Peer Fischer

List of Publications by Year
in descending order

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139 papers	10,097 citations	76031 42 h-index	39744 98 g-index
148 all docs	148 docs citations	148 times ranked	10715 citing authors

#	Article	IF	Citations
1	Plasmonic Nanostructure Engineering with Shadow Growth. Advanced Materials, 2023, 35, e2107917.	11.1	12
2	Acoustic Micro-Manipulation and Its Biomedical Applications. Engineering, 2023, 24, 13-16.	3.2	1
3	Ultrasound-Responsive Systems as Components for Smart Materials. Chemical Reviews, 2022, 122, 5165-5208.	23.0	89
4	Magnetic Micro-/Nanopropellers for Biomedicine. , 2022, , 389-411.		3
5	Dynamic Ultrasound Projector Controlled by Light. Advanced Science, 2022, 9, e2104401.	5.6	8
6	Toward Maximally Electromagnetically Chiral Scatterers at Optical Frequencies. ACS Photonics, 2022, 9, 1954-1964.	3.2	4
7	Amplification of Acoustic Forces Using Microbubble Arrays Enables Manipulation of Centimeter-Scale Objects. Physical Review Letters, 2022, 128, .	2.9	10
8	Characterization of active matter in dense suspensions with heterodyne laser Doppler velocimetry. Colloid and Polymer Science, 2021, 299, 269-280.	1.0	7
9	Progress in robotics for combating infectious diseases. Science Robotics, 2021, 6, .	9.9	67
10	Tiny robots make big advances. Science Robotics, 2021, 6, .	9.9	12
11	Large Area Patterning of Nanoparticles and Nanostructures: Current Status and Future Prospects. ACS Nano, 2021, 15, 5861-5875.	7.3	46
12	Panoramic Imaging Assessment of Different Bladder Phantoms â€“ An Evaluation Study. Urology, 2021, 156, e103-e110.	0.5	2
13	Comment on â€œUsing NMR to Test Molecular Mobility during a Chemical Reactionâ€• Journal of Physical Chemistry Letters, 2021, 12, 5932-5937.	2.1	8
14	Light- and magnetically actuated FePt microswimmers. European Physical Journal E, 2021, 44, 74.	0.7	16
15	Dynamic Acoustic Levitator Based On Subwavelength Aperture Control. Advanced Science, 2021, 8, e2100888.	5.6	13
16	Combinatorial growth of multinary nanostructured thin functional films. Materials Today, 2021, 50, 89-99.	8.3	7
17	Optical Activity in Thirdâ€Harmonic Rayleigh Scattering: A New Route for Measuring Chirality. Laser and Photonics Reviews, 2021, 15, 2100235.	4.4	17
18	Comment on â€œBoosted molecular mobility during common chemical reactionsâ€• Science, 2021, 371, .	6.0	26

