Arnaud Bertsch

List of Publications by Year
in descending order

110	4,946	94381 37	106281 65
papers	citations	h-index	g-index

112	112	112	5698
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	On-Demand Nanoliter Sampling Probe for the Collection of Brain Fluid. Analytical Chemistry, 2022, 94, 10415-10426.	3.2	1
2	Planar hydrodynamic traps and buried channels for bead and cell trapping and releasing. Lab on A Chip, 2021, 21, 3686-3694.	3.1	11
3	Impinging planar jets: hysteretic behaviour and origin of the self-sustained oscillations. Journal of Fluid Mechanics, 2021, 913, .	1.4	9
4	Microfluidic-assisted bioprinting of tissues and organoids at high cell concentrations. Biofabrication, 2021, 13, 025006.	3.7	15
5	In-flow electrochemical detection of chemicals in droplets with pyrolysed photoresist electrodes: application as a module for quantification of microsampled dopamine. Lab on A Chip, 2021, 21, 3328-3337.	3.1	7
6	Microstereolithography. , 2020, , 25-56.		4
7	Nanovolcano microelectrode arrays: toward long-term on-demand registration of transmembrane action potentials by controlled electroporation. Microsystems and Nanoengineering, 2020, 6, 67.	3.4	16
8	Volcano-Shaped Scanning Probe Microscopy Probe for Combined Force-Electrogram Recordings from Excitable Cells. Nano Letters, 2020, 20, 4520-4529.	4.5	12
9	Feedback-free microfluidic oscillator with impinging jets. Physical Review Fluids, 2020, 5, .	1.0	10
10	Swinging jets. Physical Review Fluids, 2020, 5, .	1.0	2
11	Intracellular Recording of Cardiomyocyte Action Potentials with Nanopatterned Volcano-Shaped Microelectrode Arrays. Nano Letters, 2019, 19, 6173-6181.	4.5	74
12	Ion beam etching redeposition for 3D multimaterial nanostructure manufacturing. Microsystems and Nanoengineering, 2019, 5, 11.	3.4	36
13	Pore Size Manipulation in 3D Printed Cryogels Enables Selective Cell Seeding. Advanced Materials Technologies, 2018, 3, 1700340.	3.0	26
14	Microfluidics: A New Layer of Control for Extrusion-Based 3D Printing. Micromachines, 2018, 9, 86.	1.4	49
15	Multimaterial Nanoporous Membranes Shaped through High Aspect-Ratio Sacrificial Silicon Nanostructures. ACS Omega, 2017, 2, 2387-2394.	1.6	1
16	In vivo neurochemical measurements in cerebral tissues using a droplet-based monitoring system. Nature Communications, 2017, 8, 1239.	5.8	26
17	Microfluidic Manipulation of Core/Shell Nanoparticles for Oral Delivery of Chemotherapeutics: A New Treatment Approach for Colorectal Cancer. Advanced Materials, 2016, 28, 4134-4141.	11.1	74
18	Cell-Imprinted Substrates Modulate Differentiation, Redifferentiation, and Transdifferentiation. ACS Applied Materials & Interfaces, 2016, 8, 13777-13784.	4.0	52

