Arnout Imhof

List of Publications by Year
in descending order

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121 papers	9,738 citations	47006 47 h-index	36028 97 g-index
128 all docs	128 docs citations	128 times ranked	9875 citing authors

#	Article	IF	Citations
1	Ordered macroporous materials by emulsion templating. Nature, 1997, 389, 948-951.	27.8	1,116
2	A General Method To Coat Colloidal Particles with Silica. Langmuir, 2003, 19, 6693-6700.	3.5	1,087
3	Ionic colloidal crystals of oppositely charged particles. Nature, 2005, 437, 235-240.	27.8	902
4	Synthesis of Monodisperse, Rodlike Silica Colloids with Tunable Aspect Ratio. Journal of the American Chemical Society, 2011, 133, 2346-2349.	13.7	366
5	Preparation and Characterization of Titania-Coated Polystyrene Spheres and Hollow Titania Shells. Langmuir, 2001, 17, 3579-3585.	3.5	361
6	Synthesis of Monodisperse Colloidal Spheres, Capsules, and Microballoons by Emulsion Templating. Advanced Materials, 2005, 17, 924-928.	21.0	285
7	Entropy-driven formation of large icosahedral colloidal clusters by spherical confinement. Nature Materials, 2015, 14, 56-60.	27.5	237
8	Spectroscopy of Fluorescein (FITC) Dyed Colloidal Silica Spheres. Journal of Physical Chemistry B, 1999, 103, 1408-1415.	2.6	232
9	Experimental Phase Diagram of a Binary Colloidal Hard-Sphere Mixture with a Large Size Ratio. Physical Review Letters, 1995, 75, 1662-1665.	7.8	230
10	Uniform Macroporous Ceramics and Plastics by Emulsion Templating. Advanced Materials, 1998, 10, 697-700.	21.0	212
11	Strong effects of photonic band structures on the diffraction of colloidal crystals. Physical Review B, 1996, 53, 16231-16235.	3.2	191
12	Self-Assembly of Colloids with Liquid Protrusions. Journal of the American Chemical Society, 2009, 131, 1182-1186.	13.7	188
13	Large Dispersive Effects near the Band Edges of Photonic Crystals. Physical Review Letters, 1999, 83, 2942-2945.	7.8	150
14	Deformable Hollow Hybrid Silica/Siloxane Colloids by Emulsion Templating. Langmuir, 2006, 22, 4343-4352.	3.5	141
15	Phase behavior of colloidal silica rods. Faraday Discussions, 2012, 159, 181.	3.2	124
16	Photonic Crystals from Emulsion Templates. Advanced Materials, 2001, 13, 447-450.	21.0	118
17	Lane formation in driven mixtures of oppositely charged colloids. Soft Matter, 2011, 7, 2352.	2.7	115
18	Melting and crystallization of colloidal hard-sphere suspensions under shear. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 10564-10569.	7.1	113

