

Mathias Brust

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110
papers

15,795
citations

52
h-index

123
g-index

123
ext. papers

16,550
ext. citations

9.5
avg, IF

6.2
L-index

#	Paper	IF	Citations
110	Synthesis of thiol-derivatised gold nanoparticles in a two-phase Liquid-Liquid system. <i>Journal of the Chemical Society Chemical Communications</i> , 1994 , 801-802		5396
109	Spontaneous ordering of bimodal ensembles of nanoscopic gold clusters. <i>Nature</i> , 1998 , 396, 444-446	50.4	649
108	Novel gold-dithiol nano-networks with non-metallic electronic properties. <i>Advanced Materials</i> , 1995 , 7, 795-797	24	641
107	Aligned two- and three-dimensional structures by directional freezing of polymers and nanoparticles. <i>Nature Materials</i> , 2005 , 4, 787-93	27	640
106	Rational and combinatorial design of peptide capping ligands for gold nanoparticles. <i>Journal of the American Chemical Society</i> , 2004 , 126, 10076-84	16.4	602
105	Uptake and intracellular fate of surface-modified gold nanoparticles. <i>ACS Nano</i> , 2008 , 2, 1639-44	16.7	560
104	Self-Assembled Gold Nanoparticle Thin Films with Nonmetallic Optical and Electronic Properties. <i>Langmuir</i> , 1998 , 14, 5425-5429	4	539
103	Some recent advances in nanostructure preparation from gold and silver particles: a short topical review. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2002 , 202, 175-186	5.1	514
102	Gold--an introductory perspective. <i>Chemical Society Reviews</i> , 2008 , 37, 1759-65	58.5	351
101	Size-controlled synthesis of near-monodisperse gold nanoparticles in the 1-4 nm range using polymeric stabilizers. <i>Journal of the American Chemical Society</i> , 2005 , 127, 16398-9	16.4	307
100	Kinase-catalyzed modification of gold nanoparticles: a new approach to colorimetric kinase activity screening. <i>Journal of the American Chemical Society</i> , 2006 , 128, 2214-5	16.4	252
99	Extremely Stable Water-Soluble Ag Nanoparticles. <i>Chemistry of Materials</i> , 2005 , 17, 4630-4635	9.6	224
98	Bionanoconjugation via click chemistry: The creation of functional hybrids of lipases and gold nanoparticles. <i>Bioconjugate Chemistry</i> , 2006 , 17, 1373-5	6.3	223
97	Thioalkylated tetraethylene glycol: a new ligand for water soluble monolayer protected gold clusters. <i>Chemical Communications</i> , 2002 , 2294-5	5.8	210
96	Preparation of Acrylate-Stabilized Gold and Silver Hydrosols and Gold-Polymer Composite Films. <i>Langmuir</i> , 2003 , 19, 4831-4835	4	207
95	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. <i>Journal of the American Chemical Society</i> , 2002 , 124, 1132-3	16.4	176
94	Rheology of human blood plasma: viscoelastic versus Newtonian behavior. <i>Physical Review Letters</i> , 2013 , 110, 078305	7.4	171

