Jean Christophe Baret

List of Publications by Year
in descending order

79 papers	10,416 citations	61857 43 h-index	60497 81 g-index
87 all docs	87 docs citations	87 times ranked	9779 citing authors

#	Article	IF	Citations
1	Electrowetting: from basics to applications. Journal of Physics Condensed Matter, 2005, 17, R705-R774.	0.7	1,650
2	Ultrahigh-throughput screening in drop-based microfluidics for directed evolution. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 4004-4009.	3.3	959
3	Fluorescence-activated droplet sorting (FADS): efficient microfluidic cell sorting based on enzymatic activity. Lab on A Chip, 2009, 9, 1850.	3.1	784
4	Droplet-Based Microfluidic Platforms for the Encapsulation and Screening of Mammalian Cells and Multicellular Organisms. Chemistry and Biology, 2008, 15, 427-437.	6.2	620
5	Surfactants in droplet-based microfluidics. Lab on A Chip, 2012, 12, 422-433.	3.1	485
6	Quantitative and sensitive detection of rare mutations using droplet-based microfluidics. Lab on A Chip, 2011, 11, 2156.	3.1	461
7	Sequential bottom-up assembly of mechanically stabilized synthetic cells by microfluidics. Nature Materials, 2018, 17, 89-96.	13.3	314
8	Dropletâ€Based Microreactors for the Synthesis of Magnetic Iron Oxide Nanoparticles. Angewandte Chemie - International Edition, 2008, 47, 6817-6820.	7.2	271
9	High-resolution doseâ€“response screening using droplet-based microfluidics. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 378-383.	3.3	267
10	Droplet-Based Microfluidic Systems for High-Throughput Single DNA Molecule Isothermal Amplification and Analysis. Analytical Chemistry, 2009, 81, 4813-4821.	3.2	235
11	MaxSynBio: Avenues Towards Creating Cells from the Bottom Up. Angewandte Chemie - International Edition, 2018, 57, 13382-13392.	7.2	234
12	Light-powered CO ₂ fixation in a chloroplast mimic with natural and synthetic parts. Science, 2020, 368, 649-654.	6.0	231
13	A completely in vitro ultrahigh-throughput droplet-based microfluidic screening system for protein engineering and directed evolution. Lab on A Chip, 2012, 12, 882.	3.1	221
14	Enhanced Chemical Synthesis at Soft Interfaces: A Universal Reaction-Adsorption Mechanism in Microcompartments. Physical Review Letters, 2014, 112, 028301.	2.9	206
15	Microfluidic mixing through electrowetting-induced droplet oscillations. Applied Physics Letters, 2006, 88, 204106.	1.5	192
16	Multi-step microfluidic droplet processing: kinetic analysis of an in vitro translated enzyme. Lab on A Chip, 2009, 9, 2902.	3.1	182
17	Controlling molecular transport in minimal emulsions. Nature Communications, 2016, 7, 10392.	5.8	182
18	Kinetic Aspects of Emulsion Stabilization by Surfactants: A Microfluidic Analysis. Langmuir, 2009, 25, 6088-6093.	1.6	168