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19	Switching plastic crystals of colloidal rods with electric fields. Nature Communications, 2014, 5, 3092.	12.8	103
20	Phase Behavior and Structure of a New Colloidal Model System of Bowl-Shaped Particles. Nano Letters, 2010, 10, 1907-1911.	9.1	95
21	Microradian X-ray diffraction in colloidal photonic crystals. Journal of Applied Crystallography, 2006, 39, 137-144.	4.5	94
22	Colloidal Analogues of Charged and Uncharged Polymer Chains with Tunable Stiffness. Angewandte Chemie - International Edition, 2012, 51, 11249-11253.	13.8	94
23	Directed Self-Assembly of Colloidal Dumbbells with an Electric Field. Langmuir, 2010, 26, 14466-14471.	3.5	92
24	Three-dimensional imaging of submicrometer colloidal particles in concentrated suspensions using confocal scanning laser microscopy. Langmuir, 1992, 8, 1514-1517.	3.5	89
25	A comparison between the longâ€time selfâ€diffusion and low shear viscosity of concentrated dispersions of charged colloidal silica spheres. Journal of Chemical Physics, 1994, 100, 2170-2181.	3.0	87
26	BaTiO₃, SrTiO₃, CaTiO₃, and Ba_xSr_{1â^'x}TiO₃ Particles: A General Approach for Monodisperse Colloidal Perovskites. Chemistry of Materials, 2009, 21, 3002-3007.	6.7	87
27	A General Method to Coat Colloidal Particles with Titania. Langmuir, 2010, 26, 9297-9303.	3.5	85
28	Synthesis of Monodisperse, Highly Cross-Linked, Fluorescent PMMA Particles by Dispersion Polymerization. Langmuir, 2012, 28, 6776-6785.	3.5	81
29	Time-resolved pulse propagation in a strongly scattering material. Physical Review E, 2003, 68, 016604.	2.1	80
30	Band Formation in Mixtures of Oppositely Charged Colloids Driven by an ac Electric Field. Physical Review Letters, 2011, 106, 228303.	7.8	74
31	Anisotropic colloids through non-trivial buckling. European Physical Journal E, 2008, 27, 13-20.	1.6	70
32	Long-time self-diffusion in binary colloidal hard-sphere dispersions. Physical Review E, 1995, 52, 6344-6357.	2.1	69
33	Stability of Nonaqueous Emulsions. Journal of Colloid and Interface Science, 1997, 192, 368-374.	9.4	69
34	Manipulating the self assembly of colloids in electric fields. European Physical Journal: Special Topics, 2013, 222, 2895-2909.	2.6	69
35	Oscillatory shear-induced 3D crystalline order in colloidal hard-sphere fluids. Soft Matter, 2012, 8, 6931.	2.7	64
36	Shear Melting of Colloidal Crystals of Charged Spheres Studied with Rheology and Polarizing Microscopy. Langmuir, 1994, 10, 3477-3484.	3.5	61

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37	Characterization of Photonic Colloidal Single Crystals by Microradian X-ray Diffraction. Advanced Materials, 2006, 18, 1662-1666.	21.0	61
38	Synthesis of Eccentric Titaniaâ"Silica Coreâ"Shell and Composite Particles. Chemistry of Materials, 2009, 21, 979-984.	6.7	61
39	Synthesis of Hollow Asymmetrical Silica Dumbbells with a Movable Inner Core. Langmuir, 2010, 26, 5208-5212.	3.5	59
40	Confocal microscopy of colloidal dispersions in shear flow using a counter-rotating coneâ€"plate shear cell. Journal of Physics Condensed Matter, 2004, 16, S3917-S3927.	1.8	55
41	Pores with Longitudinal Irregularities Distinguish Objects by Shape. ACS Nano, 2015, 9, 4390-4397.	14.6	55
42	Suppression of Thermally Excited Capillary Waves by Shear Flow. Physical Review Letters, 2006, 97, 038301.	7.8	54
43	Elastic properties of hollow colloidal particles. Physical Review E, 2008, 78, 051401.	2.1	54
44	Preparation of Titania Foams. Advanced Materials, 1999, 11, 311-314.	21.0	52
45	Synthesis of fluorescent monodisperse non-spherical dumbbell-like model colloids. Journal of Materials Chemistry, 2012, 22, 21893.	6.7	52
46	Surface morphology control of cross-linked polymer particles via dispersion polymerization. Soft Matter, 2015, 11, 3589-3598.	2.7	52
47	Encapsulation of emulsion droplets by organoâ€"silica shells. Journal of Colloid and Interface Science, 2007, 308, 121-129.	9.4	47
48	Tuning the mechanical properties of silica microcapsules. Physical Chemistry Chemical Physics, 2010, 12, 15392.	2.8	47
49	Colloidal Silica Rods: Material Properties and Fluorescent Labeling. Particle and Particle Systems Characterization, 2014, 31, 706-713.	2.3	43
50	Effect of external electric fields on the phase behavior of colloidal silica rods. Soft Matter, 2014, 10, 6249-6255.	2.7	42
51	Encapsulation of colorants by natural polymers for food applications. Coloration Technology, 2019, 135, 183-194.	1.5	42
52	Directed Orientation of Asymmetric Composite Dumbbells by Electric Field Induced Assembly. Langmuir, 2012, 28, 6546-6550.	3.5	40
53	Bonding Assembled Colloids without Loss of Colloidal Stability. Advanced Materials, 2012, 24, 412-416.	21.0	40
54	Colloidal Clusters by Using Emulsions and Dumbbellâ€Shaped Particles: Experiments and Simulations. Angewandte Chemie - International Edition, 2013, 52, 6709-6712.	13.8	39

