Sarah KÃ¶ster

List of Publications by Year
in descending order

98 papers	5,088 citations	136950 32 h-index	95266 68 g-index
107 all docs	107 docs citations	107 times ranked	5826 citing authors

#	Article	IF	Citations
1	Droplet-Based Microfluidic Platforms for the Encapsulation and Screening of Mammalian Cells and Multicellular Organisms. Chemistry and Biology, 2008, 15, 427-437.	6.0	620
2	Biocompatible surfactants for water-in-fluorocarbon emulsions. Lab on A Chip, 2008, 8, 1632.	6.0	589
3	Drop-based microfluidic devices for encapsulation of single cells. Lab on A Chip, 2008, 8, 1110.	6.0	470
4	Controlled encapsulation of single-cells into monodisperse picolitre drops. Lab on A Chip, 2008, 8, 1262.	6.0	444
5	Dropspots: a picoliter array in a microfluidic device. Lab on A Chip, 2009, 9, 44-49.	6.0	229
6	Anucleate platelets generate progeny. Blood, 2010, 115, 3801-3809.	1.4	164
7	Tunable Silk: Using Microfluidics to Fabricate Silk Fibers with Controllable Properties. Biomacromolecules, 2011, 12, 1504-1511.	5.4	154
8	Intermediate filament mechanics in vitro and in the cell: from coiled coils to filaments, fibers and networks. Current Opinion in Cell Biology, 2015, 32, 82-91.	5.4	134
9	Physical properties of cytoplasmic intermediate filaments. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 3053-3064.	4.1	85
10	Nonlinear Loading-Rate-Dependent Force Response of Individual Vimentin Intermediate Filaments to Applied Strain. Physical Review Letters, 2017, 118, 048101.	7.8	84
11	Scanning X-Ray Nanodiffraction on Living Eukaryotic Cells in Microfluidic Environments. Physical Review Letters, 2014, 112, .	7.8	71
12	Dynamics of intermediate filament assembly followed in micro-flow by small angle X-ray scattering. Lab on A Chip, 2011, 11, 708.	6.0	70
13	Microfluidic devices for X-ray studies on hydrated cells. Lab on A Chip, 2013, 13, 212-215.	6.0	63
14	Intermediate Filaments in Small Configuration Spaces. Physical Review Letters, 2012, 108, 088101.	7.8	62
15	Microfluidics of soft matter investigated by small-angle X-ray scattering. Journal of Synchrotron Radiation, 2005, 12, 745-750.	2.4	61
16	Imaging of Biological Materials and Cells by X-ray Scattering and Diffraction. ACS Nano, 2017, 11, 8542-8559.	14.6	57
17	An In Situ Study of Collagen Self-Assembly Processes. Biomacromolecules, 2008, 9, 199-207.	5.4	56
18	Force field evolution during human blood platelet activation. Journal of Cell Science, 2012, 125, 3914-20.	2.0	55

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19	Visualization of Flow-Aligned Type I Collagen Self-Assembly in Tunable pH Gradients. Langmuir, 2007, 23, 357-359.	3.5	54
20	Brownian motion of actin filaments in confining microchannels. Journal of Physics Condensed Matter, 2005, 17, S4091-S4104.	1.8	52
21	Viscoelastic properties of vimentin originate from nonequilibrium conformational changes. Science Advances, 2018, 4, eaat1161.	10.3	52
22	Vimentin intermediate filaments stabilize dynamic microtubules by direct interactions. Nature Communications, 2021, 12, 3799.	12.8	52
23	Direct Observation of Subunit Exchange along Mature Vimentin Intermediate Filaments. Biophysical Journal, 2014, 107, 2923-2931.	0.5	49
24	Highly Packed and Oriented DNA Mesophases Identified Using in Situ Microfluidic X-ray Microdiffraction. Biomacromolecules, 2007, 8, 2167-2172.	5.4	48
25	Mobility Gradient Induces Cross-Streamline Migration of Semiflexible Polymers. ACS Macro Letters, 2012, 1, 541-545.	4.8	44
26	X-ray nano-diffraction on cytoskeletal networks. New Journal of Physics, 2012, 14, 085013.	2.9	43
27	Mechanics of Individual Keratin Bundles in Living Cells. Biophysical Journal, 2014, 107, 2693-2699.	0.5	38
28	X-RAY STUDIES OF BIOLOGICAL MATTER IN MICROFLUIDIC ENVIRONMENTS. Modern Physics Letters B, 2012, 26, 1230018.	1.9	37
29	Vimentin Intermediate Filaments Undergo Irreversible Conformational Changes during Cyclic Loading. Nano Letters, 2019, 19, 7349-7356.	9.1	36
30	Dynamics of force generation by spreading platelets. Soft Matter, 2018, 14, 6571-6581.	2.7	35
31	Influence of Internal Capsid Pressure on Viral Infection by Phage Î». Biophysical Journal, 2009, 97, 1525-1529.	0.5	34
32	Dynamics of counterion-induced attraction between vimentin filaments followed in microfluidic drops. Lab on A Chip, 2014, 14, 2681-2687.	6.0	34
33	Topographic Cues Reveal Two Distinct Spreading Mechanisms in Blood Platelets. Scientific Reports, 2016, 6, 22357.	3.3	34
34	Cyclic olefin copolymer as an X-ray compatible material for microfluidic devices. Lab on A Chip, 2018, 18, 171-178.	6.0	33
35	Correlative microscopy approach for biology using X-ray holography, X-ray scanning diffraction and STED microscopy. Nature Communications, 2018, 9, 3641.	12.8	33
36	Rapid increase of glial glutamate uptake via blockade of the protein kinase A pathway. Glia, 2007, 55, 1699-1707.	4.9	32

