

# Stephan Keller

## List of Publications by Year in descending order

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97  
papers

2,529  
citations

218381

26  
h-index

223531

46  
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97  
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97  
docs citations

97  
times ranked

3035  
citing authors

#	ARTICLE	IF	CITATIONS
1	Impact of plasma-induced surface chemistry on electrochemical properties of microfabricated pyrolytic carbon electrodes. <i>Electrochimica Acta</i> , 2022, 410, 139987.	2.6	6
2	Generation and Culture of Cardiac Microtissues in a Microfluidic Chip with a Reversible Open Top Enables Electrical Pacing, Dynamic Drug Dosing and Endothelial Cell Culture. <i>Advanced Materials Technologies</i> , 2022, 7, .	3.0	11
3	Selective Passivation of Three-Dimensional Carbon Microelectrodes by Polydopamine Electrodeposition and Local Laser Ablation. <i>Micromachines</i> , 2022, 13, 371.	1.4	4
4	Hybrid microfabrication of 3D pyrolytic carbon electrodes by photolithography and additive manufacturing. <i>Micro and Nano Engineering</i> , 2022, 15, 100124.	1.4	4
5	Stereolithography-Derived Three-Dimensional Pyrolytic Carbon/Mn <sub>3</sub> O <sub>4</sub> Nanostructures for Free-Standing Hybrid Supercapacitor Electrodes. <i>ACS Applied Nano Materials</i> , 2022, 5, 1808-1819.	2.4	18
6	Selective Direct Laser Writing of Pyrolytic Carbon Microelectrodes in Absorber-Modified SU-8. <i>Micromachines</i> , 2021, 12, 564.	1.4	6
7	Pyrolytic carbon nanoglass electrodes for electrochemical detection of dopamine. <i>Electrochimica Acta</i> , 2021, 379, 138122.	2.6	12
8	Hot punching for loading of biodegradable microcontainers with budesonide-Soluplus film. <i>Biomedical Microdevices</i> , 2021, 23, 37.	1.4	1
9	Suspended highly 3D interdigitated carbon microelectrodes. <i>Carbon</i> , 2021, 179, 579-589.	5.4	13
10	Micromechanical Punching: A Versatile Method for Non-Spherical Microparticle Fabrication. <i>Polymers</i> , 2021, 13, 83.	2.0	8
11	Controlled Drug Release from Biodegradable Polymer Matrix Loaded in Microcontainers Using Hot Punching. <i>Pharmaceutics</i> , 2020, 12, 1050.	2.0	12
12	In situ electrochemical analysis of alkaline phosphatase activity in 3D cell cultures. <i>Electrochimica Acta</i> , 2020, 359, 136951.	2.6	16
13	Pyrolytic Carbon Nanoglass Enhances Neurogenesis and Dopaminergic Differentiation of Human Midbrain Neural Stem Cells. <i>Advanced Healthcare Materials</i> , 2020, 9, e2001108.	3.9	7
14	Leaky Opto-Electrical Neural Probe for Optical Stimulation and Electrochemical Detection of Dopamine Exocytosis. , 2020, , .		0
15	Highly structured 3D pyrolytic carbon electrodes derived from additive manufacturing technology. <i>Materials and Design</i> , 2020, 193, 108834.	3.3	34
16	Biodegradable microcontainers “ towards real life applications of microfabricated systems for oral drug delivery. <i>Lab on A Chip</i> , 2019, 19, 2905-2914.	3.1	28
17	Wafer-Scale Polymer-Based Transparent Nanocorals with Excellent Nanoplasmonic Photothermal Stability for High-Power and Superfast SERS Imaging. <i>Advanced Optical Materials</i> , 2019, 7, 1901413.	3.6	16
18	Investigation of Mucoadhesion and Degradation of PCL and PLGA Microcontainers for Oral Drug Delivery. <i>Polymers</i> , 2019, 11, 1828.	2.0	22

