

# Bastian E Rapp

## List of Publications by Year in descending order

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Version: 2024-02-01

102  
papers

3,937  
citations

159585

30  
h-index

128289

60  
g-index

105  
all docs

105  
docs citations

105  
times ranked

4957  
citing authors

#	ARTICLE	IF	CITATIONS
1	Surface acoustic wave biosensors: a review. <i>Analytical and Bioanalytical Chemistry</i> , 2008, 391, 1509-1519.	3.7	677
2	Three-dimensional printing of transparent fused silica glass. <i>Nature</i> , 2017, 544, 337-339.	27.8	588
3	Let there be chipâ€”towards rapid prototyping of microfluidic devices: one-step manufacturing processes. <i>Analytical Methods</i> , 2011, 3, 2681.	2.7	298
4	An indirect microfluidic flow injection analysis (FIA) system allowing diffusion free pumping of liquids by using tetradecane as intermediary liquid. <i>Lab on A Chip</i> , 2009, 9, 354-356.	6.0	188
5	Hot embossing of high performance polymers. <i>Microsystem Technologies</i> , 2011, 17, 585-592.	2.0	186
6	Biosensors with label-free detection designed for diagnostic applications. <i>Analytical and Bioanalytical Chemistry</i> , 2010, 398, 2403-2412.	3.7	118
7	Twoâ€”Photon Polymerization of Nanocomposites for the Fabrication of Transparent Fused Silica Glass Microstructures. <i>Advanced Materials</i> , 2021, 33, e2006341.	21.0	103
8	Volumetric additive manufacturing of silica glass with microscale computed axial lithography. <i>Science</i> , 2022, 376, 308-312.	12.6	94
9	Advances in DNA-directed immobilization. <i>Current Opinion in Chemical Biology</i> , 2014, 18, 8-15.	6.1	90
10	Highâ€”Performance Materials for 3D Printing in Chemical Synthesis Applications. <i>Advanced Materials</i> , 2019, 31, e1805982.	21.0	82
11	Liquid Glass: A Facile Soft Replication Method for Structuring Glass. <i>Advanced Materials</i> , 2016, 28, 4646-4650.	21.0	78
12	Maskless Projection Lithography for the Fast and Flexible Generation of Grayscale Protein Patterns. <i>Small</i> , 2012, 8, 1570-1578.	10.0	76
13	Fabrication of arbitrary three-dimensional suspended hollow microstructures in transparent fused silica glass. <i>Nature Communications</i> , 2019, 10, 1439.	12.8	76
14	Bioinspired Air-Retaining Nanofur for Drag Reduction. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 10651-10655.	8.0	73
15	Synthetic enzyme supercomplexes: co-immobilization of enzyme cascades. <i>Analytical Methods</i> , 2015, 7, 4030-4037.	2.7	63
16	Glassomerâ€”Processing Fused Silica Glass Like a Polymer. <i>Advanced Materials</i> , 2018, 30, e1707100.	21.0	60
17	Fused Deposition Modeling of Microfluidic Chips in Polymethylmethacrylate. <i>Micromachines</i> , 2020, 11, 873.	2.9	57
18	Study of Biofilm Growth on Slippery Liquid-Infused Porous Surfaces Made from Fluoropor. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 4480-4487.	8.0	54

