Bastian E Rapp

List of Publications by Citations

83 papers	2,673 citations	25 h-index	50 g-index
105 ext. papers	3,355 ext. citations	8.5 avg, IF	5.29 L-index

#	Paper	IF	Citations
83	Surface acoustic wave biosensors: a review. *Analytical and Bioanalytical Chemistry*, **2008**, 391, 1509-19	4.4	546
82	Three-dimensional printing of transparent fused silica glass. *Nature*, **2017**, 544, 337-339	50.4	396
81	Let there be chip—towards rapid prototyping of microfluidic devices: one-step manufacturing processes. *Analytical Methods*, **2011**, 3, 2681	3.2	235
80	Hot embossing of high performance polymers. *Microsystem Technologies*, **2011**, 17, 585-592	1.7	114
79	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, 354-6	7.2	114
78	Biosensors with label-free detection designed for diagnostic applications. *Analytical and Bioanalytical Chemistry*, **2010**, 398, 2403-12	4.4	92
77	Advances in DNA-directed immobilization. *Current Opinion in Chemical Biology*, **2014**, 18, 8-15	9.7	77
76	Bioinspired air-retaining nanofur for drag reduction. *ACS Applied Materials & Interfaces*, **2015**, 7, 10651-5	9.5	63
75	Maskless projection lithography for the fast and flexible generation of grayscale protein patterns. *Small*, **2012**, 8, 1570-8	11	63
74	Synthetic enzyme supercomplexes: co-immobilization of enzyme cascades. *Analytical Methods*, **2015**, 7, 4030-4037	3.2	53
73	Liquid Glass: A Facile Soft Replication Method for Structuring Glass. *Advanced Materials*, **2016**, 28, 4646-50	24	46
72	High-Performance Materials for 3D Printing in Chemical Synthesis Applications. *Advanced Materials*, **2019**, 31, e1805982	24	44
71	Fabrication of arbitrary three-dimensional suspended hollow microstructures in transparent fused silica glass. *Nature Communications*, **2019**, 10, 1439	17.4	42
70	Glassomer-Processing Fused Silica Glass Like a Polymer. *Advanced Materials*, **2018**, 30, e1707100	24	37
69	Two-Photon Polymerization of Nanocomposites for the Fabrication of Transparent Fused Silica Glass Microstructures. *Advanced Materials*, **2021**, 33, e2006341	24	36
68	Study of Biofilm Growth on Slippery Liquid-Infused Porous Surfaces Made from Fluoropor. *ACS Applied Materials & Interfaces*, **2019**, 11, 4480-4487	9.5	34
67	Online monitoring of biofilm growth and activity using a combined multi-channel impedimetric and amperometric sensor. *Biosensors and Bioelectronics*, **2013**, 47, 157-63	11.8	33

66	Transparent, abrasion-insensitive superhydrophobic coatings for real-world applications. *Scientific Reports*, **2017**, 7, 15078	4.9	32
65	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	3.2	30
64	Connecting microfluidic chips using a chemically inert, reversible, multichannel chip-to-world-interface. *Lab on A Chip*, **2013**, 13, 4343-51	7.2	29
63	Computer-aided microfluidics (CAMF): from digital 3D-CAD models to physical structures within a day. *Microfluidics and Nanofluidics*, **2013**, 15, 625-635	2.8	29
62	Highly Fluorinated Methacrylates for Optical 3D Printing of Microfluidic Devices. *Micromachines*, **2018**, 9,	3.3	28
61	The chemistry of cyborgs--interfacing technical devices with organisms. *Angewandte Chemie - International Edition*, **2013**, 52, 13942-57	16.4	28
60	Phase change materials in microactuators: Basics, applications and perspectives. *Sensors and Actuators A: Physical*, **2018**, 271, 303-347	3.9	26
59	Fused Deposition Modeling of Microfluidic Chips in Polymethylmethacrylate. *Micromachines*, **2020**, 11,	3.3	26
58	Biosensors for diagnostic applications. *Advances in Biochemical Engineering/Biotechnology*, **2013**, 133, 115-48	1.7	24
57	Multi-channel microfluidic biosensor platform applied for online monitoring and screening of biofilm formation and activity. *PLoS ONE*, **2015**, 10, e0117300	3.7	24
56	Liquid polystyrene: a room-temperature photocurable soft lithography compatible pour-and-cure-type polystyrene. *Lab on A Chip*, **2014**, 14, 2698-708	7.2	23
55	Tacky cyclic olefin copolymer: a biocompatible bonding technique for the fabrication of microfluidic channels in COC. *Lab on A Chip*, **2016**, 16, 1561-4	7.2	22
54	Microfluidics on liquid handling stations (F-on-LHS): an industry compatible chip interface between microfluidics and automated liquid handling stations. *Lab on A Chip*, **2013**, 13, 2337-43	7.2	21
53	Liquid PMMA: A High Resolution Polymethylmethacrylate Negative Photoresist as Enabling Material for Direct Printing of Microfluidic Chips. *Advanced Engineering Materials*, **2018**, 20, 1700699	3.5	18
52	Biofunctional Micropatterning of Thermoformed 3D Substrates. *Advanced Functional Materials*, **2014**, 24, 442-450	15.6	17
51	Deposition of ultrathin parylene C films in the range of 18 nm to 142 nm: Controlling the layer thickness and assessing the closeness of the deposited films. *Thin Solid Films*, **2012**, 520, 4884-4888	2.2	16
50	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, 909-22	3.7	14
49	Rapid bonding of polydimethylsiloxane to stereolithographically manufactured epoxy components using a photogenerated intermediary layer. *Lab on A Chip*, **2013**, 13, 2268-71	7.2	13