#	Article	IF	Citations
19	Ionic nanopeapods: Next-generation proton conducting membranes based on phosphotungstic acid filled carbon nanotube. Nano Energy, 2016, 23, 114-121.	8.2	32
20	Neural probe combining microelectrodes and a droplet-based microdialysis collection system for high temporal resolution sampling. Lab on A Chip, 2016, 16, 917-924.	3.1	23
21	Microstereolithography. , 2016, , 20-44.		6
22	A Simple and Reliable PDMS and SU-8 Irreversible Bonding Method and Its Application on a Microfluidic-MEA Device for Neuroscience Research. Micromachines, 2015, 6, 1923-1934.	1.4	39
23	Thermal gate, a new tool for ionic transport control inside nanochannels. , 2015, , .		0
24	Composite hydrogel-loaded alumina membranes for nanofluidic molecular filtration. Journal of Membrane Science, 2015, 477, 151-156.	4.1	15
25	Temperature Sensitivity of Nanochannel Electrical Conductance. ACS Nano, 2015, 9, 4563-4571.	7.3	33
26	Thermal control of ionic transport and fluid flow in nanofluidic channels. Nanoscale, 2015, 7, 18799-18804.	2.8	12
27	On-chip synthesis of fine-tuned bone-seeking hybrid nanoparticles. Nanomedicine, 2015, 10, 3431-3449.	1.7	43
28	An improved model for predicting electrical conductance in nanochannels. Physical Chemistry Chemical Physics, 2015, 17, 4160-4167.	1.3	35
29	Enclosed Electronic System for Force Measurements in Knee Implants. Sensors, 2014, 14, 15009-15021.	2.1	15
30	Smart instrumentation for determination of ligament stiffness and ligament balance in total knee arthroplasty. Medical Engineering and Physics, 2014, 36, 721-725.	0.8	2
31	Onâ€Chip Fabrication of Paclitaxelâ€Loaded Chitosan Nanoparticles for Cancer Therapeutics. Advanced Functional Materials, 2014, 24, 432-441.	7.8	103
32	Magnetically Aligned Nanodomains: Application in High-Performance Ion Conductive Membranes. ACS Applied Materials & Interfaces, 2014, 6, 7099-7107.	4.0	30
33	Microfluidicâ€Assisted Selfâ€Assembly of Complex Dendritic Polyethylene Drug Delivery Nanocapsules. Advanced Materials, 2014, 26, 3118-3123.	11.1	49
34	Superacid-doped polybenzimidazole-decorated carbon nanotubes: a novel high-performance proton exchange nanocomposite membrane. Nanoscale, 2013, 5, 11710.	2.8	48
35	A microfluidic approach to synthesizing high-performance microfibers with tunable anhydrous proton conductivity. Lab on A Chip, 2013, 13, 4549.	3.1	17
36	Design and test of a MEMS strain-sensing device for monitoring artificial knee implants. Biomedical Microdevices, 2013, 15, 831-839.	1.4	14

#	Article	IF	Citations
37	Instrumented Knee Prosthesis for Force and Kinematics Measurements. IEEE Transactions on Automation Science and Engineering, 2013, 10, 615-624.	3.4	27
38	Al<inf>2</inf>O<inf>3</inf>/W hetero-structured nanopore membranes: From native to tunable nanofluidic diodes. , 2013, , .		1
39	Microfluidic assisted self-assembly of chitosan based nanoparticles as drug delivery agents. Lab on A Chip, 2013, 13, 204-207.	3.1	121
40	Nafion/chitosan-wrapped CNT nanocomposite membrane for high-performance direct methanol fuel cells. RSC Advances, 2013, 3, 7337.	1.7	52
41	Field effect modulated nanofluidic diode membrane based on Al2O3/W heterogeneous nanopore arrays. Applied Physics Letters, 2013, 102, 213108.	1.5	37
42	Label-Free Recognition of Drug Resistance via Impedimetric Screening of Breast Cancer Cells. PLoS ONE, 2013, 8, e57423.	1.1	34
43	Morphological Tuning of Polymeric Nanoparticles via Microfluidic Platform for Fuel Cell Applications. Journal of the American Chemical Society, 2012, 134, 18904-18907.	6.6	55
44	Facile fabrication of nanofluidic diode membranes using anodic aluminium oxide. Nanoscale, 2012, 4, 5718.	2.8	70
45	A microfluidic-based frequency-multiplexing impedance sensor (FMIS). Lab on A Chip, 2012, 12, 2712.	3.1	11
46	Microfluidic synthesis of chitosan-based nanoparticles for fuel cell applications. Chemical Communications, 2012, 48, 7744.	2.2	71
47	Polyimide/SU-8 catheter-tip MEMS gauge pressure sensor. Biomedical Microdevices, 2012, 14, 819-828.	1.4	47
48	Polybenzimidazoleâ€decorated carbon nanotube: A highâ€performance proton conductor. Physica Status Solidi - Rapid Research Letters, 2012, 6, 318-320.	1.2	16
49	Instrumented prosthesis for knee implants monitoring. , 2011, , .		14
50	Microstereolithography. , 2011, , 81-112.		12
51	Distinguishing drug-induced minor morphological changes from major cellular damage via label-free impedimetric toxicity screening. Lab on A Chip, 2011, 11, 2352.	3.1	34
52	Simulation of epiretinal prostheses - Evaluation of geometrical factors affecting stimulation thresholds. Journal of NeuroEngineering and Rehabilitation, 2011, 8, 44.	2.4	48
53	Simulations to study spatial extent of stimulation and effect of electrodeâ€“tissue gap in subretinal implants. Medical Engineering and Physics, 2011, 33, 755-763.	0.8	17
54	Direct localised measurement of electrical resistivity profile in rat and embryonic chick retinas using a microprobe. Journal of Electrical Bioimpedance, 2010, 1, 84-92.	0.5	23