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19	High-throughput injection molding of transparent fused silica glass. <i>Science</i> , 2021, 372, 182-186.	12.6	50
20	Online monitoring of biofilm growth and activity using a combined multi-channel impedimetric and amperometric sensor. <i>Biosensors and Bioelectronics</i> , 2013, 47, 157-163.	10.1	48
21	Highly Fluorinated Methacrylates for Optical 3D Printing of Microfluidic Devices. <i>Micromachines</i> , 2018, 9, 115.	2.9	44
22	Phase change materials in microactuators: Basics, applications and perspectives. <i>Sensors and Actuators A: Physical</i> , 2018, 271, 303-347.	4.1	43
23	Transparent, abrasion-insensitive superhydrophobic coatings for real-world applications. <i>Scientific Reports</i> , 2017, 7, 15078.	3.3	42
24	Optimization of enzyme immobilization on magnetic microparticles using 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide (EDC) as a crosslinking agent. <i>Analytical Methods</i> , 2015, 7, 10291-10298.	2.7	41
25	Computer-aided microfluidics (CAMF): from digital 3D-CAD models to physical structures within a day. <i>Microfluidics and Nanofluidics</i> , 2013, 15, 625-635.	2.2	38
26	Connecting microfluidic chips using a chemically inert, reversible, multichannel chip-to-world-interface. <i>Lab on A Chip</i> , 2013, 13, 4343.	6.0	36
27	The Chemistry of Cyborgs—Interfacing Technical Devices with Organisms. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 13942-13957.	13.8	35
28	Biosensors for Diagnostic Applications. <i>Advances in Biochemical Engineering/Biotechnology</i> , 2011, 133, 115-148.	1.1	31
29	Multi-Channel Microfluidic Biosensor Platform Applied for Online Monitoring and Screening of Biofilm Formation and Activity. <i>PLoS ONE</i> , 2015, 10, e0117300.	2.5	31
30	Liquid polystyrene: a room-temperature photocurable soft lithography compatible pour-and-cure-type polystyrene. <i>Lab on A Chip</i> , 2014, 14, 2698-2708.	6.0	30
31	Tacky cyclic olefin copolymer: a biocompatible bonding technique for the fabrication of microfluidic channels in COC. <i>Lab on A Chip</i> , 2016, 16, 1561-1564.	6.0	30
32	Facile fabrication of micro-/nanostructured, superhydrophobic membranes with adjustable porosity by 3D printing. <i>Journal of Materials Chemistry A</i> , 2021, 9, 21379-21386.	10.3	30
33	Microfluidics on liquid handling stations (Î¼F-on-LHS): an industry compatible chip interface between microfluidics and automated liquid handling stations. <i>Lab on A Chip</i> , 2013, 13, 2337.	6.0	23
34	Liquid PMMA: A High Resolution Polymethylmethacrylate Negative Photoresist as Enabling Material for Direct Printing of Microfluidic Chips. <i>Advanced Engineering Materials</i> , 2018, 20, 1700699.	3.5	23
35	Biofunctional Micropatterning of Thermoformed 3D Substrates. <i>Advanced Functional Materials</i> , 2014, 24, 442-450.	14.9	19
36	Design and integration of a generic disposable array-compatible sensor housing into an integrated disposable indirect microfluidic flow injection analysis system. <i>Biomedical Microdevices</i> , 2011, 13, 909-922.	2.8	18