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19	Following Molecular Mobility during Chemical Reactions: No Evidence for Active Propulsion. Journal of the American Chemical Society, 2021, 143, 20884-20890.	6.6	13
20	Five years of Science Robotics. Science Robotics, 2021, 6, eabn2720.	9.9	2
21	A High-Fidelity Phantom for the Simulation and Quantitative Evaluation of Transurethral Resection of the Prostate. Annals of Biomedical Engineering, 2020, 48, 437-446.	1.3	25
22	Acoustic Holographic Cell Patterning in a Biocompatible Hydrogel. Advanced Materials, 2020, 32, e1904181.	11.1	127
23	Acoustofluidic Tweezers for the 3D Manipulation of Microparticles. , 2020, , .		3
24	A Hierarchical 3D TiO₂/Ni Nanostructure as an Efficient Holeâ€Extraction and Protection Layer for GaAs Photoanodes. ChemSusChem, 2020, 13, 6028-6036.	3.6	8
25	Molybdenum Disulfide: Scalable Fabrication of Molybdenum Disulfide Nanostructures and their Assembly (Adv. Mater. 43/2020). Advanced Materials, 2020, 32, 2070324.	11.1	1
26	Scalable Fabrication of Molybdenum Disulfide Nanostructures and their Assembly. Advanced Materials, 2020, 32, e2003439.	11.1	14
27	Microchannels with Self-Pumping Walls. ACS Nano, 2020, 14, 13673-13680.	7.3	26
28	Chiroptical spectroscopy of a freely diffusing single nanoparticle. Nature Communications, 2020, 11, 4513.	5.8	21
29	Spatial ultrasound modulation by digitally controlling microbubble arrays. Nature Communications, 2020, 11, 4537.	5.8	61
30	Biocompatible Magnetic Microâ€•and Nanodevices: Fabrication of FePt Nanopropellers and Cell Transfection. Advanced Materials, 2020, 32, e2001114.	11.1	86
31	Investigating photoresponsivity of graphene-silver hybrid nanomaterials in the ultraviolet. Journal of Chemical Physics, 2020, 152, 044709.	1.2	14
32	Vision Statement: Interactive Materialsâ€"Drivers of Future Robotic Systems. Advanced Materials, 2020, 32, e1905953.	11.1	10
33	Spectrally Selective and Highly Sensitive UV Photodetection with UVâ€A,C Band Specific Polarity Switching in Silver Plasmonic Nanoparticle Enhanced Gallium Oxide Thinâ€Film. Advanced Optical Materials, 2020, 8, 2000212.	3.6	35
34	Genetically Modified M13 Bacteriophage Nanonets for Enzyme Catalysis and Recovery. Catalysts, 2019, 9, 723.	1.6	3
35	Arrays of Plasmonic Nanoparticle Dimers with Defined Nanogap Spacers. ACS Nano, 2019, 13, 11453-11459.	7.3	38
36	Chemical Nanomotors at the Gram Scale Form a Dense Active Optorheological Medium. Advanced Materials, 2019, 31, e1807382.	11.1	27

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37	Lightâ€Controlled Micromotors and Soft Microrobots. Advanced Optical Materials, 2019, 7, 1900370.	3.6	91
38	Absolute diffusion measurements of active enzyme solutions by NMR. Journal of Chemical Physics, 2019, 150, 124201.	1.2	34
39	Self-Assembled Phage-Based Colloids for High Localized Enzymatic Activity. ACS Nano, 2019, 13, 5810-5815.	7.3	32
40	Soft Phantom for the Training of Renal Calculi Diagnostics and Lithotripsy. , 2019, 2019, 3716-3719.		6
41	A Magnetic Actuation System for the Active Microrheology in Soft Biomaterials. , 2019, , .		4
42	Soft Continuous Surface for Micromanipulation driven by Light-controlled Hydrogels. , 2019, , .		2
43	Acoustic Hologram Enhanced Phased Arrays for Ultrasonic Particle Manipulation. Physical Review Applied, 2019, 12, .	1.5	49
44	Photogravitactic Microswimmers. Advanced Functional Materials, 2018, 28, 1706660.	7.8	96
45	Grapheneâ€“silver hybrid devices for sensitive photodetection in the ultraviolet. Nanoscale, 2018, 10, 7685-7693.	2.8	32
46	The grand challenges of Science Robotics. Science Robotics, 2018, 3, .	9.9	787
47	Chiral Plasmonic Hydrogen Sensors. Small, 2018, 14, 1702990.	5.2	76
48	Acoustic Fabrication via the Assembly and Fusion of Particles. Advanced Materials, 2018, 30, 1704507.	11.1	103
49	Gait Learning for Soft Microrobots Controlled by Light Fields. , 2018, , .		10
50	Optical and Thermophoretic Control of Janus Nanopen Injection into Living Cells. Nano Letters, 2018, 18, 7935-7941.	4.5	54
51	Intelligent Nano/Micromotors: Using Free Energy To Fabricate Organized Systems Driven Far from Equilibrium. Accounts of Chemical Research, 2018, 51, 2979-2979.	7.6	18
52	Role of symmetry in driven propulsion at low Reynolds number. Physical Review E, 2018, 98, .	0.8	27
53	Chemical micromotors self-assemble and self-propel by spontaneous symmetry breaking. Chemical Communications, 2018, 54, 11933-11936.	2.2	44
54	A swarm of slippery micropropellers penetrates the vitreous body of the eye. Science Advances, 2018, 4, eaat4388.	4.7	402