#	Article	IF	Citations
55	In Vivo Electrical Impedance Spectroscopy of Tissue Reaction to Microelectrode Arrays. IEEE Transactions on Biomedical Engineering, 2009, 56, 1909-1918.	2.5	111
56	Microfluidic hydrogel layers with multiple gradients to stimulate and perfuse three-dimensional neuronal cell cultures. Procedia Chemistry, 2009, 1, 369-372.	0.7	17
57	Direct measurement of diffusing proteins in nanochannels using fluorescence correlation spectroscopy. Procedia Chemistry, 2009, 1, 1343-1346.	0.7	0
58	Direct Observation of Transitions between Surface-Dominated and Bulk Diffusion Regimes in Nanochannels. Analytical Chemistry, 2009, 81, 5407-5412.	3.2	28
59	Wireless contact lens sensor for intraocular pressure monitoring: assessment on enucleated pig eyes. Acta Ophthalmologica, 2009, 87, 433-437.	0.6	257
60	Demonstration of cortical recording using novel flexible polymer neural probes. Sensors and Actuators A: Physical, 2008, 143, 90-96.	2.0	134
61	Fluorineâ€Based Plasma Treatment of Biocompatible Silicone Elastomer: The Effect of Temperature on Etch Rate and Surface Properties. Plasma Processes and Polymers, 2008, 5, 246-255.	1.6	21
62	Towards a nanostructured thermoelectric generator using ion-track lithography. Journal of Micromechanics and Microengineering, 2008, 18, 104015.	1.5	29
63	Healthy Aims: Developing New Medical Implants and Diagnostic Equipment. IEEE Pervasive Computing, 2008, 7, 14-21.	1.1	44
64	Demonstration of cortical recording and reduced inflammatory response using flexible polymer neural probes. , 2007, , .		7
65	Controlled Release Drug Coatings on Flexible Neural Probes. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 6613-6.	0.5	2
66	The Effect of Biodegradable Drug Release Coatings on the Electrical Characteristics of Neural Electrodes. , 2007, , .		2
67	Technology developments to initiate a next generation of Cochlear Implants. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 515-8.	0.5	6
68	Direct measurement of effective diffusion coefficients in nanochannels using steady-state dispersion effects. Applied Physics Letters, 2007, 91, .	1.5	30
69	Contraction Measurements of Cardiomyocytes Grown on Silicon Cantilevers. , 2007, , .		1
70	pH-Controlled Diffusion of Proteins with Different pI Values Across a Nanochannel on a Chip. Nano Letters, 2006, 6, 543-547.	4.5	78
71	SU-8 nanocomposite photoresist with low stress properties for microfabrication applications. Microelectronic Engineering, 2006, 83, 1966-1970.	1.1	61
72	SU-8 nanocomposite coatings with improved tribological performance for MEMS. Surface and Coatings Technology, 2006, 201, 2289-2295.	2.2	40