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55	In situ hard X-ray microscopy of self-assembly in colloidal suspensions. RSC Advances, 2013, 3, 15670.	3.6	38
56	Biobased Nanoparticles for Broadband UV Protection with Photostabilized UV Filters. ACS Applied Materials & Interfaces, 2016, 8, 32655-32660.	8.0	38
57	Dynamics of colloidal crystals in shear flow. Soft Matter, 2009, 5, 1060.	2.7	37
58	Fabrication of Polyhedral Particles from Spherical Colloids and Their Selfâ€Assembly into Rotator Phases. Angewandte Chemie - International Edition, 2014, 53, 13830-13834.	13.8	36
59	Self-assembly of colloidal particles into strings in a homogeneous external electric or magnetic field. Journal of Physics Condensed Matter, 2012, 24, 464113.	1.8	35
60	An experimental and simulation study on the self-assembly of colloidal cubes in external electric fields. Soft Matter, 2014, 10, 9110-9119.	2.7	35
61	Impact of the electron beam on the thermal stability of gold nanorods studied by environmental transmission electron microscopy. Ultramicroscopy, 2018, 193, 97-103.	1.9	35
62	Quantum efficiencies of luminescent Eu3+ centers in CaO. Journal of Solid State Chemistry, 1992, 96, 311-317.	2.9	33
63	Confinement Induced Plastic Crystal-to-Crystal Transitions in Rodlike Particles with Long-Ranged Repulsion. Physical Review Letters, 2015, 115, 078301.	7.8	33
64	Electrophoresis of concentrated colloidal dispersions in low-polar solvents. Journal of Colloid and Interface Science, 2011, 361, 443-455.	9.4	32
65	Determination of the positions and orientations of concentrated rod-like colloids from 3D microscopy data. Journal of Physics Condensed Matter, 2015, 27, 194109.	1.8	32
66	Long-Ranged Oppositely Charged Interactions for Designing New Types of Colloidal Clusters. Physical Review X, 2015, 5, .	8.9	30
67	Nematic-isotropic spinodal decomposition kinetics of rodlike viruses. Physical Review E, 2006, 73, 011412.	2.1	29
68	A new parallel plate shear cell for in situ real-space measurements of complex fluids under shear flow. Review of Scientific Instruments, 2007, 78, 103902.	1.3	28
69	Experimental determination of the effective refractive index in strongly scattering media. Optics Communications, 2003, 220, 17-21.	2.1	27
70	Unloading and Reloading Colloidal Microcapsules with Apolar Solutions by Controlled and Reversible Buckling. Langmuir, 2014, 30, 2385-2393.	3.5	26
71	Direct Observation of the Formation of Liquid Protrusions on Polymer Colloids and their Coalescence. ACS Applied Materials & Interfaces, 2013, 5, 4277-4284.	8.0	25
72	Site-specific growth of polymers on silica rods. Soft Matter, 2014, 10, 9644-9650.	2.7	25