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37	Characterization of single semiflexible filaments under geometric constraints. European Physical Journal E, 2008, 25, 439-449.	1.6	32
38	X-rays Reveal the Internal Structure of Keratin Bundles in Whole Cells. ACS Nano, 2016, 10, 3553-3561.	14.6	32
39	Lateral association and elongation of vimentin intermediate filament proteins: A time-resolved light-scattering study. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11152-11157.	7.1	31
40	Rapid Prototyping of X-Ray Microdiffraction Compatible Continuous Microflow Foils. Small, 2007, 3, 96-100.	10.0	30
41	Intranasal Application of Xenon Reduces Opioid Requirement and Postoperative Pain in Patients Undergoing Major Abdominal Surgery. Anesthesiology, 2011, 115, 398-407.	2.5	30
42	A comparative analysis of the mobility of 45 proteins in the synaptic bouton. EMBO Journal, 2020, 39, e104596.	7.8	29
43	Nanomechanics of vimentin intermediate filament networks. Soft Matter, 2010, 6, 1910.	2.7	28
44	Vimentin networks at tunable ion-concentration in microfluidic drops. Biomicrofluidics, 2012, 6, 022009.	2.4	27
45	Calpain-mediated cleavage of collapsin response mediator protein-2 drives acute axonal degeneration. Scientific Reports, 2016, 6, 37050.	3.3	27
46	Lateral Subunit Coupling Determines Intermediate Filament Mechanics. Physical Review Letters, 2019, 123, 188102.	7.8	27
47	Xenon-induced changes in CNS sensitization to pain. NeuroImage, 2010, 49, 720-730.	4.2	26
48	Impact of ion valency on the assembly of vimentin studied by quantitative small angle X-ray scattering. Soft Matter, 2014, 10, 2059-2068.	2.7	26
49	Evolution of DNA compaction in microchannels. Journal of Physics Condensed Matter, 2006, 18, S639-S652.	1.8	24
50	Post-translational modifications soften vimentin intermediate filaments. Nanoscale, 2021, 13, 380-387.	5.6	24
51	Direct characterization of cytoskeletal reorganization during blood platelet spreading. Progress in Biophysics and Molecular Biology, 2019, 144, 166-176.	2.9	22
52	Assembly of Simple Epithelial Keratin Filaments: Deciphering the Ion Dependence in Filament Organization. Biomacromolecules, 2015, 16, 3313-3321.	5.4	20
53	The filament forming reactions of vimentin tetramers studied in a serial-inlet microflow device by small angle x-ray scattering. Biomicrofluidics, 2016, 10, 024108.	2.4	20
54	Tuning intermediate filament mechanics by variation of pH and ion charges. Nanoscale, 2020, 12, 15236-15245.	5.6	20

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55	An in vitro model system for cytoskeletal confinement. Cytoskeleton, 2009, 66, 771-776.	4.4	19
56	Revealing the Structure of Stereociliary Actin by X-ray Nanoimaging. ACS Nano, 2014, 8, 12228-12237.	14.6	19
57	FLUCTUATIONS OF SINGLE CONFINED ACTIN FILAMENTS. Biophysical Reviews and Letters, 2007, 02, 155-166.	0.8	18
58	Etomidate reduces glutamate uptake in rat cultured glial cells: involvement of PKA. British Journal of Pharmacology, 2008, 155, 925-933.	5.4	18
59	Competitive Counterion Binding Regulates the Aggregation Onset of Vimentin Intermediate Filaments. Israel Journal of Chemistry, 2016, 56, 614-621.	2.3	17
60	Promethazine inhibits NMDA-induced currents â€“ New pharmacological aspects of an old drug. Neuropharmacology, 2012, 63, 280-291.	4.1	15
61	The Structure of Gold-Nanoparticle Networks Cross-Linked by Di- and Multifunctional RAFT Oligomers. Langmuir, 2015, 31, 10573-10582.	3.5	15
62	Transport and programmed release of nanoscale cargo from cells by using NETosis. Nanoscale, 2020, 12, 9104-9115.	5.6	15
63	Rapid Acquisition of Xâ€Ray Scattering Data from Dropletâ€Encapsulated Protein Systems. ChemPhysChem, 2017, 18, 1220-1223.	2.1	14
64	Human blood platelets contract in perpendicular direction to shear flow. Soft Matter, 2019, 15, 2009-2019.	2.7	14
65	Mutation-induced alterations of intra-filament subunit organization in vimentin filaments revealed by SAXS. Soft Matter, 2019, 15, 1999-2008.	2.7	14
66	Effect of ionic strength on the structure and elongational kinetics of vimentin filaments. Soft Matter, 2018, 14, 8445-8454.	2.7	13
67	Time-resolved MIET measurements of blood platelet spreading and adhesion. Nanoscale, 2020, 12, 21306-21315.	5.6	13
68	Orientation of biomolecular assemblies in a microfluidic jet. New Journal of Physics, 2010, 12, 043056.	2.9	12
69	Open channel block of NMDA receptors by diphenhydramine. Neuropharmacology, 2015, 99, 459-470.	4.1	12
70	Impact of the crystallization condition on importin-Î² conformation. Acta Crystallographica Section D: Structural Biology, 2016, 72, 705-717.	2.3	12
71	Multiscale mechanics and temporal evolution of vimentin intermediate filament networks. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	12
72	Micro-topography influences blood platelet spreading. Soft Matter, 2014, 10, 2365-2371.	2.7	11