93	Design of polymeric stabilizers for size-controlled synthesis of monodisperse gold nanoparticles in water. <i>Langmuir</i> , 2007 , 23, 885-95	4	149
92	Microarray-based detection of protein binding and functionality by gold nanoparticle probes. <i>Analytical Chemistry</i> , 2005 , 77, 5770-4	7.8	146
91	Towards multistep nanostructure synthesis: programmed enzymatic self-assembly of DNA/gold systems. <i>Angewandte Chemie - International Edition</i> , 2003 , 42, 191-4	16.4	139
90	Negotiation of intracellular membrane barriers by TAT-modified gold nanoparticles. <i>ACS Nano</i> , 2011 , 5, 5195-201	16.7	131
89	Self-Assembly of Photoluminescent Copper(I)Dithiol Multilayer Thin Films and Bulk Materials. <i>Langmuir</i> , 1997 , 13, 5602-5607	4	122
88	Mercaptocarborane-capped gold nanoparticles: electron pools and ion traps with switchable hydrophilicity. <i>Journal of the American Chemical Society</i> , 2012 , 134, 212-21	16.4	117
87	Intracellular mapping with SERS-encoded gold nanostars. <i>Integrative Biology (United Kingdom)</i> , 2011 , 3, 922-6	3.7	116
86	Fabrication and characterization of self-assembled spherical gold ultramicroelectrodes. <i>Analytical Chemistry</i> , 1997 , 69, 2323-8	7.8	109
85	Cathepsin L digestion of nanobioconjugates upon endocytosis. <i>ACS Nano</i> , 2009 , 3, 2461-8	16.7	100
84	Formation of spherical nanostructures by the controlled aggregation of gold colloids. <i>Langmuir</i> , 2006 , 22, 2938-41	4	100
83	Characterization and Surface Charge Measurement of Self-Assembled CdS Nanoparticle Films. <i>Chemistry of Materials</i> , 1998 , 10, 1160-1165	9.6	99
82	Electrochemical Charge Injection into Immobilized Nanosized Gold Particle Ensembles: Potential Modulated Transmission and Reflectance Spectroscopy. <i>Langmuir</i> , 1999 , 15, 866-871	4	99
81	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	24	98
80	The peptide route to multifunctional gold nanoparticles. <i>Bioconjugate Chemistry</i> , 2005 , 16, 497-500	6.3	96
79	Nanometer Scale Patterning of Langmuir-Blodgett Films of Gold Nanoparticles by Electron Beam Lithography. <i>Nano Letters</i> , 2002 , 2, 43-47	11.5	94
78	Recyclable molecular trapping and SERS detection in silver-loaded agarose gels with dynamic hot spots. <i>Analytical Chemistry</i> , 2009 , 81, 9233-8	7.8	93
77	C60 Mediated Aggregation of Gold Nanoparticles. <i>Journal of the American Chemical Society</i> , 1998 , 120, 12367-12368	16.4	92
76	Inflicting controlled nonthermal damage to subcellular structures by laser-activated gold nanoparticles. <i>Nano Letters</i> , 2010 , 10, 4549-54	11.5	91

75	Emulsion-Templated Gold Beads Using Gold Nanoparticles as Building Blocks. <i>Advanced Materials</i> , 2004 , 16, 27-30	24	86
74	Nanostructured cellular networks. <i>Physical Review Letters</i> , 2002 , 89, 248303	7.4	86
73	The plasma protein fibrinogen stabilizes clusters of red blood cells in microcapillary flows. <i>Scientific Reports</i> , 2014 , 4, 4348	4.9	82
72	Shaping supramolecular nanofibers with nanoparticles forming complementary hydrogen bonds. <i>Angewandte Chemie - International Edition</i> , 2008 , 47, 1861-5	16.4	79
71	Molecular recognition by calix[4]arene-modified gold nanoparticles in aqueous solution. <i>Angewandte Chemie - International Edition</i> , 2005 , 44, 2913-6	16.4	72
70	Langmuir-Blodgett Films of Alkane Chalcogenide (S,Se,Te) Stabilized Gold Nanoparticles. <i>Nano Letters</i> , 2001 , 1, 189-191	11.5	72
69	Singlet Oxygen Generation by Laser Irradiation of Gold Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 10647-10657	3.8	71
68	A multidentate peptide for stabilization and facile bioconjugation of gold nanoparticles. <i>Bioconjugate Chemistry</i> , 2009 , 20, 619-24	6.3	67
67	Preventing Plasmon Coupling between Gold Nanorods Improves the Sensitivity of Photoacoustic Detection of Labeled Stem Cells in Vivo. <i>ACS Nano</i> , 2016 , 10, 7106-16	16.7	66
66	Atomic Force Microscope Tip Nanoprinting of Gold Nanoclusters. <i>Langmuir</i> , 2002 , 18, 872-876	4	64
65	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, 221-33; discussion 293-309	3.6	63
64	Templated Gold Nanowire Self-Assembly on Carbon Substrates. <i>Advanced Materials</i> , 2001 , 13, 1800-1803	4	63
63	A generic approach to monofunctionalized protein-like gold nanoparticles based on immobilized metal ion affinity chromatography. <i>ChemBioChem</i> , 2006 , 7, 592-4	3.8	61
62	High-resolution sizing of monolayer-protected gold clusters by differential centrifugal sedimentation. <i>ACS Nano</i> , 2013 , 7, 8881-90	16.7	60
61	Controlled step growth of molecularly linked gold nanoparticles: from metallic monomers to dimers to polymeric nanoparticle chains. <i>Langmuir</i> , 2009 , 25, 1934-9	4	59
60	Biocompatible gold nanoparticles. <i>Materials Science and Technology</i> , 2004 , 20, 980-984	1.5	56
59	Thiol-specific and nonspecific interactions between DNA and gold nanoparticles. <i>Langmuir</i> , 2006 , 22, 3294-9	4	55
58	Enzymatic disassembly of DNA-gold nanostructures. <i>Small</i> , 2007 , 3, 590-4	11	49