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37	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. <i>Thin Solid Films</i> , 2012, 520, 4884-4888.	1.8	17
38	Long-Term Stability of Polymer-Coated Surface Transverse Wave Sensors for the Detection of Organic Solvent Vapors. <i>Sensors</i> , 2017, 17, 2529.	3.8	16
39	Rapid bonding of polydimethylsiloxane to stereolithographically manufactured epoxy components using a photogenerated intermediary layer. <i>Lab on A Chip</i> , 2013, 13, 2268.	6.0	15
40	vasQchip: A Novel Microfluidic, Artificial Blood Vessel Scaffold for Vascularized 3D Tissues. <i>Advanced Materials Technologies</i> , 2018, 3, 1700246.	5.8	15
41	Rational design of a peptide capture agent for CXCL8 based on a model of the CXCL8: CXCR1 complex. <i>RSC Advances</i> , 2015, 5, 25657-25668.	3.6	14
42	Suspended Liquid Subtractive Lithography: One-step generation of 3D channel geometries in viscous curable polymer matrices. <i>Scientific Reports</i> , 2017, 7, 7387.	3.3	14
43	Meltâ€Extrusionâ€Based Additive Manufacturing of Transparent Fused Silica Glass. <i>Advanced Science</i> , 2021, 8, e2103180.	11.2	14
44	Fused Deposition Modeling of Microfluidic Chips in Transparent Polystyrene. <i>Micromachines</i> , 2021, 12, 1348.	2.9	14
45	Polymer coating behavior of Rayleigh-SAW resonators with gold electrode structure for gas sensor applications. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2007, 54, 157-166.	3.0	13
46	Acoustic Biosensors Coated With Phosphorylcholine Groups for Label-Free Detection of Human C-Reactive Protein in Serum. <i>IEEE Sensors Journal</i> , 2015, 15, 4388-4392.	4.7	13
47	Photolithographic structuring of soft, extremely foldable and autoclavable hydrophobic barriers in paper. <i>Analytical Methods</i> , 2018, 10, 4028-4035.	2.7	13
48	Liquid Glass for Photovoltaics: Multifunctional Front Cover Glass for Solar Modules. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 35015-35022.	8.0	13
49	Design and characterization of a platform for thermal actuation of up to 588 microfluidic valves. <i>Microfluidics and Nanofluidics</i> , 2013, 14, 177-186.	2.2	12
50	Numerics made easy: solving the Navierâ€Stokes equation for arbitrary channel cross-sections using Microsoft Excel. <i>Biomedical Microdevices</i> , 2016, 18, 52.	2.8	12
51	High Resolution Patterning of an Organicâ€Inorganic Photoresin for the Fabrication of Platinum Microstructures. <i>Advanced Materials</i> , 2021, 33, e2101992.	21.0	11
52	Quantification of the Influence of Endotoxins on the Mechanics of Adult and Neonatal Red Blood Cells. <i>Journal of Physical Chemistry B</i> , 2015, 119, 7837-7845.	2.6	10
53	An Onâ€Chip Liquid Metal Plug Generator. <i>Advanced Materials</i> , 2022, 34, e2201469.	21.0	10
54	Polysiloxane layers created by solâ€gel and photochemistry: ideal surfaces for rapid, low-cost and high-strength bonding of epoxy components to polydimethylsiloxane. <i>Lab on A Chip</i> , 2015, 15, 1772-1782.	6.0	9

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55	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.	3.6	9
56	Polymer Structures on Surface Acoustic Wave Biosensors. Procedia Technology, 2017, 27, 35-36.	1.1	9
57	Emerging Technologies and Materials for High-Resolution 3D Printing of Microfluidic Chips. Advances in Biochemical Engineering/Biotechnology, 2020, , 1.	1.1	9
58	Deterministic Lateral Displacement Microfluidic Chip for Minicell Purification. Micromachines, 2022, 13, 365.	2.9	9
59	On-Chip Chemical Synthesis Using One-Step 3D Printed Polyperfluoropolyether. Chemie-Ingenieur-Technik, 2022, 94, 975-982.	0.8	9
60	Hot punching on an 8 inch substrate as an alternative technology to produce holes on a large scale. Microsystem Technologies, 2010, 16, 1201-1206.	2.0	7
61	Divide and print. Nature Materials, 2020, 19, 131-133.	27.5	6
62	Additive manufacturing of microfluidic glass chips. , 2018, , .		6
63	Surface Acoustic Wave (SAW) Biosensor Chip System - a Promising Alternative for Biomedical Applications. IFMBE Proceedings, 2009, , 73-76.	0.3	5
64	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.	7.8	4
65	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.	0.4	4
66	Study of repellence on polymeric surfaces with two individually adjustable pore hierarchies. Chemical Engineering Journal, 2022, 437, 135287.	12.7	4
67	A parallelized, perfused 3D triculture model of leukemia for in vitro drug testing of chemotherapeutics. Biofabrication, 2022, 14, 035011.	7.1	4
68	Synthesis and application of photo curable perfluoropolyethers as new material for microfluidics. Procedia Engineering, 2010, 5, 866-869.	1.2	3
69	Localized protein immobilization on microstructured polymeric surfaces for diagnostic applications. Microfluidics and Nanofluidics, 2016, 20, 1.	2.2	3
70	Finite Difference Method. , 2017, , 623-631.		3
71	A Nontoxic Battery with 3D-Printed Housing for On-Demand Operation of Microcontrollers in Microfluidic Sensors. Micromachines, 2019, 10, 588.	2.9	3
72	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.	4.7	3