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19	Miniaturizing chemistry and biology in microdroplets. Chemical Communications, 2007, , 1773.	2.2	165
20	A fast and efficient microfluidic system for highly selective one-to-one droplet fusion. Lab on A Chip, 2009, 9, 2665.	3.1	134
21	Dynamics of molecular transport by surfactants in emulsions. Soft Matter, 2012, 8, 10618.	1.2	133
22	Extremal Model for Amorphous Media Plasticity. Physical Review Letters, 2002, 89, 195506.	2.9	131
23	Microfluidic Dynamic Interfacial Tensiometry (Î¼DIT). Soft Matter, 2014, 10, 3066.	1.2	102
24	Microfluidic flow-focusing in ac electric fields. Lab on A Chip, 2014, 14, 1099.	3.1	96
25	Boundaries Control Collective Dynamics of Inertial Self-Propelled Robots. Physical Review Letters, 2018, 120, 188002.	2.9	96
26	Quantitative Cell-Based Reporter Gene Assays Using Droplet-Based Microfluidics. Chemistry and Biology, 2010, 17, 528-536.	6.2	91
27	High-Throughput Screening of Enzymes by Retroviral Display Using Droplet-Based Microfluidics. Chemistry and Biology, 2010, 17, 229-235.	6.2	84
28	A new-to-nature carboxylation module to improve natural and synthetic CO2 fixation. Nature Catalysis, 2021, 4, 105-115.	16.1	83
29	Gravity-driven flows of viscous liquids over two-dimensional topographies. Journal of Fluid Mechanics, 2003, 487, 147-166.	1.4	79
30	Vesicles-on-a-chip: A universal microfluidic platform for the assembly of liposomes and polymersomes. European Physical Journal E, 2016, 39, 59.	0.7	71
31	Catanionic Coacervate Droplets as a Surfactantâ€Based Membraneâ€Free Protocell Model. Angewandte Chemie - International Edition, 2017, 56, 13689-13693.	7.2	65
32	CotA laccase: high-throughput manipulation and analysis of recombinant enzyme libraries expressed in E. coli using droplet-based microfluidics. Analyst, The, 2014, 139, 3314-3323.	1.7	64
33	Micro-optical lens array for fluorescence detection in droplet-based microfluidics. Lab on A Chip, 2013, 13, 1472.	3.1	62
34	Stabilisers for water-in-fluorinated-oil dispersions: Key properties for microfluidic applications. Current Opinion in Colloid and Interface Science, 2015, 20, 183-191.	3.4	61
35	Switching Liquid Morphologies on Linear Grooves. Langmuir, 2007, 23, 12997-13006.	1.6	60
36	Transport Dynamics in Open Microfluidic Grooves. Langmuir, 2007, 23, 5200-5204.	1.6	57

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37	Microfluidic Production of Droplet Pairs. Langmuir, 2008, 24, 12073-12076.	1.6	56
38	Wetting Heterogeneities in Porous Media Control Flow Dissipation. Physical Review Applied, 2014, 2, .	1.5	56
39	Out-of-equilibrium microcompartments for the bottom-up integration of metabolic functions. Nature Communications, 2018, 9, 2391.	5.8	55
40	Preparation of Swellable Hydrogelâ€Containing Colloidosomes from Aqueous Twoâ€Phase Pickering Emulsion Droplets. Angewandte Chemie - International Edition, 2018, 57, 7780-7784.	7.2	51
41	High-throughput multiplexed fluorescence-activated droplet sorting. Microsystems and Nanoengineering, 2018, 4, 33.	3.4	48
42	Parallelized ultra-high throughput microfluidic emulsifier for multiplex kinetic assays. Biomicrofluidics, 2015, 9, 034101.	1.2	46
43	High throughput single cell counting in droplet-based microfluidics. Scientific Reports, 2017, 7, 1366.	1.6	45
44	Surfactant adsorption kinetics in microfluidics. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 11465-11470.	3.3	44
45	Polyurea Microcapsules in Microfluidics: Surfactant Control of Soft Membranes. Langmuir, 2015, 31, 1127-1134.	1.6	43
46	Electroactuation of Fluid Using Topographical Wetting Transitions. Langmuir, 2005, 21, 12218-12221.	1.6	41
47	The Microfluidic Jukebox. Scientific Reports, 2014, 4, 4787.	1.6	41
48	Electrical Discharge in Capillary Breakup: Controlling the Charge of a Droplet. Physical Review Letters, 2006, 96, 016106.	2.9	38
49	Self-Excited Drop Oscillations in Electrowetting. Langmuir, 2007, 23, 5173-5179.	1.6	33
50	Highâ€Throughput Synthesis and Screening of Functional Coacervates Using Microfluidics. ChemSystemsChem, 2020, 2, e2000022.	1.1	32
51	From collections of independent, mindless robots to flexible, mobile, and directional superstructures. Science Robotics, 2021, 6, .	9.9	32
52	Breakup length of AC electrified jets in a microfluidic flow-focusing junction. Microfluidics and Nanofluidics, 2015, 19, 787-794.	1.0	29
53	Ultra-high throughput detection of single cell Î²-galactosidase activity in droplets using micro-optical lens array. Applied Physics Letters, 2013, 103, 203704.	1.5	28
54	Correction for Agresti et al., Ultrahigh-throughput screening in drop-based microfluidics for directed evolution. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 6550-6550.	3.3	27