57	Fundamental Sintering Studies of 2-Dimensional Gold Nanoparticle Arrays. <i>Microscopy and Microanalysis</i> , 2004 , 10, 384-385	0.5	47
56	Electrocatalytic hydrogen redox chemistry on gold nanoparticles. <i>Journal of the American Chemical Society</i> , 2012 , 134, 3318-21	16.4	45
55	Enzymatic DNA processing on gold nanoparticles. <i>Journal of Materials Chemistry</i> , 2004 , 14, 578		45
54	Coerced mechanical coarsening of nanoparticle assemblies. <i>Nature Nanotechnology</i> , 2007 , 2, 167-70	28.7	38
53	Site-specific ligation of DNA-modified gold nanoparticles activated by the restriction enzyme Styl. <i>Small</i> , 2007 , 3, 67-70	11	37
52	Structure and conductivity of self-assembled films of gold nanoparticles. <i>Applied Physics Letters</i> , 2006 , 89, 063110	3.4	36
51	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, 3622-8	16.7	34
50	Ion Transport across Biological Membranes by Carborane-Capped Gold Nanoparticles. <i>ACS Nano</i> , 2017 , 11, 12492-12499	16.7	33
49	Sensitive Analysis of Protein Adsorption to Colloidal Gold by Differential Centrifugal Sedimentation. <i>Analytical Chemistry</i> , 2017 , 89, 6807-6814	7.8	32
48	In situ growth of gold nanoparticles on latent fingerprints-from forensic applications to inkjet printed nanoparticle patterns. <i>Nanoscale</i> , 2010 , 2, 2575-8	7.7	32
47	Electron microscopy studies of the thermal stability of gold nanoparticle arrays 2009 , 42, 133-143		30
46	Fabrication of nanostructure via self-assembly of nanowires within the AAO template. <i>Nanoscale Research Letters</i> , 2007 , 2, 34-39	5	29
45	Towards Multistep Nanostructure Synthesis: Programmed Enzymatic Self-Assembly of DNA/Gold Systems. <i>Angewandte Chemie</i> , 2003 , 115, 201-204	3.6	29
44	Spatial Analysis of Metal/PLGA Hybrid Microstructures Using 3D SERS Imaging. <i>Advanced Functional Materials</i> , 2017 , 27, 1701626	15.6	28
43	Deposition of passivated gold nanoclusters onto prepatterned substrates. <i>Applied Physics Letters</i> , 1999 , 74, 2833-2835	3.4	27
42	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	7.7	25
41	Synthesis of hierarchically porous inorganic-metal site-isolated nanocomposites. <i>Chemical Communications</i> , 2006 , 2539-41	5.8	25
40	Biocompatible, Multiresponsive Nanogel Composites for Codelivery of Antiangiogenic and Chemotherapeutic Agents. <i>Chemistry of Materials</i> , 2017 , 29, 2303-2313	9.6	24

39	Preparation and characterization of Au nanoparticles capped with mercaptocarboranyl clusters. <i>Dalton Transactions</i> , 2014 , 43, 5054-61	4.3	21
38	In situ preparation of network forming gold nanoparticles in agarose hydrogels. <i>Chemical Communications</i> , 2009 , 6661-3	5.8	21
37	Humidity-Dependent Reversible Transitions in Gold Nanoparticle Superlattices. <i>Chemistry of Materials</i> , 2016 , 28, 2970-2980	9.6	20
36	Multimodal cell tracking from systemic administration to tumour growth by combining gold nanorods and reporter genes. <i>ELife</i> , 2018 , 7,	8.9	20
35	Enzymatic activity of lipase-nanoparticle conjugates and the digestion of lipid liquid crystalline assemblies. <i>Langmuir</i> , 2010 , 26, 13590-9	4	18
34	Emulsions-directed assembly of gold nanoparticles to molecularly-linked and size-controlled spherical aggregates. <i>Journal of Colloid and Interface Science</i> , 2010 , 350, 368-72	9.3	18
33	Studies on the attachment of DNA to silica-coated nanoparticles through a Diels-Alder reaction. <i>Nucleosides, Nucleotides and Nucleic Acids</i> , 2005 , 24, 1075-9	1.4	18
32	Interactions of gold nanoparticles with a phospholipid monolayer membrane on mercury. <i>ACS Nano</i> , 2014 , 8, 6074-80	16.7	17
31	Acrylate-facilitated cellular uptake of gold nanoparticles. <i>Small</i> , 2011 , 7, 1982-6	11	15
30	Colloidal particle foams: Templates for Au nanowire networks?. <i>Applied Physics Letters</i> , 2002 , 81, 5039-5041	5.4	15
29	Shaping Supramolecular Nanofibers with Nanoparticles Forming Complementary Hydrogen Bonds. <i>Angewandte Chemie</i> , 2008 , 120, 1887-1891	3.6	14
28	Molecular Recognition by Calix[4]arene-Modified Gold Nanoparticles in Aqueous Solution. <i>Angewandte Chemie</i> , 2005 , 117, 2973-2976	3.6	12
27	Interaction of passivated clusters in solution with micro-patterned surfaces: guided flow versus defect pinning. <i>Nanotechnology</i> , 2001 , 12, 6-10	3.4	11
26	Design of artificial membrane transporters from gold nanoparticles with controllable hydrophobicity. <i>Faraday Discussions</i> , 2016 , 191, 495-510	3.6	9
25	Monitoring pattern formation in drying and wetting dispersions of gold nanoparticles by ESEM. <i>Faraday Discussions</i> , 2015 , 181, 281-98	3.6	8
24	Detection of near-wall hydrodynamic effects by electrochemiluminescence. <i>Journal of Electroanalytical Chemistry</i> , 1999 , 470, 89-94	4.1	8
23	Characterisation of thin films containing Au and Pd nanoparticles by grazing-incidence X-ray diffraction and related methods. <i>Journal of Alloys and Compounds</i> , 2001 , 328, 248-252	5.7	7
22	Conjugation of PEG and gold nanoparticles to increase the accessibility and valency of tethered RNA splicing enhancers. <i>Chemical Science</i> , 2013 , 4, 257-265	9.4	6