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73	Phase diagram of binary colloidal rod-sphere mixtures from a 3D real-space analysis of sedimentationâ€“diffusion equilibria. Soft Matter, 2016, 12, 9238-9245.	2.7	25
74	A qualitative confocal microscopy study on a range of colloidal processes by simulating microgravity conditions through slow rotations. Soft Matter, 2012, 8, 6979.	2.7	24
75	Kinetic pathways of the nematicâ€“isotropic phase transition as studied by confocal microscopy on rod-like viruses. Journal of Physics Condensed Matter, 2005, 17, S3609-S3618.	1.8	23
76	Seeded Growth of Titania Colloids with Refractive Index Tunability and Fluorophore-Free Luminescence. Langmuir, 2011, 27, 1626-1634.	3.5	23
77	Measuring colloidal forces from particle position deviations inside an optical trap. Soft Matter, 2011, 7, 3462.	2.7	23
78	Retention and remobilization of colloids during steady-state and transient two-phase flow. Water Resources Research, 2013, 49, 8005-8016.	4.2	22
79	Flow-induced particle migration in microchannels for improved microfiltration processes. Microfluidics and Nanofluidics, 2013, 15, 451-465.	2.2	22
80	Directed Self-Assembly of Micron-Sized Gold Nanoplatelets into Oriented Flexible Stacks with Tunable Interplate Distance. Nano Letters, 2015, 15, 5617-5623.	9.1	22
81	Dynamic Electric Field Alignment of Metalâ€“Organic Framework Microrods. Journal of the American Chemical Society, 2019, 141, 12989-12993.	13.7	20
82	Synthesis of Cone-Shaped Colloids from Rod-Like Silica Colloids with a Gradient in the Etching Rate. Langmuir, 2016, 32, 3970-3976.	3.5	19
83	Electric-Field-Induced Lock-and-Key Interactions between Colloidal Spheres and Bowls. Chemistry of Materials, 2016, 28, 1040-1048.	6.7	19
84	Yolk/Shell Colloidal Crystals Incorporating Movable Cores with Their Motion Controlled by an External Electric Field. Langmuir, 2017, 33, 296-302.	3.5	18
85	Fully Biobased Highly Transparent Nanopaper with UV-Blocking Functionality. ACS Applied Polymer Materials, 2019, 1, 641-646.	4.4	18
86	Uniform Macroporous Ceramics and Plastics by Emulsion Templating. Chemical Engineering and Technology, 1998, 21, 682-685.	1.5	17
87	Microelectrophoresis of Silica Rods Using Confocal Microscopy. Langmuir, 2017, 33, 881-890.	3.5	17
88	Sculpting Silica Colloids by Etching Particles with Nonuniform Compositions. Chemistry of Materials, 2017, 29, 3304-3313.	6.7	17
89	White zein colloidal particles: synthesis and characterization of their optical properties on the single particle level and in concentrated suspensions. Soft Matter, 2018, 14, 2870-2878.	2.7	17
90	Bulk Scale Synthesis of Monodisperse PDMS Droplets above 3 Î¼m and Their Encapsulation by Elastic Shells. Chemistry of Materials, 2015, 27, 1709-1719.	6.7	16