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55	MaxSynBio: Wege zur Synthese einer Zelle aus nicht lebenden Komponenten. Angewandte Chemie, 2018, 130, 13566-13577.	1.6	27
56	Rational design of a high-throughput droplet sorter. Lab on A Chip, 2019, 19, 2220-2232.	3.1	24
57	Bacterial Expression Systems for Enzymatic Activity in Droplet-Based Microfluidics. Analytical Chemistry, 2020, 92, 4908-4916.	3.2	23
58	Wettability Control of Droplet Deposition and Detachment. Physical Review Letters, 2006, 96, 146106.	2.9	22
59	Enhanced imine synthesis in water: from surfactant-mediated catalysis to hostâ€“guest mechanisms. Chemical Communications, 2013, 49, 11332.	2.2	22
60	High-Content Screening of Plankton Alkaline Phosphatase Activity in Microfluidics. Analytical Chemistry, 2018, 90, 4174-4181.	3.2	21
61	AC electrified jets in a flow-focusing device: Jet length scaling. Biomicrofluidics, 2016, 10, 043504.	1.2	20
62	Monitoring reactive microencapsulation dynamics using microfluidics. Soft Matter, 2015, 11, 2916-2923.	1.2	19
63	The microfluidic puzzle: chip-oriented rapid prototyping. Lab on A Chip, 2014, 14, 1669-1672.	3.1	14
64	High-Throughput Triggered Merging of Surfactant-Stabilized Droplet Pairs Using Traveling Surface Acoustic Waves. Analytical Chemistry, 2019, 91, 13978-13985.	3.2	14
65	Microfluidic technology for plankton research. Current Opinion in Biotechnology, 2019, 55, 134-150.	3.3	14
66	Frontiers in single cell analysis: multimodal technologies and their clinical perspectives. Lab on A Chip, 2022, 22, 2403-2422.	3.1	13
67	Fast and Ample Light Controlled Actuation of Monodisperse Allâ€ÐNA Microgels. Advanced Functional Materials, 2021, 31, 2010396.	7.8	11
68	Finite conductivity effects and apparent contact angle saturation in AC electrowetting. Materials Research Society Symposia Proceedings, 2005, 899, 1.	0.1	10
69	Rapid Stabilization of Droplets by Particles in Microfluidics: Role of Droplet Formation. ChemSystemsChem, 2019, 1, 16-24.	1.1	10
70	From Compartmentalization of Bacteria within Inorganic Macrocellular Beads to the Assembly of Microbial Consortia. Advanced Biology, 2018, 2, 1700233.	3.0	9
71	Variable inter and intraspecies alkaline phosphatase activity within single cells of revived dinoflagellates. ISME Journal, 2021, 15, 2057-2069.	4.4	7
72	Directed Evolution in Drops: Molecular Aspects and Applications. ACS Synthetic Biology, 2021, 10, 2772-2783.	1.9	5

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73	Microfluidic angle of repose test for Pickering emulsions. Journal Physics D: Applied Physics, 2017, 50, 39LT04.	1.3	4
74	On-chip liquid cooling with integrated pump technology. , 0, , .		3
75	In Situ Encapsulation Kinetics Monitored by Microfluidics. Procedia IUTAM, 2015, 16, 115-122.	1.2	3
76	Confining Trypanosoma brucei in emulsion droplets reveals population variabilities in division rates and improves in vitro cultivation. Scientific Reports, 2021, 11, 18192.	1.6	2
77	Novel Electrical Control in Droplet Microfluidics Using an AC Electric Field. , 2013, , .		1
78	Microfluidic Approaches for the Study of Emulsions: Transport of Solutes. Materials Research Society Symposia Proceedings, 2013, 1530, 1.	0.1	1
79	Droplet-Based Microfluidics for Measuring Enzymatic Activities: Application to L-Asparaginase used in Antileukemic Therapy. Biophysical Journal, 2016, 110, 548a-549a.	0.2	0