21	Entropy-Driven Reversible Agglomeration of Crown Ether Capped Gold Nanoparticles. <i>Chemistry - A European Journal</i> , 2018 , 24, 3151-3155	4.8	5
20	Preparation of thin ferrite films on silicon using RF sputtering. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2008 , 205, 1783-1786	1.6	5
19	Polydisperse Au nanoclusters on silicon: fractal aggregates via spinodal decomposition?. <i>Chemical Physics Letters</i> , 2001 , 348, 27-33	2.5	5
18	Anisotropic nanoparticles: general discussion. <i>Faraday Discussions</i> , 2016 , 191, 229-254	3.6	5
17	Electrodeposition of Gold Nanostructures at the Interface of a Pickering Emulsion. <i>ChemElectroChem</i> , 2018 , 5, 2055-2058	4.3	4
16	Electrochemical fabrication of self assembled monolayer using ferrocene-functionalized gold nanoparticles on glassy carbon electrode. <i>Electrochimica Acta</i> , 2011 , 56, 7092-7096	6.7	4
15	Giant field effect in self-assembled metallo-organic nanoscale networks. <i>Physical Review B</i> , 2005 , 72,	3.3	4
14	Janus and patchy nanoparticles: general discussion. <i>Faraday Discussions</i> , 2016 , 191, 117-139	3.6	3
13	Adoption of near-coincident-site lattice orientations by contacting monolayer rafts of metallic nanoparticles with different superlattice periodicities. <i>Philosophical Magazine Letters</i> , 2002 , 82, 21-26	1	3
12	Site-Specific Modification of Gold Nanoparticles by Underpotential Deposition of Cadmium Atoms. <i>ChemElectroChem</i> , 2018 , 5, 1586-1590	4.3	2
11	Search for the optimally suited cantilever type for high-frequency MFM. <i>Journal of Physics: Conference Series</i> , 2007 , 61, 596-600	0.3	2
10	Selective enzymatic cleavage of gold nanoparticle-labelled DNA on a microarray. <i>IET Nanobiotechnology</i> , 2005 , 152, 85-8		2
9	Monolayer Protected Clusters of Gold and Silver	96-119	2
8	Self-Assembly of Nanostructured Materials	1999,	1
7	Multimodal cell tracking from systemic administration to tumour growth by combining gold nanorods and reporter genes		1
6	Ion shuttling between emulsion droplets by crown ether modified gold nanoparticles. <i>Nanoscale Advances</i> , 2021 , 3, 3136-3144	5.1	1
5	Nanoparticle Assemblies and Superstructures. Herausgegeben von Nicholas A. Kotov.. <i>Angewandte Chemie</i> , 2006 , 118, 4507-4507	3.6	
4	Synthesis of Porous Materials via Multiscale Templating Approaches: Emulsions, Nanoparticles, Supercritical Fluids, and Directional Freezing. <i>Materials Research Society Symposia Proceedings</i> , 2006 , 988, 1		

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2 Applications: general discussion. *Faraday Discussions*, **2016**, 191, 565-595

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1 Imaging of Nanoscale Gold in Intact Biological Cells by Environmental Electron Microscopy.
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3.8