Stephan Handschuh-Wang

List of Publications by Year
in descending order

72 papers	3,367 citations	172207 29 h-index	149479 56 g-index
77 all docs	77 docs citations	77 times ranked	3374 citing authors

#	Article	IF	Citations
1	Rational Fabrication of Antiâ€Freezing, Nonâ€Drying Tough Organohydrogels by Oneâ€Pot Solvent Displacement. Angewandte Chemie - International Edition, 2018, 57, 6568-6571.	7.2	341
2	Biomimetic anti-freezing polymeric hydrogels: keeping soft-wet materials active in cold environments. Materials Horizons, 2021, 8, 351-369.	6.4	250
3	Liquid Metalâ€Based Transient Circuits for Flexible and Recyclable Electronics. Advanced Functional Materials, 2019, 29, 1808739.	7.8	223
4	Recent progress in fabrication and application of polydimethylsiloxane sponges. Journal of Materials Chemistry A, 2017, 5, 16467-16497.	5.2	207
5	Liquid Metalâ€“Based Soft Microfluidics. Small, 2020, 16, e1903841.	5.2	146
6	Liquid metal sponges for mechanically durable, all-soft, electrical conductors. Journal of Materials Chemistry C, 2017, 5, 1586-1590.	2.7	136
7	Lightâ€Induced Shape Morphing of Liquid Metal Nanodroplets Enabled by Polydopamine Coating. Small, 2019, 15, e1804838.	5.2	102
8	Enzyme Degradable Polymersomes from Hyaluronic Acid-block-poly(Îµ-caprolactone) Copolymers for the Detection of Enzymes of Pathogenic Bacteria. Biomacromolecules, 2015, 16, 832-841.	2.6	100
9	Liquid metal droplets with high elasticity, mobility and mechanical robustness. Materials Horizons, 2017, 4, 591-597.	6.4	100
10	Rational Fabrication of Antiâ€Freezing, Nonâ€Drying Tough Organohydrogels by Oneâ€Pot Solvent Displacement. Angewandte Chemie, 2018, 130, 6678-6681.	1.6	96
11	Robust Biomimetic Hierarchical Diamond Architecture with a Self-Cleaning, Antibacterial, and Antibiofouling Surface. ACS Applied Materials & Interfaces, 2020, 12, 24432-24441.	4.0	95
12	Robust Fabrication of Nonstick, Noncorrosive, Conductive Grapheneâ€Coated Liquid Metal Droplets for Dropletâ€Based, Floating Electrodes. Advanced Functional Materials, 2018, 28, 1706277.	7.8	93
13	Biomimetic Extremeâ€Temperatureâ€and Environmentâ€Adaptable Hydrogels. ChemPhysChem, 2019, 20, 2139-2154.	1.0	86
14	Critical Review on the Physical Properties of Gallium-Based Liquid Metals and Selected Pathways for Their Alteration. Journal of Physical Chemistry C, 2021, 125, 20113-20142.	1.5	76
15	Analysis and Transformations of Roomâ€Temperature Liquid Metal Interfaces â€“ A Closer Look through Interfacial Tension. ChemPhysChem, 2018, 19, 1584-1592.	1.0	68
16	Surface Tension of the Oxide Skin of Gallium-Based Liquid Metals. Langmuir, 2021, 37, 9017-9025.	1.6	65
17	Ultrathin Diamond Nanofilmsâ€”Development, Challenges, and Applications. Small, 2021, 17, e2007529.	5.2	61
18	Surface Nanobubbles Studied by Time-Resolved Fluorescence Microscopy Methods Combined with AFM: The Impact of Surface Treatment on Nanobubble Nucleation. Langmuir, 2016, 32, 11155-11163.	1.6	54