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73	Vesicle adhesion in the electrostatic strong-coupling regime studied by time-resolved small-angle X-ray scattering. Soft Matter, 2020, 16, 4142-4154.	2.7	11
74	Tracking reactions in microflow. Microfluidics and Nanofluidics, 2014, 16, 39-45.	2.2	10
75	The Coding and Small Non-coding Hippocampal Synaptic RNAome. Molecular Neurobiology, 2021, 58, 2940-2953.	4.0	10
76	Influence of microfluidic shear on keratin networks in living cells. New Journal of Physics, 2013, 15, 045025.	2.9	9
77	Following DNA Compaction During the Cell Cycle by X-ray Nanodiffraction. ACS Nano, 2016, 10, 10661-10670.	14.6	8
78	A minimalist model to measure interactions between proteins and synaptic vesicles. Scientific Reports, 2020, 10, 21086.	3.3	8
79	Ion type and valency differentially drive vimentin tetramers into intermediate filaments or higher order assemblies. Soft Matter, 2021, 17, 870-878.	2.7	8
80	Structural model of the M7G46 Methyltransferase TrmB in complex with tRNA. RNA Biology, 2021, 18, 2466-2479.	3.1	8
81	Contribution of myosin II activity to cell spreading dynamics. Soft Matter, 2016, 12, 500-507.	2.7	5
82	Helical Superstructure of Intermediate Filaments. Physical Review Letters, 2019, 122, 098101.	7.8	5
83	Tuning the Mechanical Properties of Poly(Methyl Acrylate) via Surfaceâ€Functionalized Montmorillonite Nanosheets. Macromolecular Materials and Engineering, 2021, 306, 2000595.	3.6	5
84	Microfluidicsâ€"from fundamental research to industrial applications. Journal Physics D: Applied Physics, 2013, 46, 110301.	2.8	3
85	New Developments in Hard X-ray Fluorescence Microscopy for In-situ Investigations of Trace Element Distributions in Aqueous Systems of Soil Colloids. Journal of Physics: Conference Series, 2013, 463, 012005.	0.4	2
86	Exploring early time points of vimentin assembly in flow by fluorescence fluctuation spectroscopy. Lab on A Chip, 2021, 21, 735-745.	6.0	2
87	Editorial â€" Special issue on mechanobiology. Biochimica Et Biophysica Acta - Molecular Cell Research, 2015, 1853, 2975-2976.	4.1	1
88	Scanning Small-Angle-X-Ray Scattering for Imaging Biological Cells. Microscopy and Microanalysis, 2018, 24, 336-339.	0.4	1
89	A beamline-compatible STED microscope for combined visible-light and X-ray studies of biological matter. Journal of Synchrotron Radiation, 2019, 26, 1144-1151.	2.4	1
90	STXM analysis: Preparing to go live @ 750â€...Hz. AIP Conference Proceedings, 2019, , .	0.4	1

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91	Reflections on COVID-19â€“Induced Online Teaching in Biophysics Courses. The Biophysicist, 2021, 2, 20-22.	0.3	1
92	Combined scanning small-angle X-ray scattering and holography probes multiple length scales in cell nuclei. Journal of Synchrotron Radiation, 2021, 28, 518-529.	2.4	1
93	Large field-of-view scanning small-angle X-ray scattering of mammalian cells. Journal of Synchrotron Radiation, 2020, 27, 1059-1068.	2.4	1
94	Scanning Small-Angle X-ray Scattering and Coherent X-ray Imaging of Cells. Topics in Applied Physics, 2020, , 405-433.	0.8	1
95	Microaligned collagen matrices by hydrodynamic focusing: controlling the pH-induced self-assembly. Materials Research Society Symposia Proceedings, 2005, 898, 1.	0.1	0
96	Internal Capsid-Pressure Dependence of Viral Infection by Phage Lambda. Biophysical Journal, 2009, 96, 421a.	0.5	0
97	Emerging Investigators 2016: discovery science meets technology. Lab on A Chip, 2016, 16, 2974-2976.	6.0	0
98	Election of the German Committee for Research with Synchrotron Radiation (KFS). Synchrotron Radiation News, 2017, 30, 32-32.	0.8	0