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91	Shaping Silica Rods by Tuning Hydrolysis and Condensation of Silica Precursors. Chemistry of Materials, 2019, 31, 521-531.	6.7	16
92	Phase separating colloid polymer mixtures in shear flow. Journal of Physics Condensed Matter, 2008, 20, 404208.	1.8	15
93	Study of colloids transport during two-phase flow using a novel polydimethylsiloxane micro-model. Journal of Colloid and Interface Science, 2013, 401, 141-147.	9.4	15
94	Compartmentalization of gold nanoparticle clusters in hollow silica spheres and their assembly induced by an external electric field. Journal of Colloid and Interface Science, 2020, 566, 202-210.	9.4	15
95	Novel Mini-Reactor of Silicone Oil Droplets for Synthesis of Morphology-Controlled Polymer Particles. Langmuir, 2012, 28, 17642-17646.	3.5	14
96	Size and Optically Tunable Ethyl Cellulose Nanoparticles as Carriers for Organic UV Filters. ChemNanoMat, 2018, 4, 301-308.	2.8	14
97	Photo-stability of lutein in surfactant-free lutein-zein composite colloidal particles. Food Chemistry: X, 2020, 5, 100071.	4.3	13
98	Selfâ€Organization of Anisotropic and Binary Colloids in Thermoâ€Switchable 1D Microconfinement. Particle and Particle Systems Characterization, 2015, 32, 313-320.	2.3	11
99	Propagation of Light in Disordered Semiconductor Materials. , 2001, , 447-473.		11
100	Orientation of a dielectric rod near a planar electrode. Physical Chemistry Chemical Physics, 2014, 16, 22575-22582.	2.8	10
101	Regiospecific Nucleation and Growth of Silane Coupling Agent Droplets onto Colloidal Particles. Journal of Physical Chemistry C, 2017, 121, 19989-19998.	3.1	10
102	Fully-biobased UV-absorbing nanoparticles from ethyl cellulose and zein for environmentally friendly photoprotection. RSC Advances, 2018, 8, 25104-25111.	3.6	10
103	Phase behaviour and long-time self-diffusion in a binary hard sphere dispersion. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1997, 122, 53-61.	4.7	9
104	Smectic Liquid Crystalline Titanium Dioxide Nanorods: Reducing Attractions by Optimizing Ligand Density. Advanced Functional Materials, 2020, 30, 2005491.	14.9	9
105	Nematic ordering of polarizable colloidal rods in an external electric field: theory and experiment. Physical Chemistry Chemical Physics, 2015, 17, 22423-22430.	2.8	8
106	Jammed elastic shells â€“ a 3D experimental soft frictionless granular system. Soft Matter, 2015, 11, 1800-1813.	2.7	7
107	Characterization of the Scattering and Absorption of Colored Zein Colloids in Optically Dense Dispersions. Langmuir, 2019, 35, 12091-12099.	3.5	7
108	Tunability of Interactions between the Core and Shell in Rattle-Type Particles Studied with Liquid-Cell Electron Microscopy. ACS Nano, 2021, 15, 11137-11149.	14.6	7

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109	Color-tunable particles through affinity interactions between water-insoluble protein and soluble dyes. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2019, 562, 154-160.	4.7	6
110	Synthesis and Characterization of Anatase TiO2 Nanorods: Insights from Nanorodsâ€™ Formation and Self-Assembly. Applied Sciences (Switzerland), 2022, 12, 1614.	2.5	6
111	Experimental Probes of the Optical Properties of Photonic Crystals. , 2001, , 191-218.		5
112	Random three-dimensional jammed packings of elastic shells acting as force sensors. Physical Review E, 2016, 93, 062901.	2.1	5
113	Seeded-Growth of Silica Rods from Silica-Coated Particles. Langmuir, 2019, 35, 14913-14919.	3.5	5
114	Three-Dimensional Photonic Crystals Made from Colloids. , 2004, , 423-454.		3
115	Lowâ€dose liquid cell electron microscopy investigation of the complex etching mechanism of rodâ€shaped silica colloids. Nano Select, 2021, 2, 313-327.	3.7	2
116	Influence of Optical Band Structures on the Diffraction of Photonic Colloidal Crystals. , 1996, , 107-118.		2
117	‹title›Ordered macroporous rutile titanium dioxide by emulsion templating‹/title›. , 2000, , .		1
118	A New Procedure for Measuring Particle Length using the Resistive Pulse Technique with Irregular Single Micropores. Biophysical Journal, 2016, 110, 506a-507a.	0.5	1
119	Macroporous Materials with Uniform Pores by Emulsion Templating. Materials Research Society Symposia Proceedings, 1997, 497, 167.	0.1	0
120	Pores with Undulating Opening Diameter can Determine Particles by Size and Shape. Biophysical Journal, 2015, 108, 329a.	0.5	0
121	Self-Assembly: Self-Organization of Anisotropic and Binary Colloids in Thermo-Switchable 1D Microconfinement (Part. Part. Syst. Charact. 3/2015). Particle and Particle Systems Characterization, 2015, 32, 270-270.	2.3	0