48	vasQchip: A Novel Microfluidic, Artificial Blood Vessel Scaffold for Vascularized 3D Tissues. *Advanced Materials Technologies*, **2018**, 3, 1700246	6.8	12
47	High-throughput injection molding of transparent fused silica glass. *Science*, **2021**, 372, 182-186	33.3	12
46	Long-Term Stability of Polymer-Coated Surface Transverse Wave Sensors for the Detection of Organic Solvent Vapors. *Sensors*, **2017**, 17,	3.8	11
45	Design and characterization of a platform for thermal actuation of up to 588 microfluidic valves. *Microfluidics and Nanofluidics*, **2013**, 14, 177-186	2.8	11
44	Rational design of a peptide capture agent for CXCL8 based on a model of the CXCL8:CXCR1 complex. *RSC Advances*, **2015**, 5, 25657-25668	3.7	11
43	Volumetric additive manufacturing of silica glass with microscale computed axial lithography.. *Science*, **2022**, 376, 308-312	33.3	11
42	Acoustic Biosensors Coated With Phosphorylcholine Groups for Label-Free Detection of Human C-Reactive Protein in Serum. *IEEE Sensors Journal*, **2015**, 15, 4388-4392	4	10
41	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, 157-66	3.2	10
40	Quantification of the Influence of Endotoxins on the Mechanics of Adult and Neonatal Red Blood Cells. *Journal of Physical Chemistry B*, **2015**, 119, 7837-45	3.4	9
39	Photolithographic structuring of soft, extremely foldable and autoclavable hydrophobic barriers in paper. *Analytical Methods*, **2018**, 10, 4028-4035	3.2	9
38	Polymer Structures on Surface Acoustic Wave Biosensors. *Procedia Technology*, **2017**, 27, 35-36		9
37	Polysiloxane layers created by sol-gel and photochemistry: ideal surfaces for rapid, low-cost and high-strength bonding of epoxy components to polydimethylsiloxane. *Lab on A Chip*, **2015**, 15, 1772-82	7.2	8
36	Suspended Liquid Subtractive Lithography: One-step generation of 3D channel geometries in viscous curable polymer matrices. *Scientific Reports*, **2017**, 7, 7387	4.9	8
35	Functionalization of paper using photobleaching: A fast and convenient method for creating paper-based assays with colorimetric and fluorescent readout. *Engineering in Life Sciences*, **2016**, 16, 525-531	3.4	8
34	Numerics made easy: solving the Navier-Stokes equation for arbitrary channel cross-sections using Microsoft Excel. *Biomedical Microdevices*, **2016**, 18, 52	3.7	8
33	Hot punching on an 8 inch substrate as an alternative technology to produce holes on a large scale. *Microsystem Technologies*, **2010**, 16, 1201-1206	1.7	7
32	Liquid Glass for Photovoltaics: Multifunctional Front Cover Glass for Solar Modules. *ACS Applied Materials & Interfaces*, **2019**, 11, 35015-35022	9.5	6
31	Facile fabrication of micro-/nanostructured, superhydrophobic membranes with adjustable porosity by 3D printing. *Journal of Materials Chemistry A*, **2021**, 9, 21379-21386	13	6

