Axel Guenther

List of Publications by Year
in descending order

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60 papers	5,616 citations	101384 36 h-index	149479 56 g-index
66 all docs	66 docs citations	66 times ranked	5712 citing authors

#	Article	IF	Citations
1	Multiphase microfluidics: from flow characteristics to chemical and materials synthesis. Lab on A Chip, 2006, 6, 1487-1503.	3.1	862
2	Transport and reaction in microscale segmented gasâ€“liquid flow. Lab on A Chip, 2004, 4, 278-286.	3.1	465
3	Microfluidic Synthesis of Colloidal Silica. Langmuir, 2004, 20, 8604-8611.	1.6	397
4	Micromixing of Miscible Liquids in Segmented Gasâ^'Liquid Flow. Langmuir, 2005, 21, 1547-1555.	1.6	387
5	Flow-induced deformation of shallow microfluidic channels. Lab on A Chip, 2006, 6, 500.	3.1	283
6	A Microfabricated Gas-Liquid Segmented Flow Reactor for High-Temperature Synthesis: The Case of CdSe Quantum Dots. Angewandte Chemie - International Edition, 2005, 44, 5447-5451.	7.2	252
7	Microfluidic Synthesis of Polymer and Inorganic Particulate Materials. Annual Review of Materials Research, 2010, 40, 415-443.	4.3	194
8	Microfabricated Multiphase Reactors for the Selective Direct Fluorination of Aromatics. Industrial & Engineering Chemistry Research, 2003, 42, 698-710.	1.8	178
9	Handheld skin printer: in situ formation of planar biomaterials and tissues. Lab on A Chip, 2018, 18, 1440-1451.	3.1	175
10	Measurement of residence time distribution in microfluidic systems. Chemical Engineering Science, 2005, 60, 5729-5737.	1.9	152
11	Effect of low-magnitude, high-frequency vibration on osteocytes in the regulation of osteoclasts. Bone, 2010, 46, 1508-1515.	1.4	149
12	Mosaic Hydrogels: Oneâ€Step Formation of Multiscale Soft Materials. Advanced Materials, 2012, 24, 3650-3658.	11.1	113
13	A microfluidic platform for probing small artery structure and function. Lab on A Chip, 2010, 10, 2341.	3.1	110
14	Scaled-Out Multilayer Gasâ^'Liquid Microreactor with Integrated Velocimetry Sensors. Industrial & Engineering Chemistry Research, 2005, 44, 8997-9013.	1.8	105
15	Bubbles no more: in-plane trapping and removal of bubbles in microfluidic devices. Lab on A Chip, 2012, 12, 595-601.	3.1	99
16	Apoptotic osteocytes regulate osteoclast precursor recruitment and differentiation in vitro. Journal of Cellular Biochemistry, 2011, 112, 2412-2423.	1.2	93
17	Microfluidic Study of Fast Gasâ€“Liquid Reactions. Journal of the American Chemical Society, 2012, 134, 3127-3132.	6.6	89
18	Cell Stimulus and Lysis in a Microfluidic Device with Segmented Gasâ^'Liquid Flow. Analytical Chemistry, 2005, 77, 3629-3636.	3.2	84

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19	CMOS Neurotransmitter Microarray: 96-Channel Integrated Potentiostat With On-Die Microsensors. IEEE Transactions on Biomedical Circuits and Systems, 2013, 7, 338-348.	2.7	80
20	Multi-Step Microfluidic Polymerization Reactions Conducted in Droplets: The Internal Trigger Approach. Journal of the American Chemical Society, 2008, 130, 9935-9941.	6.6	77
21	Automated microfluidic platform for studies of carbon dioxide dissolution and solubility in physical solvents. Lab on A Chip, 2012, 12, 1611.	3.1	68
22	Turbulent flow in a channel at a low Reynolds number. Experiments in Fluids, 1998, 25, 503-511.	1.1	64
23	Sample Dispersion for Segmented Flow in Microchannels with Rectangular Cross Section. Analytical Chemistry, 2008, 80, 1558-1567.	3.2	64
24	Predictive microfluidic control of regulatory ligand trajectories in individual pluripotent cells. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 3264-3269.	3.3	63
25	Handheld instrument for wound-conformal delivery of skin precursor sheets improves healing in full-thickness burns. Biofabrication, 2020, 12, 025002.	3.7	62
26	Sphere-to-Wormlike Network Transition of Block Copolymer Micelles Containing CdSe Quantum Dots in the Corona. Macromolecules, 2010, 43, 5066-5074.	2.2	58
27	Microfluidic co-culture platform for investigating osteocyte-osteoclast signalling during fluid shear stress mechanostimulation. Journal of Biomechanics, 2017, 59, 35-42.	0.9	58
28	Microfluidic Studies of Carbon Dioxide. Angewandte Chemie - International Edition, 2014, 53, 7992-8002.	7.2	56
29	Microfluidic Studies of CO₂ Sequestration by Frustrated Lewis Pairs. Journal of the American Chemical Society, 2014, 136, 3875-3880.	6.6	55
30	Artery-on-a-chip platform for automated, multimodal assessment of cerebral blood vessel structure and function. Lab on A Chip, 2015, 15, 2660-2669.	3.1	53
31	Large-scale structures in a developed flow over a wavy wall. Journal of Fluid Mechanics, 2003, 478, 257-285.	1.4	51
32	Increasing Productivity of Microreactors for Fast Gasâ^'Liquid Reactions: The Case of Direct Fluorination of Toluene. Industrial & Engineering Chemistry Research, 2009, 48, 1428-1434.	1.8	47
33	Droplet production from disintegrating bubbles at water surfaces. Single vs. multiple bubbles. International Journal of Multiphase Flow, 2003, 29, 795-811.	1.6	41
34	An integrated multiphase flow sensor for microchannels. Experiments in Fluids, 2004, 36, 819-832.	1.1	40
35	A computational study of axial dispersion in segmented gas-liquid flow. Physics of Fluids, 2007, 19, .	1.6	38
36	Switchable Water: Microfluidic Investigation of Liquidâ€“Liquid Phase Separation Mediated by Carbon Dioxide. Journal of the American Chemical Society, 2014, 136, 11972-11979.	6.6	34

