Bastian E Rapp

List of Publications by Year
in descending order

102 papers	3,937 citations	159358 30 h-index	128067 60 g-index
105 all docs	105 docs citations	105 times ranked	4957 citing authors

#	Article	IF	Citations
1	Deterministic Lateral Displacement Microfluidic Chip for Minicell Purification. Micromachines, 2022, 13, 365.	1.4	9
2	High-throughput manufacturing of transparent fused silica glass by injection molding and extrusion. , 2022, , .		1
3	Study of repellence on polymeric surfaces with two individually adjustable pore hierarchies. Chemical Engineering Journal, 2022, 437, 135287.	6.6	4
4	An Onâ€Chip Liquid Metal Plug Generator. Advanced Materials, 2022, 34, e2201469.	11.1	10
5	Volumetric additive manufacturing of silica glass with microscale computed axial lithography. Science, 2022, 376, 308-312.	6.0	94
6	A parallelized, perfused 3D triculture model of leukemia for in vitro drug testing of chemotherapeutics. Biofabrication, 2022, 14, 035011.	3.7	4
7	Onâ€Chip Chemical Synthesis Using Oneâ€Step 3D Printed Polyperfluoropolyether. Chemie-Ingenieur-Technik, 2022, 94, 975-982.	0.4	9
8	A Polystyrene Photoresin for Direct Lithography of Microfluidic Chips. Advanced Materials Technologies, 2022, 7, .	3.0	2
9	Application of Micro/Nanoporous Fluoropolymers with Reduced Bioadhesion in Digital Microfluidics. Nanomaterials, 2022, 12, 2201.	1.9	2
10	Twoâ€Photon Polymerization of Nanocomposites for the Fabrication of Transparent Fused Silica Glass Microstructures. Advanced Materials, 2021, 33, e2006341.	11.1	103
11	Facile fabrication of micro-/nanostructured, superhydrophobic membranes with adjustable porosity by 3D printing. Journal of Materials Chemistry A, 2021, 9, 21379-21386.	5.2	30
12	High-throughput injection molding of transparent fused silica glass. Science, 2021, 372, 182-186.	6.0	50
13	High Resolution Patterning of an Organicâ€“Inorganic Photoresin for the Fabrication of Platinum Microstructures. Advanced Materials, 2021, 33, e2101992.	11.1	11
14	Meltâ€Extrusionâ€Based Additive Manufacturing of Transparent Fused Silica Glass. Advanced Science, 2021, 8, e2103180.	5.6	14
15	Fused Deposition Modeling of Microfluidic Chips in Transparent Polystyrene. Micromachines, 2021, 12, 1348.	1.4	14
16	3D Printing of Transparent Glasses. Springer Series in Optical Sciences, 2021, , 169-184.	0.5	0
17	Fused Deposition Modeling of Microfluidic Chips in Polymethylmethacrylate. Micromachines, 2020, 11, 873.	1.4	57
18	Emerging Technologies and Materials for High-Resolution 3D Printing of Microfluidic Chips. Advances in Biochemical Engineering/Biotechnology, 2020, , 1.	0.6	9