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19	Pyrolytic carbon resonators for micromechanical thermal analysis. <i>Microsystems and Nanoengineering</i> , 2019, 5, 58.	3.4	7
20	Ex vivo intestinal perfusion model for investigating mucoadhesion of microcontainers. <i>International Journal of Pharmaceutics</i> , 2019, 570, 118658.	2.6	20
21	Electrochemical pyrolytic carbon resonators for mass sensing on electrodeposited polymers. <i>Micro and Nano Engineering</i> , 2019, 2, 64-69.	1.4	7
22	Where Is the Drug? Quantitative 3D Distribution Analyses of Confined Drug-Loaded Polymer Matrices. <i>ACS Biomaterials Science and Engineering</i> , 2019, 5, 2935-2941.	2.6	5
23	Evaluation of the capacitive behavior of 3D carbon electrodes for sub-retinal photovoltaic prosthesis. <i>Micro and Nano Engineering</i> , 2019, 2, 110-116.	1.4	10
24	Fabrication of fully suspended pyrolytic carbon string resonators for characterization of drug nano- and microparticles. <i>Sensors and Actuators A: Physical</i> , 2019, 288, 194-203.	2.0	5
25	Leaky Optoelectrical Fiber for Optogenetic Stimulation and Electrochemical Detection of Dopamine Exocytosis from Human Dopaminergic Neurons. <i>Advanced Science</i> , 2019, 6, 1902011.	5.6	23
26	Electrochemical Monitoring of Saos-2 Cell Differentiation on Pyrolytic Carbon Electrodes. <i>Electroanalysis</i> , 2019, 31, 256-266.	1.5	6
27	Tailoring stress in pyrolytic carbon for fabrication of nanomechanical string resonators. <i>Carbon</i> , 2018, 133, 358-368.	5.4	13
28	Drug loaded biodegradable polymer microneedles fabricated by hot embossing. <i>Microelectronic Engineering</i> , 2018, 195, 57-61.	1.1	26
29	Three-dimensional fabrication of thick and densely populated soft constructs with complex and actively perfused channel network. <i>Acta Biomaterialia</i> , 2018, 65, 174-184.	4.1	72
30	Micropatterned Carbon-on-Quartz Electrode Chips for Photocurrent Generation from Thylakoid Membranes. <i>ACS Applied Energy Materials</i> , 2018, 1, 3313-3322.	2.5	16
31	Microfabricated devices for oral drug delivery. <i>Lab on A Chip</i> , 2018, 18, 2348-2358.	3.1	61
32	3D Carbon Microelectrodes with Bio-Functionalized Graphene for Electrochemical Biosensing. <i>Biosensors</i> , 2018, 8, 70.	2.3	22
33	Powder embossing method for selective loading of polymeric microcontainers with drug formulation. <i>Microelectronic Engineering</i> , 2017, 171, 20-24.	1.1	23
34	High temperature SU-8 pyrolysis for fabrication of carbon electrodes. <i>Journal of Analytical and Applied Pyrolysis</i> , 2017, 125, 91-99.	2.6	39
35	Suspended 3D pyrolytic carbon microelectrodes for electrochemistry. <i>Carbon</i> , 2017, 121, 226-234.	5.4	32
36	Suspended microstructures of epoxy based photoresists fabricated with UV photolithography. <i>Microelectronic Engineering</i> , 2017, 176, 40-44.	1.1	6