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37	Shaken, and stirred: oscillatory segmented flow for controlled size-evolution of colloidal nanomaterials. Lab on A Chip, 2014, 14, 2309-2318.	3.1	34
38	Temperature-controlled â€˜breathingâ€™ of carbon dioxide bubbles. Lab on A Chip, 2011, 11, 3545.	3.1	29
39	Dynamics of large-scale structures in turbulent flow over a wavy wall. Journal of Fluid Mechanics, 2003, 485, 87-96.	1.4	28
40	Development and applications of a microfluidic reactor with multiple analytical probes. Analyst, The, 2012, 137, 444-450.	1.7	25
41	Peclet Number Dependence of Mass Transfer in Microscale Segmented Gasâ€“Liquid Flow. Industrial & Engineering Chemistry Research, 2015, 54, 9046-9051.	1.8	25
42	Continuous Formation of Ultrathin, Strong Collagen Sheets with Tunable Anisotropy and Compaction. ACS Biomaterials Science and Engineering, 2020, 6, 4236-4246.	2.6	23
43	Influence of the optical configuration on temperature measurements with fluid-dispersed TLCs. Experiments in Fluids, 2002, 32, 533-541.	1.1	22
44	Cruise control for segmented flow. Lab on A Chip, 2012, 12, 4787.	3.1	22
45	Structure of the temperature field in a flow over heated waves. Experiments in Fluids, 2002, 33, 920-930.	1.1	21
46	A CMOS-Microfluidic Chemiluminescence Contact Imaging Microsystem. IEEE Journal of Solid-State Circuits, 2012, 47, 2822-2833.	3.5	20
47	Bubble gate for in-plane flow control. Lab on A Chip, 2013, 13, 2519.	3.1	19
48	Bubble pump: scalable strategy for in-plane liquid routing. Lab on A Chip, 2015, 15, 2842-2853.	3.1	13
49	Transport of salts and micron-sized particles entrained from a boiling water pool. Experimental Thermal and Fluid Science, 2003, 27, 877-889.	1.5	12
50	192-channel CMOS neurochemical microarray. , 2010, , .		9
51	Oneâ€Step Formation of Proteinâ€Based Tubular Structures for Functional Devices and Tissues. Advanced Healthcare Materials, 2021, 10, e2001746.	3.9	5
52	Cover Picture: A Microfabricated Gas-Liquid Segmented Flow Reactor for High-Temperature Synthesis: The Case of CdSe Quantum Dots (Angew. Chem. Int. Ed. 34/2005). Angewandte Chemie - International Edition, 2005, 44, 5349-5349.	7.2	3
53	A hybrid CMOS-microfluidic contact imaging microsystem. Proceedings of SPIE, 2009, , .	0.8	3
54	Hydrogels: Mosaic Hydrogels: Oneâ€Step Formation of Multiscale Soft Materials (Adv. Mater. 27/2012). Advanced Materials, 2012, 24, 3582-3582.	11.1	1

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55	Towards controlled bubble nucleation in microreactors for enhanced mass transport. Reaction Chemistry and Engineering, 2021, 6, 1869-1877.	1.9	1
56	519 Development and Use of an Intraoperatively Usable Hand-Held Bio-Printer Delivering Mesenchymal Stem Cells In-situ. Journal of Burn Care and Research, 2019, 40, S235-S236.	0.2	0
57	514 Effect of Topical Platelet Rich Plasma on Burn Healing After Partial Thickness Burn Injury. Journal of Burn Care and Research, 2019, 40, S233-S233.	0.2	0
58	Fabrication and in Vitro Characteristics of Completely Native Polymer, Cellularized Arterial Substitute. Journal of the American College of Surgeons, 2019, 229, S329.	0.2	0
59	Microfluidic Platform for Investigating Small Blood Vessels. IFMBE Proceedings, 2009, , 376-377.	0.2	0
60	A polymer chipâ€based technology for the investigation of small resistance arteries. FASEB Journal, 2010, 24, 1065.23.	0.2	0