir</i> , 2002, 18, 872-876.	1.6	67
48	Adaptive chemistry of bifunctional gold nanoparticles at the air/water interface. A synchrotron X-ray study of giant amphiphiles. <i>Faraday Discussions</i> , 2004, 125, 221-233.	1.6	65
49	Thiol-Specific and Nonspecific Interactions between DNA and Gold Nanoparticles. <i>Langmuir</i> , 2006, 22, 3294-3299.	1.6	65
50	A Generic Approach to Monofunctionalized Protein-Like Gold Nanoparticles Based on Immobilized Metal Ion Affinity Chromatography. <i>ChemBioChem</i> , 2006, 7, 592-594.	1.3	64
51	Controlled Step Growth of Molecularly Linked Gold Nanoparticles: From Metallic Monomers to Dimers to Polymeric Nanoparticle Chains. <i>Langmuir</i> , 2009, 25, 1934-1939.	1.6	60
52	Biocompatible gold nanoparticles. <i>Materials Science and Technology</i> , 2004, 20, 980-984.	0.8	56
53	Enzymatic Disassembly of DNA-Gold Nanostructures. <i>Small</i> , 2007, 3, 590-594.	5.2	55
54	Enzymatic DNA processing on gold nanoparticles. <i>Journal of Materials Chemistry</i> , 2004, 14, 578.	6.7	49

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55	Fundamental Sintering Studies of 2-Dimensional Gold Nanoparticle Arrays. <i>Microscopy and Microanalysis</i> , 2004, 10, 384-385.	0.2	49
56	Electrocatalytic Hydrogen Redox Chemistry on Gold Nanoparticles. <i>Journal of the American Chemical Society</i> , 2012, 134, 3318-3321.	6.6	49
57	Sensitive Analysis of Protein Adsorption to Colloidal Gold by Differential Centrifugal Sedimentation. <i>Analytical Chemistry</i> , 2017, 89, 6807-6814.	3.2	48
58	Site-Specific Ligation of DNA-Modified Gold Nanoparticles Activated by the Restriction Enzyme Styl. <i>Small</i> , 2007, 3, 67-70.	5.2	43
59	Ion Transport across Biological Membranes by Carborane-Capped Gold Nanoparticles. <i>ACS Nano</i> , 2017, 11, 12492-12499.	7.3	43
60	Coerced mechanical coarsening of nanoparticle assemblies. <i>Nature Nanotechnology</i> , 2007, 2, 167-170.	15.6	41
61	A Way To Control the Gold Nanocrystals Size: Using Seeds with Different Sizes and Subjecting Them to Mild Annealing. <i>ACS Nano</i> , 2009, 3, 3622-3628.	7.3	37
62	Spatial Analysis of Metal-PLGA Hybrid Microstructures Using 3D SERS Imaging. <i>Advanced Functional Materials</i> , 2017, 27, 1701626.	7.8	37
63	Structure and conductivity of self-assembled films of gold nanoparticles. <i>Applied Physics Letters</i> , 2006, 89, 063110.	1.5	36
64	Electron microscopy studies of the thermal stability of gold nanoparticle arrays. <i>Gold Bulletin</i> , 2009, 42, 133-143.	3.2	34
65	Towards Multistep Nanostructure Synthesis: Programmed Enzymatic Self-Assembly of DNA/Gold Systems. <i>Angewandte Chemie</i> , 2003, 115, 201-204.	1.6	33
66	Fabrication of nanostructure via self-assembly of nanowires within the AAO template. <i>Nanoscale Research Letters</i> , 2007, 2, 34-39.	3.1	33
67	In situ growth of gold nanoparticles on latent fingerprints" from forensic applications to inkjet printed nanoparticle patterns. <i>Nanoscale</i> , 2010, 2, 2575.	2.8	33
68	Conserved effects and altered trafficking of Cetuximab antibodies conjugated to gold nanoparticles with precise control of their number and orientation. <i>Nanoscale</i> , 2017, 9, 6111-6121.	2.8	33
69	Multimodal cell tracking from systemic administration to tumour growth by combining gold nanorods and reporter genes. <i>ELife</i> , 2018, 7, .	2.8	33
70	Deposition of passivated gold nanoclusters onto prepatterned substrates. <i>Applied Physics Letters</i> , 1999, 74, 2833-2835.	1.5	30
71	Biocompatible, Multiresponsive Nanogel Composites for Codelivery of Antiangiogenic and Chemotherapeutic Agents. <i>Chemistry of Materials</i> , 2017, 29, 2303-2313.	3.2	29
72	Nanocrystals come to order. <i>Nature Materials</i> , 2005, 4, 364-365.	13.3	26