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55	Soft Miniaturized Linear Actuators Wirelessly Powered by Rotating Permanent Magnets. , 2018, , .		6
56	Diffusion Measurements of Swimming Enzymes with Fluorescence Correlation Spectroscopy. Accounts of Chemical Research, 2018, 51, 1911-1920.	7.6	67
57	New materials for next-generation robots. Science Robotics, 2018, 3, .	9.9	14
58	A machine from machines. Nature Physics, 2018, 14, 1072-1073.	6.5	7
59	Chemotaxis of Active Janus Nanoparticles. Nano Letters, 2018, 18, 5345-5349.	4.5	83
60	Bioinspired microrobots. Nature Reviews Materials, 2018, 3, 113-124.	23.3	472
61	Uphill production of dihydrogen by enzymatic oxidation of glucose without an external energy source. Nature Communications, 2018, 9, 3229.	5.8	13
62	NANOSCALE ROBOTIC AGENTS IN BIOLOGICAL FLUIDS AND TISSUES. , 2018, , 19-42.		1
63	Strong Rotational Anisotropies Affect Nonlinear Chiral Metamaterials. Advanced Materials, 2017, 29, 1605110.	11.1	50
64	Akustische Hologramme steuern Partikel. Physik in Unserer Zeit, 2017, 48, 9-10.	0.0	0
65	On-chip enzymatic microbiofuel cell-powered integrated circuits. Lab on A Chip, 2017, 17, 1761-1768.	3.1	15
66	Nonâ€Equilibrium Assembly of Lightâ€Activated Colloidal Mixtures. Advanced Materials, 2017, 29, 1701328.	11.1	216
67	Nanodiamonds That Swim. Advanced Materials, 2017, 29, 1701024.	11.1	34
68	Micro- and nanorobots in Newtonian and biological viscoelastic fluids. , 2017, , 133-162.		7
69	Active Acoustic Surfaces Enable the Propulsion of a Wireless Robot. Advanced Materials Interfaces, 2017, 4, 1700933.	1.9	18
70	Corrosionâ€Protected Hybrid Nanoparticles. Advanced Science, 2017, 4, 1700234.	5.6	20
71	Pattern formation and collective effects in populations of magnetic microswimmers. Journal Physics D: Applied Physics, 2017, 50, 11LT03.	1.3	34
72	Nanodiamonds: Nanodiamonds That Swim (Adv. Mater. 30/2017). Advanced Materials, 2017, 29, .	11.1	2

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73	Wireless Acoustic-Surface Actuators for Miniaturized Endoscopes. ACS Applied Materials & Interfaces, 2017, 9, 42536-42543.	4.0	21
74	Soft 3D-Printed Phantom of the Human Kidney with Collecting System. Annals of Biomedical Engineering, 2017, 45, 963-972.	1.3	127
75	Locomotion of light-driven soft microrobots through a hydrogel via local melting. , 2017, , .		3
76	Active colloidal propulsion over a crystalline surface. New Journal of Physics, 2017, 19, 125010.	1.2	29
77	Acoustic Surfaces: Active Acoustic Surfaces Enable the Propulsion of a Wireless Robot (Adv. Mater.) Tj ETQq1 1 0.784314 rgBT /Overl	1.9	0
78	Hybrid Nanoparticles: Corrosionâ€Protected Hybrid Nanoparticles (Adv. Sci. 12/2017). Advanced Science, 2017, 4, 1770059.	5.6	0
79	Active Nanorheology with Plasmonics. Nano Letters, 2016, 16, 4887-4894.	4.5	57
80	A loop-gap resonator for chirality-sensitive nuclear magneto-electric resonance (NMER). Journal of Chemical Physics, 2016, 145, 104201.	1.2	6
81	Science for robotics and robotics for science. Science Robotics, 2016, 1, .	9.9	27
82	Towards photo-induced swimming: actuation of liquid crystalline elastomer in water. Proceedings of SPIE, 2016, , .	0.8	1
83	Dispersion and shape engineered plasmonic nanosensors. Nature Communications, 2016, 7, 11331.	5.8	154
84	Magnesium plasmonics for UV applications and chiral sensing. Chemical Communications, 2016, 52, 12179-12182.	2.2	72
85	Wireless actuator based on ultrasonic bubble streaming. , 2016, , .		1
86	Holograms for acoustics. Nature, 2016, 537, 518-522.	13.7	571
87	Capture of 2D Microparticle Arrays via a UVâ€Triggered Thiolâ€yne â€œClickâ€•Reaction. Advanced Materials, 2016, 28, 9846-9850.	11.1	20
88	Nanomotors. European Physical Journal: Special Topics, 2016, 225, 2241-2254.	1.2	17
89	Soft continuous microrobots with multiple intrinsic degrees of freedom. , 2016, , .		2
90	Auxetic metamaterial simplifies soft robot design. , 2016, , .		39