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37	Loading of Drugâ€Polymer Matrices in Microreservoirs for Oral Drug Delivery. <i>Macromolecular Materials and Engineering</i> , 2017, 302, 1600366.	1.7	8
38	From concept to in vivo testing: Microcontainers for oral drug delivery. <i>Journal of Controlled Release</i> , 2017, 268, 343-351.	4.8	55
39	Nanomechanical Pyrolytic Carbon Resonators: Novel Fabrication Method and Characterization of Mechanical Properties. <i>Sensors</i> , 2016, 16, 1097.	2.1	11
40	Polymeric microcontainers improve oral bioavailability of furosemide. <i>International Journal of Pharmaceutics</i> , 2016, 504, 98-109.	2.6	59
41	Synthesis and characterization of UV photocrosslinkable hydrogels with poly(N-vinyl-2-pyrrolidone): Determination of the network mesh size distribution. <i>International Journal of Polymeric Materials and Polymeric Biomaterials</i> , 2016, 65, 516-525.	1.8	13
42	Pyrolytic carbon microelectrodes for impedance based cell sensing. <i>ECS Transactions</i> , 2016, 72, 35-44.	0.3	14
43	Pyrolytic 3D Carbon Microelectrodes for Electrochemistry. <i>ECS Transactions</i> , 2016, 72, 117-124.	0.3	11
44	Supercritical impregnation of polymer matrices spatially confined in microcontainers for oral drug delivery: Effect of temperature, pressure and time. <i>Journal of Supercritical Fluids</i> , 2016, 107, 145-152.	1.6	28
45	Novel Nanostructured Electrodes Obtained by Pyrolysis of Composite Polymeric Materials. <i>Electroanalysis</i> , 2015, 27, 1544-1549.	1.5	6
46	Micromechanical fast quasiâ€static detection of $\hat{I}_1$ and $\hat{I}_2$ relaxations with nanograms of polymer. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2015, 53, 1035-1039.	2.4	8
47	pH-triggered drug release from biodegradable microwells for oral drug delivery. <i>Biomedical Microdevices</i> , 2015, 17, 9958.	1.4	29
48	Dense high-aspect ratio 3D carbon pillars on interdigitated microelectrode arrays. <i>Carbon</i> , 2015, 94, 792-803.	5.4	28
49	Microcantilever sensors for fast analysis of enzymatic degradation of poly (d, l-lactide). <i>Polymer Degradation and Stability</i> , 2015, 119, 1-8.	2.7	5
50	Hot embossing and mechanical punching of biodegradable microcontainers for oral drug delivery. <i>Microelectronic Engineering</i> , 2015, 133, 104-109.	1.1	17
51	Fabrication of Ni stamp with high aspect ratio, two-leveled, cylindrical microstructures using dry etching and electroplating. <i>Journal of Micromechanics and Microengineering</i> , 2015, 25, 055021.	1.5	9
52	Hot punching of high-aspect-ratio 3D polymeric microstructures for drug delivery. <i>Lab on A Chip</i> , 2015, 15, 2576-2579.	3.1	18
53	Integrated Cantilever-Based Flow Sensors with Tunable Sensitivity for In-Line Monitoring of Flow Fluctuations in Microfluidic Systems. <i>Sensors</i> , 2014, 14, 229-244.	2.1	29
54	Pyrolysed 3Dâ€Carbon Scaffolds Induce Spontaneous Differentiation of Human Neural Stem Cells and Facilitate Realâ€Time Dopamine Detection. <i>Advanced Functional Materials</i> , 2014, 24, 7042-7052.	7.8	62

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55	A slow cooling rate of indomethacin melt spatially confined in microcontainers increases the physical stability of the amorphous drug without influencing its biorelevant dissolution behaviour. <i>Drug Delivery and Translational Research</i> , 2014, 4, 268-274.	3.0	11
56	Micromechanical String Resonators: Analytical Tool for Thermal Characterization of Polymers. <i>ACS Macro Letters</i> , 2014, 3, 55-58.	2.3	19
57	Polymer-filled microcontainers for oral delivery loaded using supercritical impregnation. <i>Journal of Controlled Release</i> , 2014, 173, 1-9.	4.8	61
58	SU-8 etching in inductively coupled oxygen plasma. <i>Microelectronic Engineering</i> , 2013, 112, 35-40.	1.1	31
59	Ferromagnetic shadow mask for spray coating of polymer patterns. <i>Microelectronic Engineering</i> , 2013, 110, 427-431.	1.1	13
60	Sensitive determination of the Young's modulus of thin films by polymeric microcantilevers. <i>Measurement Science and Technology</i> , 2013, 24, 125603.	1.4	12
61	Inkjet printing as a technique for filling of micro-wells with biocompatible polymers. <i>Microelectronic Engineering</i> , 2013, 111, 391-395.	1.1	25
62	Process Optimization of Ultrasonic Spray Coating of Polymer Films. <i>Langmuir</i> , 2013, 29, 6911-6919.	1.6	82
63	Pyrolyzed Photoresist Electrodes for Integration in Microfluidic Chips for Transmitter Detection from Biological Cells. <i>ECS Electrochemistry Letters</i> , 2013, 2, B5-B7.	1.9	8
64	Fabrication of high-aspect ratio SU-8 micropillar arrays. <i>Microelectronic Engineering</i> , 2012, 98, 483-487.	1.1	49
65	Statistical analysis of DNT detection using chemically functionalized microcantilever arrays. <i>Sensors and Actuators B: Chemical</i> , 2012, 171-172, 1054-1059.	4.0	21
66	Spatial confinement can lead to increased stability of amorphous indomethacin. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2012, 81, 418-425.	2.0	54
67	Surface chemical functionalisation of epoxy photoresist-based microcantilevers with organic-coated TiO <sub>2</sub> nanocrystals. <i>Micro and Nano Letters</i> , 2012, 7, 337.	0.6	0
68	Micromechanical aptasensor-based protein detection using a compact-disc format microfluidics system. , 2012, , .		2
69	An Astigmatic Detection System for Polymeric Cantilever-Based Sensors. <i>Journal of Sensors</i> , 2012, 2012, 1-7.	0.6	9
70	High throughput label-free platform for statistical bio-molecular sensing. <i>Lab on A Chip</i> , 2011, 11, 2411.	3.1	37
71	Fabrication of a cantilever-based microfluidic flow meter with nL min <sup>-1</sup> resolution. <i>Journal of Micromechanics and Microengineering</i> , 2011, 21, 015007.	1.5	16
72	Cantilever-like micromechanical sensors. <i>Reports on Progress in Physics</i> , 2011, 74, 036101.	8.1	473