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73	Preparation and characterization of Au nanoparticles capped with mercaptocarboranyl clusters. Dalton Transactions, 2014, 43, 5054-5061.	1.6	26
74	Synthesis of hierarchically porous inorganic-metal site-isolated nanocomposites. Chemical Communications, 2006, , 2539-2541.	2.2	25
75	Enzymatic Activity of Lipase-Nanoparticle Conjugates and the Digestion of Lipid Liquid Crystalline Assemblies. Langmuir, 2010, 26, 13590-13599.	1.6	25
76	In situ preparation of network forming gold nanoparticles in agarose hydrogels. Chemical Communications, 2009, , 6661.	2.2	22
77	Humidity-Dependent Reversible Transitions in Gold Nanoparticle Superlattices. Chemistry of Materials, 2016, 28, 2970-2980.	3.2	22
78	Colloidal particle foams: Templates for Au nanowire networks?. Applied Physics Letters, 2002, 81, 5039-5041.	1.5	19
79	STUDIES ON THE ATTACHMENT OF DNA TO SILICA-COATED NANOPARTICLES THROUGH A DIELS-ALDER REACTION. Nucleosides, Nucleotides and Nucleic Acids, 2005, 24, 1075-1079.	0.4	19
80	Emulsions-directed assembly of gold nanoparticles to molecularly-linked and size-controlled spherical aggregates. Journal of Colloid and Interface Science, 2010, 350, 368-372.	5.0	19
81	Acrylate-Facilitated Cellular Uptake of Gold Nanoparticles. Small, 2011, 7, 1982-1986.	5.2	17
82	Interactions of Gold Nanoparticles with a Phospholipid Monolayer Membrane on Mercury. ACS Nano, 2014, 8, 6074-6080.	7.3	17
83	Interaction of passivated clusters in solution with micro-patterned surfaces: guided flow versus defect pinning. Nanotechnology, 2001, 12, 6-10.	1.3	11
84	Detection of near-wall hydrodynamic effects by electrochemiluminescence. Journal of Electroanalytical Chemistry, 1999, 470, 89-94.	1.9	10
85	Design of artificial membrane transporters from gold nanoparticles with controllable hydrophobicity. Faraday Discussions, 2016, 191, 495-510.	1.6	10
86	Characterisation of thin films containing Au and Pd nanoparticles by grazing-incidence X-ray diffraction and related methods. Journal of Alloys and Compounds, 2001, 328, 248-252.	2.8	8
87	Monitoring pattern formation in drying and wetting dispersions of gold nanoparticles by ESEM. Faraday Discussions, 2015, 181, 281-298.	1.6	8
88	Anisotropic nanoparticles: general discussion. Faraday Discussions, 2016, 191, 229-254.	1.6	8
89	Conjugation of PEG and gold nanoparticles to increase the accessibility and valency of tethered RNA splicing enhancers. Chemical Science, 2013, 4, 257-265.	3.7	7
90	Preparation of thin ferrite films on silicon using RF sputtering. Physica Status Solidi (A) Applications and Materials Science, 2008, 205, 1783-1786.	0.8	6

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91	Electrodeposition of Gold Nanostructures at the Interface of a Pickering Emulsion. ChemElectroChem, 2018, 5, 2055-2058.	1.7	6
92	Polydisperse Au nanoclusters on silicon: fractal aggregates via spinodal decomposition?. Chemical Physics Letters, 2001, 348, 27-33.	1.2	5
93	Electrochemical fabrication of self assembled monolayer using ferrocene-functionalized gold nanoparticles on glassy carbon electrode. Electrochimica Acta, 2011, 56, 7092-7096.	2.6	5
94	Entropy-Driven Reversible Agglomeration of Crown Ether Capped Gold Nanoparticles. Chemistry - A European Journal, 2018, 24, 3151-3155.	1.7	5
95	Giant field effect in self-assembled metallo-organic nanoscale networks. Physical Review B, 2005, 72, .	1.1	4
96	Adoption of near-coincident-site lattice orientations by contacting monolayer rafts of metallic nanoparticles with different superlattice periodicities. Philosophical Magazine Letters, 2002, 82, 21-26.	0.5	3
97	Janus and patchy nanoparticles: general discussion. Faraday Discussions, 2016, 191, 117-139.	1.6	3
98	Monolayer Protected Clusters of Gold and Silver. , 0, , 96-119.		2
99	Selective enzymatic cleavage of gold nanoparticle-labelled DNA on a microarray. IET Nanobiotechnology, 2005, 152, 85.	2.1	2
100	Search for the optimally suited cantilever type for high-frequency MFM. Journal of Physics: Conference Series, 2007, 61, 596-600.	0.3	2
101	Site-Specific Modification of Gold Nanoparticles by Underpotential Deposition of Cadmium Atoms. ChemElectroChem, 2018, 5, 1586-1590.	1.7	2
102	Ion shuttling between emulsion droplets by crown ether modified gold nanoparticles. Nanoscale Advances, 2021, 3, 3136-3144.	2.2	2
103	Intracellular Delivery and Fate of Peptide-Capped Gold Nanoparticles. Biophysical Journal, 2010, 98, 203a.	0.2	1
104	Particles at interfaces: general discussion. Faraday Discussions, 2016, 191, 407-434.	1.6	1
105	Self-Assembly of Nanostructured Materials. , 1999, , .		1
106	Superlattices start taking shape. Physics World, 2003, 16, 21-21.	0.0	0
107	Journal developments for 2004. Journal of Materials Chemistry, 2004, 14, E1.	6.7	0
108	What are the Limitations in the Characterization of Self-Assembled Metamaterials using Advanced Microscopy Techniques?. Microscopy and Microanalysis, 2005, 11, .	0.2	0

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109	Synthesis of Porous Materials via Multiscale Templating Approaches: Emulsions, Nanoparticles, Supercritical Fluids, and Directional Freezing. Materials Research Society Symposia Proceedings, 2006, 988, 1.	0.1	0
110	Editorial. Advanced Drug Delivery Reviews, 2012, 64, 127-128.	6.6	0
111	Applications: general discussion. Faraday Discussions, 2016, 191, 565-595.	1.6	0
112	Templates for Metal Nanowire Self-Assembly. , 2002, , 139-146.		0
113	Imaging of Nanoscale Gold in "Intact" Biological Cells by Environmental Electron Microscopy. Journal of Physical Chemistry C, 2021, 125, 27865-27875.	1.5	0