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91	Structured light enables biomimetic swimming and versatile locomotion of photoresponsive softÂmicrorobots. Nature Materials, 2016, 15, 647-653.	13.3	757
92	Magnetic Propulsion of Microswimmers with DNA-Based Flagellar Bundles. Nano Letters, 2016, 16, 906-910.	4.5	122
93	Frontispiece: Dynamic Inclusion Complexes of Metal Nanoparticles Inside Nanocups. Angewandte Chemie - International Edition, 2015, 54, .	7.2	0
94	Selectable Nanopattern Arrays for Nanolithographic Imprint and Etchâ€Mask Applications. Advanced Science, 2015, 2, 1500016.	5.6	14
95	Enzymatically active biomimetic micropropellers for the penetration of mucin gels. Science Advances, 2015, 1, e1500501.	4.7	254
96	3D-printed soft microrobot for swimming in biological fluids. , 2015, 2015, 4922-5.		2
97	Surface roughness-induced speed increase for active Janus micromotors. Chemical Communications, 2015, 51, 8660-8663.	2.2	68
98	Dynamic Inclusion Complexes of Metal Nanoparticles Inside Nanocups. Angewandte Chemie - International Edition, 2015, 54, 6730-6734.	7.2	15
99	Shape control in wafer-based aperiodic 3D nanostructures. Nanotechnology, 2014, 25, 235302.	1.3	15
100	Active microrheology of the vitreous of the eye applied to nanorobot propulsion. , 2014, , .		8
101	Swimming by reciprocal motion at low Reynolds number. Nature Communications, 2014, 5, 5119.	5.8	349
102	3D nanofabrication on complex seed shapes using glancing angle deposition. , 2014, , .		2
103	From Nanohelices to Magnetically Actuated Microdrills: A Universal Platform for Some of the Smallest Untethered Microrobotic Systems for Low Reynolds Number and Biological Environments. Lecture Notes in Computer Science, 2014, , 53-65.	1.0	1
104	Swelling and shrinking behaviour of photoresponsive phosphonium-based ionogel microstructures. Sensors and Actuators B: Chemical, 2014, 194, 105-113.	4.0	38
105	Chiral Nanomagnets. ACS Photonics, 2014, 1, 1231-1236.	3.2	70
106	Nanohelices by shadow growth. Nanoscale, 2014, 6, 9457-9466.	2.8	105
107	Self-Propelling Nanomotors in the Presence of Strong Brownian Forces. Nano Letters, 2014, 14, 2407-2412.	4.5	257
108	Nanopropellers and Their Actuation in Complex Viscoelastic Media. ACS Nano, 2014, 8, 8794-8801.	7.3	286