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19	Divide and print. Nature Materials, 2020, 19, 131-133.	13.3	6
20	Sacrificial template replication: fabrication of arbitrary embedded microfluidic channels in transparent fused silica glass. , 2020, , .		1
21	Generation of multi-level microstructures using a wavelength-selective photoresist and mask-less grayscale lithography. , 2020, , .		2
22	Facile integration of electronics in glass microfluidic devices for electrochemical synthesis and analysis. , 2020, , .		3
23	Liquid Glass for Photovoltaics: Multifunctional Front Cover Glass for Solar Modules. ACS Applied Materials & Interfaces, 2019, 11, 35015-35022.	4.0	13
24	A Nontoxic Battery with 3D-Printed Housing for On-Demand Operation of Microcontrollers in Microfluidic Sensors. Micromachines, 2019, 10, 588.	1.4	3
25	Analytical Solution of the Time-Dependent Microfluidic Poiseuille Flow in Rectangular Channel Cross-Sections and Its Numerical Implementation in Microsoft Excel. Biosensors, 2019, 9, 67.	2.3	3
26	Fabrication of arbitrary three-dimensional suspended hollow microstructures in transparent fused silica glass. Nature Communications, 2019, 10, 1439.	5.8	76
27	Highâ€Performance Materials for 3D Printing in Chemical Synthesis Applications. Advanced Materials, 2019, 31, e1805982.	11.1	82
28	Study of Biofilm Growth on Slippery Liquid-Infused Porous Surfaces Made from Fluoropor. ACS Applied Materials & Interfaces, 2019, 11, 4480-4487.	4.0	54
29	High-throughput thermal replication of transparent fused silica glass. , 2019, , .		1
30	Suspended liquid subtractive lithography: printing three dimensional channels directly into uncured polymeric matrices. , 2019, , .		0
31	3D printing of highly fluorinated methacrylates for the rapid prototyping of transparent and chemically-resistant microfluidic devices. , 2019, , .		1
32	Glassomerâ€"Processing Fused Silica Glass Like a Polymer. Advanced Materials, 2018, 30, e1707100.	11.1	60
33	Phase change materials in microactuators: Basics, applications and perspectives. Sensors and Actuators A: Physical, 2018, 271, 303-347.	2.0	43
34	Towards Biofilm Spectroscopy â€" A Novel Microfluidic Approach for Characterizing Biofilm Subpopulation by Microwave-Based Electrical Impedance Spectroscopy. Frequenz, 2018, 72, 123-134.	0.6	0
35	vasQchip: A Novel Microfluidic, Artificial Blood Vessel Scaffold for Vascularized 3D Tissues. Advanced Materials Technologies, 2018, 3, 1700246.	3.0	15
36	Liquid PMMA: A High Resolution Polymethylmethacrylate Negative Photoresist as Enabling Material for Direct Printing of Microfluidic Chips. Advanced Engineering Materials, 2018, 20, 1700699.	1.6	23

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37	Photolithographic structuring of soft, extremely foldable and autoclavable hydrophobic barriers in paper. Analytical Methods, 2018, 10, 4028-4035.	1.3	13
38	Long-term capability of polymer-coated surface transverse wave sensors for distinguishing vapors of similar hydrocarbons. Sensors and Actuators B: Chemical, 2018, 274, 560-564.	4.0	4
39	Highly Fluorinated Methacrylates for Optical 3D Printing of Microfluidic Devices. Micromachines, 2018, 9, 115.	1.4	44
40	Electrochemical Methods for Biomass and Biocorrosion Monitoring. , 2018, , 166-172.		1
41	Additive manufacturing of microfluidic glass chips. , 2018, , .		6
42	Next-generation 3D printing of glass: the emergence of enabling materials. , 2018, , .		3
43	Suspended liquid subtractive lithography: printing three dimensional channels directly into uncured PDMS. , 2018, , .		0
44	Structuring unbreakable hydrophobic barriers in paper. , 2018, , .		0
45	Rapid structuring of proteins on filter paper using lithography. , 2017, , .		0
46	Fast and cheap fabrication of molding tools for polymer replication. Proceedings of SPIE, 2017, , .	0.8	0
47	Three-dimensional printing of transparent fused silica glass. Nature, 2017, 544, 337-339.	13.7	588
48	Polymer Structures on Surface Acoustic Wave Biosensors. Procedia Technology, 2017, 27, 35-36.	1.1	9
49	Suspended Liquid Subtractive Lithography: One-step generation of 3D channel geometries in viscous curable polymer matrices. Scientific Reports, 2017, 7, 7387.	1.6	14
50	Transparent, abrasion-insensitive superhydrophobic coatings for real-world applications. Scientific Reports, 2017, 7, 15078.	1.6	42
51	Taylor-Aris Dispersion. , 2017, , 401-417.		0
52	Finite Difference Method. , 2017, , 623-631.		3
53	Long-Term Stability of Polymer-Coated Surface Transverse Wave Sensors for the Detection of Organic Solvent Vapors. Sensors, 2017, 17, 2529.	2.1	16
54	An Analytical Solution to Neumann-Type Mixed Boundary Poiseuille Microfluidic Flow in Rectangular Channel Cross-Sections (Slip/No-Slip) including a Numerical Technique to Derive It. Journal of Biomedical Science and Engineering, 2017, 10, 205-218.	0.2	4