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73	High-throughput automated system for statistical biosensing employing microcantilever arrays. , 2011, , .		2
74	Micromechanical sensors for the measurement of biopolymer degradation. , 2011, , .		1
75	3D microstructuring of biodegradable polymers. Microelectronic Engineering, 2011, 88, 2342-2344.	1.1	15
76	Fabrication of biopolymer cantilevers using nanoimprint lithography. Microelectronic Engineering, 2011, 88, 2294-2296.	1.1	5
77	Fabrication and characterization of SRN/SU-8 bimorph cantilevers for temperature sensing. Microelectronic Engineering, 2011, 88, 2311-2313.	1.1	15
78	Deposition of biopolymer films on micromechanical sensors. Microelectronic Engineering, 2011, 88, 2297-2299.	1.1	12
79	Cantilever-based micro-particle filter with simultaneous single particle detection. Journal of Micromechanics and Microengineering, 2011, 21, 054022.	1.5	3
80	Drift study of SU8 cantilevers in liquid and gaseous environments. Ultramicroscopy, 2010, 110, 596-598.	0.8	14
81	Surface Functionalization of Epoxyâ€Resistâ€Based Microcantilevers with Iron Oxide Nanocrystals. Advanced Materials, 2010, 22, 3288-3292.	11.1	14
82	Double layer resist process scheme for metal lift-off with application in inductive heating of microstructures. Microelectronic Engineering, 2010, 87, 1226-1228.	1.1	10
83	Novel SU-8 based vacuum wafer-level packaging for MEMS devices. Microelectronic Engineering, 2010, 87, 1173-1176.	1.1	25
84	Self-aligned cantilever positioning for on-substrate measurements using DVD pickup head. Microelectronic Engineering, 2010, 87, 708-711.	1.1	14
85	Fabrication of thin SU-8 cantilevers: initial bending, release and time stability. Journal of Micromechanics and Microengineering, 2010, 20, 045024.	1.5	37
86	Thermoplastic microcantilevers fabricated by nanoimprint lithography. Journal of Micromechanics and Microengineering, 2010, 20, 015009.	1.5	12
87	Wafer scale coating of polymer cantilever fabricated by nanoimprint lithography. , 2010, , .		1
88	Diffusion of water into SU-8 microcantilevers. Physical Chemistry Chemical Physics, 2010, 12, 10577.	1.3	26
89	Autonomous valve for detection of biopolymer degradation. , 2009, , .		0
90	Surface Functionalization of Micro Mechanical Cantilever Sensors by Organic Capped TiO2 and Fe2O3 Nanocrystals. Procedia Chemistry, 2009, 1, 32-35.	0.7	5

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91	Functionalization of SU-8 photoresist surfaces with IgG proteins. Applied Surface Science, 2008, 255, 2896-2902.	3.1	50
92	Photochemical Modification and Patterning of SU-8 Using Anthraquinone Photolinkers. Langmuir, 2008, 24, 9929-9932.	1.6	15
93	Processing of thin SU-8 films. Journal of Micromechanics and Microengineering, 2008, 18, 125020.	1.5	132
94	SU-8 Cantilevers for Bio/chemical Sensing; Fabrication, Characterisation and Development of Novel Read-out Methods. Sensors, 2008, 8, 1595-1612.	2.1	127
95	Optimized plasma-deposited fluorocarbon coating for dry release and passivation of thin SU-8 cantilevers. Journal of Vacuum Science & Technology B, 2007, 25, 1903.	1.3	30
96	Microscopic four-point probe based on SU-8 cantilevers. Review of Scientific Instruments, 2005, 76, 125102.	0.6	16
97	Hydrogen Peroxide Detection Using Prussian Blue-Modified 3D Pyrolytic Carbon Microelectrodes. Electroanalysis, 0, , .	1.5	4