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19	Hydrophilic Sponges for Leafâ€Inspired Continuous Pumping of Liquids. Advanced Science, 2017, 4, 1700028.	5.6	54
20	Anisotropic liquid metalâ€“elastomer composites. Journal of Materials Chemistry C, 2019, 7, 10166-10172.	2.7	53
21	â€œFreezingâ€, morphing, and folding of stretchy tough hydrogels. Journal of Materials Chemistry B, 2017, 5, 5726-5732.	2.9	51
22	Defect-free, high resolution patterning of liquid metals using reversibly sealed, reusable polydimethylsiloxane microchannels for flexible electronic applications. Journal of Materials Chemistry C, 2017, 5, 6790-6797.	2.7	47
23	Electric Actuation of Liquid Metal Droplets in Acidified Aqueous Electrolyte. Langmuir, 2019, 35, 372-381.	1.6	43
24	Recyclable, weldable, mechanically durable, and programmable liquid metal-elastomer composites. Journal of Materials Chemistry A, 2021, 9, 10953-10965.	5.2	42
25	Tough protein organohydrogels. Journal of Materials Chemistry B, 2018, 6, 7366-7372.	2.9	40
26	Softening and Shape Morphing of Stiff Tough Hydrogels by Localized Unlocking of the Trivalent Ionically Crossâ€Linked Centers. Macromolecular Rapid Communications, 2018, 39, e1800143.	2.0	38
27	Robust, multiscale liquid-metal patterning enabled by a sacrificial sealing layer for flexible and wearable wireless powering. Journal of Materials Chemistry C, 2019, 7, 15243-15251.	2.7	37
28	Liquid Metalâ€“Mediated Mechanochemical Polymerization. Macromolecular Rapid Communications, 2019, 40, e1900537.	2.0	35
29	Hierarchical Micro/Nanostructured Diamond Gradient Surface for Controlled Water Transport and Fog Collection. Advanced Materials Interfaces, 2021, 8, 2100196.	1.9	33
30	Liquid metal droplets enabled soft robots. Applied Materials Today, 2022, 27, 101423.	2.3	31
31	Controlled Surface Chemistry of Diamond/Î²-SiC Composite Films for Preferential Protein Adsorption. Langmuir, 2014, 30, 1089-1099.	1.6	30
32	Enhancing the colloidal stability of detonation synthesized diamond particles in aqueous solutions by adsorbing organic mono-, bi- and tridentate molecules. Journal of Colloid and Interface Science, 2017, 499, 102-109.	5.0	29
33	Corrosion-Resistant Functional Diamond Coatings for Reliable Interfacing of Liquid Metals with Solid Metals. ACS Applied Materials & Interfaces, 2020, 12, 40891-40900.	4.0	28
34	Interfacing of surfaces with gallium-based liquid metals â€“ approaches for mitigation and augmentation of liquid metal adhesion on surfaces. Applied Materials Today, 2020, 21, 100868.	2.3	27
35	The Effect of Size and Geometry of Poly(acrylamide) Brush-Based Micropatterns on the Behavior of Cells. ACS Applied Materials & Interfaces, 2016, 8, 23591-23603.	4.0	26
36	Enhanced nucleation of diamond on three dimensional tools via stabilized colloidal nanodiamond in electrostatic self-assembly seeding process. Journal of Colloid and Interface Science, 2017, 506, 543-552.	5.0	25

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37	Recent advances in hybrid measurement methods based on atomic force microscopy and surface sensitive measurement techniques. RSC Advances, 2017, 7, 47464-47499.	1.7	22
38	TiB2 barrier interlayer approach for HFCVD diamond deposition onto cemented carbide tools. Diamond and Related Materials, 2018, 83, 126-133.	1.8	21
39	Multimodal microscopy-based identification of surface nanobubbles. Journal of Colloid and Interface Science, 2019, 547, 162-170.	5.0	21
40	Bacterial Enzyme Responsive Polymersomes: A Closer Look at the Degradation Mechanism of PEG-block-PLA Vesicles. Australian Journal of Chemistry, 2014, 67, 578.	0.5	19
41	Thickness-Encoded Micropatterns in One-Component Thermoresponsive Polymer Brushes for Culture and Triggered Release of Pancreatic Tumor Cell Monolayers and Spheroids. Langmuir, 2018, 34, 14670-14677.	1.6	18
42	Adherent and low friction nanocrystalline diamond films via adsorbing organic molecules in self-assembly seeding process. Applied Surface Science, 2018, 456, 75-82.	3.1	18
43	Fluorimetric Detection of G-Quadruplex DNA in Solution and Adsorbed on Surfaces with a Selective Trinuclear Cyanine Dye. Langmuir, 2018, 34, 11866-11877.	1.6	17
44	Controlling Directional Liquid Motion on Micro- and Nanocrystalline Diamond/Î²-SiC Composite Gradient Films. Langmuir, 2018, 34, 1419-1428.	1.6	16
45	Bioinspired Tough Organohydrogel Dynamic Interfaces Enabled Subzero Temperature Antifrosting, Deicing, and Antiadhesion. ACS Applied Materials & Interfaces, 2020, 12, 55501-55509.	4.0	16
46	On the Interaction of Surfactants with Galliumâ€Based Liquid Metals. ChemistrySelect, 2021, 6, 10625-10636.	0.7	16
47	Amphiphilic Block Copolymer Vesicles for Active Wound Dressings: Synthesis of Model Systems and Studies of Encapsulation and Release. Macromolecular Symposia, 2013, 328, 73-79.	0.4	15
48	Detailed Study of BSA Adsorption on Micro- and Nanocrystalline Diamond/Î²-SiC Composite Gradient Films by Time-Resolved Fluorescence Microscopy. Langmuir, 2017, 33, 802-813.	1.6	15
49	Polydimethylsiloxane/Nanodiamond Composite Sponge for Enhanced Mechanical or Wettability Performance. Polymers, 2019, 11, 948.	2.0	15
50	Unraveling the nanomechanical properties of surface-grafted conjugated polymer brushes with ladder-like architecture. Polymer Chemistry, 2020, 11, 7050-7062.	1.9	14
51	Is There a Relationship between Surface Wettability of Structured Surfaces and Lyophobicity toward Liquid Metals?. Materials, 2020, 13, 2283.	1.3	14
52	Giant Biodegradable Poly(ethylene glycol)â€blockâ€Poly(Îµâ€caprolactone) Polymersomes by Electroformation. Macromolecular Bioscience, 2020, 20, e2000014.	2.1	12
53	Highly stable N-containing polymer-based Fe/Nx/C electrocatalyst for alkaline anion exchange membrane fuel cell applications. Progress in Natural Science: Materials International, 2022, 32, 27-33.	1.8	11
54	Self-Healable and Recyclable Dual-Shape Memory Liquid Metalâ€“Elastomer Composites. Polymers, 2022, 14, 2259.	2.0	10