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55	Functionalization of paper using photobleaching: A fast and convenient method for creating paperâ€based assays with colorimetric and fluorescent readout. Engineering in Life Sciences, 2016, 16, 525-531.	2.0	9
56	Novel microfluidic system for online monitoring of biofilm dynamics by electrical impedance spectroscopy and amperometry. , 2016, , .		0
57	Numerics made easy: solving the Navierâ€"Stokes equation for arbitrary channel cross-sections using Microsoft Excel. Biomedical Microdevices, 2016, 18, 52.	1.4	12
58	Tacky COC: a solvent bonding technique for fabrication of microfluidic systems. Proceedings of SPIE, 2016, , .	0.8	0
59	An individual addressable and latchable actuator array for microfluidic systems. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	2
60	A latchable thermally activated phase change actuator for microfluidic systems. , 2016, , .		0
61	Liquid Glass: A Facile Soft Replication Method for Structuring Glass. Advanced Materials, 2016, 28, 4646-4650.	11.1	78
62	Tacky cyclic olefin copolymer: a biocompatible bonding technique for the fabrication of microfluidic channels in COC. Lab on A Chip, 2016, 16, 1561-1564.	3.1	30
63	Localized protein immobilization on microstructured polymeric surfaces for diagnostic applications. Microfluidics and Nanofluidics, 2016, 20, 1.	1.0	3
64	Rational design of a peptide capture agent for CXCL8 based on a model of the CXCL8:CXCR1 complex. RSC Advances, 2015, 5, 25657-25668.	1.7	14
65	Synthetic enzyme supercomplexes: co-immobilization of enzyme cascades. Analytical Methods, 2015, 7, 4030-4037.	1.3	63
66	Optimization of enzyme immobilization on magnetic microparticles using 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide (EDC) as a crosslinking agent. Analytical Methods, 2015, 7, 10291-10298.	1.3	41
67	Polysiloxane layers created by solâ€"gel and photochemistry: ideal surfaces for rapid, low-cost and high-strength bonding of epoxy components to polydimethylsiloxane. Lab on A Chip, 2015, 15, 1772-1782.	3.1	9
68	Quantification of the Influence of Endotoxins on the Mechanics of Adult and Neonatal Red Blood Cells. Journal of Physical Chemistry B, 2015, 119, 7837-7845.	1.2	10
69	Acoustic Biosensors Coated With Phosphorylcholine Groups for Label-Free Detection of Human C-Reactive Protein in Serum. IEEE Sensors Journal, 2015, 15, 4388-4392.	2.4	13
70	Rapid prototyping of glass microfluidic chips. , 2015, , .		1
71	Fluidic Platforms and Components of Lab-on-a-Chip devices. , 2015, , 83-139.		0
72	Bioinspired Air-Retaining Nanofur for Drag Reduction. ACS Applied Materials & Interfaces, 2015, 7, 10651-10655.	4.0	73

