Jean Christophe Baret

List of Publications by Citations

77 papers	8,344 citations	39 h-index	87 g-index
87 ext. papers	9,558 ext. citations	7.9 avg, IF	6.17 L-index

#	Paper	IF	Citations
77	Electrowetting: from basics to applications. *Journal of Physics Condensed Matter*, **2005**, 17, R705-R774	1.8	1322
76	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, 4004-9	11.5	817
75	Fluorescence-activated droplet sorting (FADS): efficient microfluidic cell sorting based on enzymatic activity. *Lab on A Chip*, **2009**, 9, 1850-8	7.2	648
74	Droplet-based microfluidic platforms for the encapsulation and screening of Mammalian cells and multicellular organisms. *Chemistry and Biology*, **2008**, 15, 427-37		555
73	Quantitative and sensitive detection of rare mutations using droplet-based microfluidics. *Lab on A Chip*, **2011**, 11, 2156-66	7.2	389
72	Surfactants in droplet-based microfluidics. *Lab on A Chip*, **2012**, 12, 422-33	7.2	377
71	Droplet-based microreactors for the synthesis of magnetic iron oxide nanoparticles. *Angewandte Chemie - International Edition*, **2008**, 47, 6817-20	16.4	232
70	High-resolution dose-response screening using droplet-based microfluidics. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 378-83	11.5	222
69	Droplet-based microfluidic systems for high-throughput single DNA molecule isothermal amplification and analysis. *Analytical Chemistry*, **2009**, 81, 4813-21	7.8	213
68	Sequential bottom-up assembly of mechanically stabilized synthetic cells by microfluidics. *Nature Materials*, **2018**, 17, 89-96	27	211
67	A completely in vitro ultrahigh-throughput droplet-based microfluidic screening system for protein engineering and directed evolution. *Lab on A Chip*, **2012**, 12, 882-91	7.2	180
66	Multi-step microfluidic droplet processing: kinetic analysis of an in vitro translated enzyme. *Lab on A Chip*, **2009**, 9, 2902-8	7.2	164
65	MaxSynBio: Avenues Towards Creating Cells from the Bottom Up. *Angewandte Chemie - International Edition*, **2018**, 57, 13382-13392	16.4	155
64	Miniaturizing chemistry and biology in microdroplets. *Chemical Communications*, **2007**, 1773-88	5.8	155
63	Kinetic aspects of emulsion stabilization by surfactants: a microfluidic analysis. *Langmuir*, **2009**, 25, 6088-93	4	154
62	Enhanced chemical synthesis at soft interfaces: a universal reaction-adsorption mechanism in microcompartments. *Physical Review Letters*, **2014**, 112, 028301	7.4	151
61	Microfluidic mixing through electrowetting-induced droplet oscillations. *Applied Physics Letters*, **2006**, 88, 204106	3.4	143