30	Chemie der Cyborgs Zur Verknpfung technischer Systeme mit Lebewesen. *Angewandte Chemie*, **2013**, 125, 14190-14206	3.6	5
29	Surface Acoustic Wave (SAW) Biosensor Chip System - a Promising Alternative for Biomedical Applications. *IFMBE Proceedings*, **2009**, 73-76	0.2	5
28	Divide and print. *Nature Materials*, **2020**, 19, 131-133	27	4
27	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	8.5	4
26	Melt-Extrusion-Based Additive Manufacturing of Transparent Fused Silica Glass. *Advanced Science*, **2021**, 8, e2103180	13.6	4
25	Emerging Technologies and Materials for High-Resolution 3D Printing of Microfluidic Chips. *Advances in Biochemical Engineering/Biotechnology*, **2020**, 1	1.7	4
24	Localized protein immobilization on microstructured polymeric surfaces for diagnostic applications. *Microfluidics and Nanofluidics*, **2016**, 20, 1	2.8	3
23	Synthesis and application of photo curable perfluoropolyethers as new material for microfluidics. *Procedia Engineering*, **2010**, 5, 866-869		3
22	Additive manufacturing of microfluidic glass chips **2018**,		3
21	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	0.7	3
20	Finite Difference Method **2017**, 623-631		2
19	An individual addressable and latchable actuator array for microfluidic systems. *Microfluidics and Nanofluidics*, **2016**, 20, 1	2.8	2
18	Next-generation 3D printing of glass: the emergence of enabling materials **2018**,		2
17	Facile integration of electronics in glass microfluidic devices for electrochemical synthesis and analysis **2020**,		2
16	Fused Deposition Modeling of Microfluidic Chips in Transparent Polystyrene. *Micromachines*, **2021**, 12,	3.3	2
15	High Resolution Patterning of an Organic-Inorganic Photoresin for the Fabrication of Platinum Microstructures. *Advanced Materials*, **2021**, 33, e2101992	24	2
14	A Nontoxic Battery with 3D-Printed Housing for On-Demand Operation of Microcontrollers in Microfluidic Sensors. *Micromachines*, **2019**, 10,	3.3	1
13	Analytical Solution of the Time-Dependent Microfluidic Poiseuille Flow in Rectangular Channel Cross-Sections and its Numerical Implementation in Microsoft Excel. *Biosensors*, **2019**, 9,	5.9	1

12	Electrochemical Methods for Biomass and Biocorrosion Monitoring **2018**, 166-172		1
11	Biosensor packaging adaptation of the surface modification procedure. *Procedia Engineering*, **2010**, 5, 363-366		1
10	Sacrificial template replication: fabrication of arbitrary embedded microfluidic channels in transparent fused silica glass **2020**,		1
9	Generation of multi-level microstructures using a wavelength-selective photoresist and mask-less grayscale lithography **2020**,		1
8	3D printing of highly fluorinated methacrylates for the rapid prototyping of transparent and chemically-resistant microfluidic devices **2019**,		1
7	On-chip Liquid Metal Plug Generator.. *Advanced Materials*, **2022**, e2201469	24	1
6	Study of repellence on polymeric surfaces with two individually adjustable pore hierarchies. *Chemical Engineering Journal*, **2022**, 437, 135287	14.7	0
5	Fluidic Platforms and Components of Lab-on-a-Chip devices **2015**, 83-139		
4	Towards Biofilm Spectroscopy A Novel Microfluidic Approach for Characterizing Biofilm Subpopulation by Microwave-Based Electrical Impedance Spectroscopy. *Frequenz*, **2018**, 72, 123-134	0.6	
3	Taylor-Aris Dispersion **2017**, 401-417		
2	3D Printing of Transparent Glasses. *Springer Series in Optical Sciences*, **2021**, 169-184	0.5	
1	A Polystyrene Photoresin for Direct Lithography of Microfluidic Chips. *Advanced Materials Technologies*,2200084	6.8	