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55	Determination of the Wall Thickness of Block Copolymer Vesicles by Fluorescence Lifetime Imaging Microscopy. Macromolecular Chemistry and Physics, 2017, 218, 1600454.	1.1	9
56	Bioinspired, Mechanoâ€Regulated Interfaces for Rationally Designed, Dynamically Controlled Collection of Oil Spills from Water. Global Challenges, 2017, 1, 1600014.	1.8	8
57	Siteâ€Specific Oxidationâ€Induced Stiffening and Shape Morphing of Soft Tough Hydrogels. Macromolecular Materials and Engineering, 2019, 304, 1800589.	1.7	8
58	LeitfÃhig und verformbar â€“ FlÃ¼ssigmetalle. Nachrichten Aus Der Chemie, 2021, 69, 69-72.	0.0	8
59	Impact of substrate temperature on the structure and electrical performance of vacuum-deposited Î±,Î±â€²-DH5T oligothiophene thin films. RSC Advances, 2016, 6, 115085-115091.	1.7	7
60	Rapid synthesis and growth process deconvolution of Au nanoflowers with ultrahigh catalytic activity based on microfluidics. Journal of Materials Science, 2021, 56, 6315-6326.	1.7	7
61	Multiple interval thixotropic test (miTT)â€”an advanced tool for the rheological characterization of emulsions and other colloidal systems. Rheologica Acta, 2022, 61, 229-242.	1.1	5
62	Analysis and Transformations of Roomâ€Temperature Liquid Metal Interfaces â€“ A Closer Look through Interfacial Tension. ChemPhysChem, 2018, 19, 1551-1551.	1.0	4
63	Superoleophilic-Hydrophobic Kapok Oil Sorbents via Energy Efficient Carbonization. Journal of Natural Fibers, 2022, 19, 12398-12414.	1.7	4
64	Facile synthesis of hierarchical Co3O4/MWCNT composites with enhanced acetone sensing property. Ceramics International, 2022, 48, 28419-28427.	2.3	4
65	Anti-Freezing, Non-Drying, Localized Stiffening, and Shape-Morphing Organohydrogels. Gels, 2022, 8, 331.	2.1	3
66	Fluorescence lifetime-based sensing of polymersome leakage. Photochemical and Photobiological Sciences, 2017, 16, 155-158.	1.6	2
67	Phase Transitions and Formation of a Monolayer-Type Structure in Thin Oligothiophene Films: Exploration with a Combined In Situ X-ray Diffraction and Electrical Measurements. Nanoscale Research Letters, 2019, 14, 185.	3.1	2
68	Liquid Metal Superelastic Fiber Mat Enabling Highly Permeable Wearable Electronics Toward Comfortable e-Skins. Chemical Research in Chinese Universities, 2021, 37, 615-616.	1.3	2
69	Elastic Sponges: Hydrophilic Sponges for Leafâ€Inspired Continuous Pumping of Liquids (Adv. Sci. 6/2017). Advanced Science, 2017, 4, .	5.6	1
70	Liquid Metal Nanodroplets: Light-Induced Shape Morphing of Liquid Metal Nanodroplets Enabled by Polydopamine Coating (Small 9/2019). Small, 2019, 15, 1970047.	5.2	0
71	Enhanced Diamond Nucleation on Cemented Carbide Cutting Tools by Employing Electrostatic Self-Assembly Seeding. , 2016, , .		0
72	Hemorrhagic esophagitis caused by chewing areca nut. International Journal of Surgery and Medicine, 2020, , 1.	0.1	0