60	Controlling molecular transport in minimal emulsions. *Nature Communications*, **2016**, 7, 10392	17.4	134
59	A fast and efficient microfluidic system for highly selective one-to-one droplet fusion. *Lab on A Chip* , **2009**, 9, 2665-72	7.2	123
58	Extremal model for amorphous media plasticity. *Physical Review Letters*, **2002**, 89, 195506	7.4	120
57	Dynamics of molecular transport by surfactants in emulsions. *Soft Matter*, **2012**, 8, 10618	3.6	115
56	Light-powered CO fixation in a chloroplast mimic with natural and synthetic parts. *Science*, **2020**, 368, 649-654	33.3	102
55	Quantitative cell-based reporter gene assays using droplet-based microfluidics. *Chemistry and Biology*, **2010**, 17, 528-36		86
54	Microfluidic Dynamic Interfacial Tensiometry (DIT). *Soft Matter*, **2014**, 10, 3066-76	3.6	84
53	Microfluidic flow-focusing in ac electric fields. *Lab on A Chip*, **2014**, 14, 1099-106	7.2	83
52	Gravity-driven flows of viscous liquids over two-dimensional topographies. *Journal of Fluid Mechanics*, **2003**, 487, 147-166	3.7	75
51	High-throughput screening of enzymes by retroviral display using droplet-based microfluidics. *Chemistry and Biology*, **2010**, 17, 229-35		74
50	CotA laccase: high-throughput manipulation and analysis of recombinant enzyme libraries expressed in E. coli using droplet-based microfluidics. *Analyst, The*, **2014**, 139, 3314-23	5	56
49	Switching liquid morphologies on linear grooves. *Langmuir*, **2007**, 23, 12997-3006	4	55
48	Micro-optical lens array for fluorescence detection in droplet-based microfluidics. *Lab on A Chip*, **2013**, 13, 1472-5	7.2	54
47	Vesicles-on-a-chip: A universal microfluidic platform for the assembly of liposomes and polymersomes. *European Physical Journal E*, **2016**, 39, 59	1.5	53
46	Boundaries Control Collective Dynamics of Inertial Self-Propelled Robots. *Physical Review Letters*, **2018**, 120, 188002	7.4	52
45	Transport dynamics in open microfluidic grooves. *Langmuir*, **2007**, 23, 5200-4	4	51
44	Microfluidic production of droplet pairs. *Langmuir*, **2008**, 24, 12073-6	4	50
43	Stabilisers for water-in-fluorinated-oil dispersions: Key properties for microfluidic applications. *Current Opinion in Colloid and Interface Science*, **2015**, 20, 183-191	7.6	47

42	Wetting Heterogeneities in Porous Media Control Flow Dissipation. *Physical Review Applied*, **2014**, 2,	4.3	45
41	Catanionic Coacervate Droplets as a Surfactant-Based Membrane-Free Protocell Model. *Angewandte Chemie - International Edition*, **2017**, 56, 13689-13693	16.4	45
40	Parallelized ultra-high throughput microfluidic emulsifier for multiplex kinetic assays. *Biomicrofluidics*, **2015**, 9, 034101	3.2	42
39	Out-of-equilibrium microcompartments for the bottom-up integration of metabolic functions. *Nature Communications*, **2018**, 9, 2391	17.4	41
38	The microfluidic jukebox. *Scientific Reports*, **2014**, 4, 4787	4.9	39
37	Electroactuation of fluid using topographical wetting transitions. *Langmuir*, **2005**, 21, 12218-21	4	37
36	Surfactant adsorption kinetics in microfluidics. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 11465-11470	11.5	34
35	Polyurea microcapsules in microfluidics: surfactant control of soft membranes. *Langmuir*, **2015**, 31, 1127-34	4	33
34	Preparation of Swellable Hydrogel-Containing Colloidosomes from Aqueous Two-Phase Pickering Emulsion Droplets. *Angewandte Chemie - International Edition*, **2018**, 57, 7780-7784	16.4	32
33	Electrical discharge in capillary breakup: controlling the charge of a droplet. *Physical Review Letters*, **2006**, 96, 016106	7.4	32
32	High-throughput multiplexed fluorescence-activated droplet sorting. *Microsystems and Nanoengineering*, **2018**, 4, 33	7.7	30
31	High throughput single cell counting in droplet-based microfluidics. *Scientific Reports*, **2017**, 7, 1366	4.9	27
30	Breakup length of AC electrified jets in a microfluidic flow-focusing junction. *Microfluidics and Nanofluidics*, **2015**, 19, 787-794	2.8	27
29	Self-excited drop oscillations in electrowetting. *Langmuir*, **2007**, 23, 5173-9	4	27
28	Ultra-high throughput detection of single cell -galactosidase activity in droplets using micro-optical lens array. *Applied Physics Letters*, **2013**, 103, 203704	3.4	25
27	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	11.5	25
26	MaxSynBio: Wege zur Synthese einer Zelle aus nicht lebenden Komponenten. *Angewandte Chemie*, **2018**, 130, 13566-13577	3.6	25
25	A new-to-nature carboxylation module to improve natural and synthetic CO2 fixation. *Nature Catalysis*, **2021**, 4, 105-115	36.5	24