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73	Next-generation 3D printing of glass: the emergence of enabling materials. , 2018, , .		3
74	Facile integration of electronics in glass microfluidic devices for electrochemical synthesis and analysis. , 2020, , .		3
75	An individual addressable and latchable actuator array for microfluidic systems. Microfluidics and Nanofluidics, 2016, 20, 1.	2.2	2
76	Generation of multi-level microstructures using a wavelength-selective photoresist and mask-less grayscale lithography. , 2020, , .		2
77	A Polystyrene Photoresin for Direct Lithography of Microfluidic Chips. Advanced Materials Technologies, 2022, 7, .	5.8	2
78	Application of Micro/Nanoporous Fluoropolymers with Reduced Bioadhesion in Digital Microfluidics. Nanomaterials, 2022, 12, 2201.	4.1	2
79	Biosensor packaging " adaptation of the surface modification procedure. Procedia Engineering, 2010, 5, 363-366.	1.2	1
80	Rapid prototyping of glass microfluidic chips. , 2015, , .		1
81	Electrochemical Methods for Biomass and Biocorrosion Monitoring. , 2018, , 166-172.		1
82	Sacrificial template replication: fabrication of arbitrary embedded microfluidic channels in transparent fused silica glass. , 2020, , .		1
83	High-throughput thermal replication of transparent fused silica glass. , 2019, , .		1
84	3D printing of highly fluorinated methacrylates for the rapid prototyping of transparent and chemically-resistant microfluidic devices. , 2019, , .		1
85	High-throughput manufacturing of transparent fused silica glass by injection molding and extrusion. , 2022, , .		1
86	Surface acoustic wave (SAW) biosensor system with an indirect microfluidic flow injection analysis system. , 2009, , .		0
87	Microfluidics on liquid handling stations (Î¼F-on-LHS): a new industry-compatible microfluidic platform. Proceedings of SPIE, 2014, , .	0.8	0
88	A chemically inert multichannel chip-to-world interface to connect microfluidic chips. , 2014, , .		0
89	Rapid bonding of polydimethylsiloxane (PDMS) to various stereolithographically (STL) structurable epoxy resins using photochemically cross-linked intermediary siloxane layers. , 2014, , .		0
90	Fluidic Platforms and Components of Lab-on-a-Chip devices. , 2015, , 83-139.		0

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91	Protein assay structured on paper by using lithography. Proceedings of SPIE, 2015, , .	0.8	0
92	Novel microfluidic system for online monitoring of biofilm dynamics by electrical impedance spectroscopy and amperometry. , 2016, , .		0
93	Tacky COC: a solvent bonding technique for fabrication of microfluidic systems. Proceedings of SPIE, 2016, , .	0.8	0
94	A latchable thermally activated phase change actuator for microfluidic systems. , 2016, , .		0
95	Rapid structuring of proteins on filter paper using lithography. , 2017, , .		0
96	Fast and cheap fabrication of molding tools for polymer replication. Proceedings of SPIE, 2017, , .	0.8	0
97	Taylor-Aris Dispersion. , 2017, , 401-417.		0
98	Towards Biofilm Spectroscopy – A Novel Microfluidic Approach for Characterizing Biofilm Subpopulation by Microwave-Based Electrical Impedance Spectroscopy. Frequenz, 2018, 72, 123-134.	0.9	0
99	Suspended liquid subtractive lithography: printing three dimensional channels directly into uncured PDMS. , 2018, , .		0
100	Structuring unbreakable hydrophobic barriers in paper. , 2018, , .		0
101	Suspended liquid subtractive lithography: printing three dimensional channels directly into uncured polymeric matrices. , 2019, , .		0
102	3D Printing of Transparent Glasses. Springer Series in Optical Sciences, 2021, , 169-184.	0.7	0