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109	Wireless powering of e -swimmers. Scientific Reports, 2014, 4, 6705.	1.6	50
110	Chiral Colloidal Molecules And Observation of The Propeller Effect. Journal of the American Chemical Society, 2013, 135, 12353-12359.	6.6	107
111	Hybrid nanocolloids with programmed three-dimensional shape and material composition. Nature Materials, 2013, 12, 802-807.	13.3	432
112	Indirect absorption spectroscopy using quantum cascade lasers: mid-infrared refractometry and photothermal spectroscopy. Optics Express, 2013, 21, 25643.	1.7	16
113	Fourier-transform photocurrent spectroscopy using a supercontinuum light source. Applied Physics Letters, 2012, 100, 061108.	1.5	5
114	Eine neue Form von Cavity Enhanced Absorption Spectroscopy. TM Technisches Messen, 2012, 79, 10-16.	0.3	0
115	Magnetically actuated propulsion at low Reynolds numbers: towards nanoscale control. Nanoscale, 2011, 3, 557-563.	2.8	250
116	Quantum-Cascade Laser-Based Vibrational Circular Dichroism. Journal of the American Chemical Society, 2011, 133, 5704-5707.	6.6	41
117	Actively coupled cavity ringdown spectroscopy with low-power broadband sources. Optics Express, 2011, 19, 10164.	1.7	6
118	Weak value amplified optical activity measurements. Optics Express, 2011, 19, 16508.	1.7	66
119	Absolute Asymmetric Reduction Based on the Relative Orientation of Achiral Reactants. Angewandte Chemie - International Edition, 2009, 48, 6857-6860.	7.2	37
120	Controlled Propulsion of Artificial Magnetic Nanostructured Propellers. Nano Letters, 2009, 9, 2243-2245.	4.5	1,118
121	Optical Activity at Interfaces. , 2009, , .		0
122	Chen, Fischer, and Wise Reply:. Physical Review Letters, 2007, 98, .	2.9	7
123	Observation of the Faraday effect via beam deflection in a longitudinal magnetic field. Physical Review A, 2007, 76, .	1.0	21
124	Circular differential double diffraction in chiral media. Optics Letters, 2007, 32, 1836.	1.7	14
125	Frequency-domain displacement sensing with a fiber ring-resonator containing a variable gap. Sensors and Actuators A: Physical, 2007, 134, 410-413.	2.0	10
126	Ring-resonator-based frequency-domain optical activity measurements of a chiral liquid. Optics Letters, 2006, 31, 453.	1.7	15

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127	Sign of the refractive index in a gain medium with negative permittivity and permeability. Journal of the Optical Society of America B: Optical Physics, 2006, 23, 45.	0.9	21
128	Chen, Fischer, and Wise Reply:. Physical Review Letters, 2006, 96, .	2.9	7
129	Chiral Molecules Split Light: Reflection and Refraction in a Chiral Liquid. Physical Review Letters, 2006, 97, 173002.	2.9	83
130	Nonlinear Optical Properties of Chiral Liquids. Challenges and Advances in Computational Chemistry and Physics, 2006, , 359-381.	0.6	1
131	Nonlinear optical spectroscopy of chiral molecules. Chirality, 2005, 17, 421-437.	1.3	213
132	Negative Refraction at Optical Frequencies in Nonmagnetic Two-Component Molecular Media. Physical Review Letters, 2005, 95, 067402.	2.9	65
133	Chirality-Specific Nonlinear Spectroscopies in Isotropic Media. Bulletin of the Chemical Society of Japan, 2002, 75, 1119-1124.	2.0	6
134	Optical Response of a Chiral Liquid. ACS Symposium Series, 2002, , 119-129.	0.5	4
135	Sum-Frequency Generation at Second Order in Isotropic Chiral Systems: The Microscopic View and the Surprising Fragility of the Signal. ACS Symposium Series, 2002, , 130-144.	0.5	1
136	Isotropic second-order nonlinear optical susceptibilities. Physical Review A, 2001, 64, .	1.0	33
137	Ab initio investigation of the sum-frequency hyperpolarizability of small chiral molecules. Chemical Physics Letters, 2000, 331, 83-88.	1.2	36
138	Three-Wave Mixing in Chiral Liquids. Physical Review Letters, 2000, 85, 4253-4256.	2.9	115
139	Diffusion mechanisms of DNA in agarose gels - NMR Studies and Monte Carlo Simulations. Journal of Chemical Physics, 0, , .	1.2	1