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73	Protein assay structured on paper by using lithography. Proceedings of SPIE, 2015, , .	0.8	0
74	Multi-Channel Microfluidic Biosensor Platform Applied for Online Monitoring and Screening of Biofilm Formation and Activity. PLoS ONE, 2015, 10, e0117300.	1.1	31
75	Microfluidics on liquid handling stations (Î¼F-on-LHS): a new industry-compatible microfluidic platform. Proceedings of SPIE, 2014, , .	0.8	0
76	A chemically inert multichannel chip-to-world interface to connect microfluidic chips. , 2014, , .		0
77	Rapid bonding of polydimethylsiloxane (PDMS) to various stereolithographically (STL) structurable epoxy resins using photochemically cross-linked intermediary siloxane layers. , 2014, , .		0
78	Biofunctional Micropatterning of Thermoformed 3D Substrates. Advanced Functional Materials, 2014, 24, 442-450.	7.8	19
79	Advances in DNA-directed immobilization. Current Opinion in Chemical Biology, 2014, 18, 8-15.	2.8	90
80	Liquid polystyrene: a room-temperature photocurable soft lithography compatible pour-and-cure-type polystyrene. Lab on A Chip, 2014, 14, 2698-2708.	3.1	30
81	Microfluidics on liquid handling stations (Î¼F-on-LHS): an industry compatible chip interface between microfluidics and automated liquid handling stations. Lab on A Chip, 2013, 13, 2337.	3.1	23
82	Connecting microfluidic chips using a chemically inert, reversible, multichannel chip-to-world-interface. Lab on A Chip, 2013, 13, 4343.	3.1	36
83	Design and characterization of a platform for thermal actuation of up to 588 microfluidic valves. Microfluidics and Nanofluidics, 2013, 14, 177-186.	1.0	12
84	Online monitoring of biofilm growth and activity using a combined multi-channel impedimetric and amperometric sensor. Biosensors and Bioelectronics, 2013, 47, 157-163.	5.3	48
85	Rapid bonding of polydimethylsiloxane to stereolithographically manufactured epoxy components using a photogenerated intermediary layer. Lab on A Chip, 2013, 13, 2268.	3.1	15
86	Computer-aided microfluidics (CAMF): from digital 3D-CAD models to physical structures within a day. Microfluidics and Nanofluidics, 2013, 15, 625-635.	1.0	38
87	The Chemistry of Cyborgsâ€"Interfacing Technical Devices with Organisms. Angewandte Chemie - International Edition, 2013, 52, 13942-13957.	7.2	35
88	Maskless Projection Lithography for the Fast and Flexible Generation of Grayscale Protein Patterns. Small, 2012, 8, 1570-1578.	5.2	76
89	Deposition of ultrathin parylene C films in the range of 18nm to 142nm: Controlling the layer thickness and assessing the closeness of the deposited films. Thin Solid Films, 2012, 520, 4884-4888.	0.8	17
90	Let there be chipâ€"towards rapid prototyping of microfluidic devices: one-step manufacturing processes. Analytical Methods, 2011, 3, 2681.	1.3	298

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91	Biosensors for Diagnostic Applications. Advances in Biochemical Engineering/Biotechnology, 2011, 133, 115-148.	0.6	31
92	Design and integration of a generic disposable array-compatible sensor housing into an integrated disposable indirect microfluidic flow injection analysis system. Biomedical Microdevices, 2011, 13, 909-922.	1.4	18
93	Hot embossing of high performance polymers. Microsystem Technologies, 2011, 17, 585-592.	1.2	186
94	Biosensors with label-free detection designed for diagnostic applications. Analytical and Bioanalytical Chemistry, 2010, 398, 2403-2412.	1.9	118
95	Biosensor packaging â€" adaptation of the surface modification procedure. Procedia Engineering, 2010, 5, 363-366.	1.2	1
96	Hot punching on an 8 inch substrate as an alternative technology to produce holes on a large scale. Microsystem Technologies, 2010, 16, 1201-1206.	1.2	7
97	Synthesis and application of photo curable perfluoropolyethers as new material for microfluidics. Procedia Engineering, 2010, 5, 866-869.	1.2	3
98	Surface Acoustic Wave (SAW) Biosensor Chip System - a Promising Alternative for Biomedical Applications. IFMBE Proceedings, 2009, , 73-76.	0.2	5
99	Surface acoustic wave (SAW) biosensor system with an indirect microfluidic flow injection analysis system. , 2009, , .		0
100	An indirect microfluidic flow injection analysis (FIA) system allowing diffusion free pumping of liquids by using tetradecane as intermediary liquid. Lab on A Chip, 2009, 9, 354-356.	3.1	188
101	Surface acoustic wave biosensors: a review. Analytical and Bioanalytical Chemistry, 2008, 391, 1509-1519.	1.9	677
102	Polymer coating behavior of Rayleigh-SAW resonators with gold electrode structure for gas sensor applications. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2007, 54, 157-166.	1.7	13