#	Article	IF	Citations
73	The sensing contact lens. Medical Device Technology, 2006, 17, 19-21.	0.1	3
74	Conductive SU8 Photoresist for Microfabrication. Advanced Functional Materials, 2005, 15, 1511-1516.	7.8	102
75	Partial release and detachment of microfabricated metal and polymer structures by anodic metal dissolution. Journal of Microelectromechanical Systems, 2005, 14, 383-391.	1.7	55
76	Polyimide microfluidic devices with integrated nanoporous filtration areas manufactured by micromachining and ion track technology. Journal of Micromechanics and Microengineering, 2004, 14, 324-331.	1.5	79
77	First Steps toward Noninvasive Intraocular Pressure Monitoring with a Sensing Contact Lens. , 2004, 45, 3113.		209
78	Microfabrication of ceramic components by microstereolithography. Journal of Micromechanics and Microengineering, 2004, 14, 197-203.	1.5	140
79	SU8-Silver Photosensitive Nanocomposite. Advanced Engineering Materials, 2004, 6, 719-724.	1.6	68
80	Flexible polyimide probes with microelectrodes and embedded microfluidic channels for simultaneous drug delivery and multi-channel monitoring of bioelectric activity. Biosensors and Bioelectronics, 2004, 19, 1309-1318.	5.3	153
81	Dielectric spectroscopy in a micromachined flow cytometer: theoretical and practical considerations. Lab on A Chip, 2004, 4, 241.	3.1	284
82	Cell immersion and cell dipping in microfluidic devicesElectronic supplementary information (ESI) available: cell dipping video sequence from which Fig. 7 was extracted and cell dipping video sequence with close-ups. See http://www.rsc.org/suppdata/lc/b3/b311210a/. Lab on A Chip, 2004, 4, 148.	3.1	81
83	Resistivity probing of multi-layered tissue phantoms using microelectrodes. Physiological Measurement, 2004, 25, 645-658.	1.2	23
84	Polyimide and SU-8 microfluidic devices manufactured by heat-depolymerizable sacrificial material technique. Lab on A Chip, 2004, 4, 114.	3.1	114
85	High aspect ratio, 3D structuring of photoresist materials by ion beam LIGA. Microelectronic Engineering, 2003, 67-68, 96-103.	1.1	33
86	Microstereolithography: a Review. Materials Research Society Symposia Proceedings, 2002, 758, 111.	0.1	17
87	Methods and algorithms for the slicing process in microstereolithography. Rapid Prototyping Journal, 2002, 8, 190-199.	1.6	10
88	Static micromixers based on large-scale industrial mixer geometry. Lab on A Chip, 2001, 1, 56.	3.1	185
89	Rapid prototyping of small size objects. Rapid Prototyping Journal, 2000, 6, 259-266.	1.6	153
90	3D microfabrication by combining microstereolithography and thick resist UV lithography. Sensors and Actuators A: Physical, 1999, 73, 14-23.	2.0	145

#	Article	IF	Citations
91	Microstereolithography: a new process to build complex 3D objects. , 1999, , .		36
92	Microphotofabrication of Very Small Objects: Pushing the Limits of Stereophotolithography. Molecular Crystals and Liquid Crystals, 1998, 315, 223-234.	0.3	5
93	Microstereophotolithography using a liquid crystal display as dynamic mask-generator. Microsystem Technologies, 1997, 3, 42-47.	1.2	163
94	Microstereophotolithography and shape memory alloy for the fabrication of miniaturized actuators. Sensors and Actuators A: Physical, 1997, 62, 741-747.	2.0	16
95	Study of the spatial resolution of a new 3D microfabrication process: the microstereophotolithography using a dynamic mask-generator technique. Journal of Photochemistry and Photobiology A: Chemistry, 1997, 107, 275-281.	2.0	87
96	Industrial photochemistry XXIV. Relations between light flux and polymerized depth in laser stereophotolithography. Journal of Photochemistry and Photobiology A: Chemistry, 1997, 107, 283-290.	2.0	20
97	Stereolithography and microtechniques. Microsystem Technologies, 1996, 2, 97-102.	1.2	73
98	Actionneurs miniatures Ã alliages Ã mÃ©moire de forme fabriquÃ©s par microstÃ©rÃ©ophotolithographie. Journal De Physique III, 1996, 6, 1759-1774.	0.3	5
99	Stereolithography and microtechniques. Microsystem Technologies, 1995, 2, 97-102.	1.2	11
100	Design and control of compliant microrobots. , 0, , .		6
101	Microrobots realized by microstereophotolithography and actuated by shape memory alloys. , 0, , .		1
102	Combining microstereolithography and thick resist UV lithography for 3D microfabrication. , 0, , .		35
103	Microstereolithography: concepts and applications. , 0, , .		23
104	3D micromixers-downscaling large scale industrial static mixers. , 0, , .		21
105	Flexible microchannels with integrated nanoporous membranes for filtration and separation of molecules and particles. , 0, , .		7
106	A soft contact lens with a MEMS strain gage embedded for intraocular pressure monitoring. , 0, , .		47
107	Composite photopolymer microstructures: from planar to 3D devices. , 0, , .		3
108	Conductive SU8-silver composite photopolymer. , 0, , .		6

#	Article	IF	Citations
109	Ceramic microcomponents by microstereolithography. , 0, , .		6
110	Dielectrophoretic Traps for Efficient Bead and Cell Trapping and Formation of Aggregates of Controlled Size and Composition. Frontiers in Bioengineering and Biotechnology, 0, 10, .	2.0	2