24	Wettability control of droplet deposition and detachment. *Physical Review Letters*, **2006**, 96, 146106	7.4	18
23	Tropfenbasierte Mikroreaktoren f□ die Synthese von magnetischen Eisenoxid-Nanopartikeln. *Angewandte Chemie*, **2008**, 120, 6923-6926	3.6	16
22	Rational design of a high-throughput droplet sorter. *Lab on A Chip*, **2019**, 19, 2220-2232	7.2	15
21	Monitoring reactive microencapsulation dynamics using microfluidics. *Soft Matter*, **2015**, 11, 2916-23	3.6	15
20	Bacterial Expression Systems for Enzymatic Activity in Droplet-Based Microfluidics. *Analytical Chemistry*, **2020**, 92, 4908-4916	7.8	15
19	AC electrified jets in a flow-focusing device: Jet length scaling. *Biomicrofluidics*, **2016**, 10, 043504	3.2	15
18	High-Throughput Synthesis and Screening of Functional Coacervates Using Microfluidics. *ChemSystemsChem*, **2020**, 2, e2000022	3.1	14
17	High-Content Screening of Plankton Alkaline Phosphatase Activity in Microfluidics. *Analytical Chemistry*, **2018**, 90, 4174-4181	7.8	14
16	The microfluidic puzzle: chip-oriented rapid prototyping. *Lab on A Chip*, **2014**, 14, 1669-72	7.2	13
15	Enhanced imine synthesis in water: from surfactant-mediated catalysis to host-guest mechanisms. *Chemical Communications*, **2013**, 49, 11332-4	5.8	13
14	From collections of independent, mindless robots to flexible, mobile, and directional superstructures. *Science Robotics*, **2021**, 6,	18.6	10
13	Microfluidic technology for plankton research. *Current Opinion in Biotechnology*, **2019**, 55, 134-150	11.4	8
12	High-Throughput Triggered Merging of Surfactant-Stabilized Droplet Pairs Using Traveling Surface Acoustic Waves. *Analytical Chemistry*, **2019**, 91, 13978-13985	7.8	7
11	Finite conductivity effects and apparent contact angle saturation in AC electrowetting. *Materials Research Society Symposia Proceedings*, **2005**, 899, 1		7
10	Rapid Stabilization of Droplets by Particles in Microfluidics: Role of Droplet Formation. *ChemSystemsChem*, **2019**, 1, 16-24	3.1	6
9	From Compartmentalization of Bacteria within Inorganic Macrocellular Beads to the Assembly of Microbial Consortia. *Advanced Biology*, **2018**, 2, 1700233	3.5	5
8	Microfluidic angle of repose test for Pickering emulsions. *Journal Physics D: Applied Physics*, **2017**, 50, 39LT04	3	3
7	In Situ Encapsulation Kinetics Monitored by Microfluidics. *Procedia IUTAM*, **2015**, 16, 115-122		3

6	Fast and Ample Light Controlled Actuation of Monodisperse All-DNA Microgels. *Advanced Functional Materials*, **2021**, 31, 2010396	15.6	3
5	On-chip liquid cooling with integrated pump technology		2
4	Variable inter and intraspecies alkaline phosphatase activity within single cells of revived dinoflagellates. *ISME Journal*, **2021**, 15, 2057-2069	11.9	2
3	Microfluidic Approaches for the Study of Emulsions: Transport of Solutes. *Materials Research Society Symposia Proceedings*, **2013**, 1530, 1		1
2	Directed Evolution in Drops: Molecular Aspects and Applications. *ACS Synthetic Biology*, **2021**, 10, 2772-2783	5.7	0
1	Confining Trypanosoma brucei in emulsion droplets reveals population variabilities in division rates and improves in vitro cultivation. *Scientific Reports*, **2021**, 11, 18192	4.9	