

Tobias Baier

List of Publications by Year in descending order

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Version: 2024-02-01

50
papers

1,261
citations

279798

23
h-index

361022

35
g-index

50
all docs

50
docs citations

50
times ranked

1505
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of insoluble surfactants on shear flow over a surface in Cassie state at large Péclet numbers. <i>Journal of Fluid Mechanics</i> , 2021, 907, .	3.4	13
2	Drag force on spherical particle moving near a plane wall in highly rarefied gas. <i>Journal of Fluid Mechanics</i> , 2020, 883, .	3.4	5
3	Gas separation in a Knudsen pump inspired by a Crookes radiometer. <i>Microfluidics and Nanofluidics</i> , 2020, 24, 1.	2.2	9
4	Controlling the Trajectories of Nano/Micro Particles Using Light-Actuated Marangoni Flow. <i>Nano Letters</i> , 2018, 18, 6924-6930.	9.1	43
5	Air-propelled, herringbone-textured platelets. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	2
6	Thermophoresis of Janus particles at large Knudsen numbers. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	7
7	Thermally induced gas flows in ratchet channels with diffuse and specular boundaries. <i>Scientific Reports</i> , 2017, 7, 41412.	3.3	40
8	Knudsen pump inspired by Crookes radiometer with a specular wall. <i>Physical Review Fluids</i> , 2017, 2, .	2.5	27
9	Energy conversion by surface-tension-driven charge separation. <i>Microfluidics and Nanofluidics</i> , 2015, 19, 721-735.	2.2	2
10	Inscribing wettability gradients onto polymer substrates with different stiffness using corona discharge in point-to-plane geometry. <i>Applied Surface Science</i> , 2015, 330, 104-110.	6.1	13
11	Simple Fabrication of Robust Water-Repellent Surfaces with Low Contact-Angle Hysteresis Based on Impregnation. <i>Advanced Materials Interfaces</i> , 2014, 1, 1300138.	3.7	101
12	Influence of the enclosed fluid on the flow over a microstructured surface in the Cassie state. <i>Journal of Fluid Mechanics</i> , 2014, 740, 168-195.	3.4	100
13	Increasing the sensitivity of microfluidics based immunoassays using isotachopheresis. <i>Analyst</i> , The, 2014, 139, 4564.	3.5	17
14	Energy harvesting through gas dynamics in the free molecular flow regime between structured surfaces at different temperatures. <i>Physical Review E</i> , 2014, 89, 053003.	2.1	4
15	Small onset voltages in negative corona discharges using the edges of gold and aluminum foils as nano-structured electrodes. <i>Applied Physics Letters</i> , 2013, 103, 023114.	3.3	27
16	Self-propelling uneven Leidenfrost solids. <i>Physics of Fluids</i> , 2013, 25, .	4.0	46
17	Effect of electro-osmotic flow on energy conversion on superhydrophobic surfaces. <i>Physics of Fluids</i> , 2013, 25, .	4.0	6
18	Sample dispersion in isotachopheresis with Poiseuille counterflow. <i>Physics of Fluids</i> , 2013, 25, .	4.0	19

#	ARTICLE	IF	CITATIONS
19	Propulsion mechanisms for Leidenfrost solids on ratchets. <i>Physical Review E</i> , 2013, 87, 021001.	2.1	44
20	Particle Manipulation Based on Optically Controlled Free Surface Hydrodynamics. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 7291-7295.	13.8	55
21	Thermally driven flows between a Leidenfrost solid and a ratchet surface. <i>Physical Review E</i> , 2013, 87, 063015.	2.1	24
22	Isotachophoresis with emulsions. <i>Biomicrofluidics</i> , 2013, 7, 044103.	2.4	9
23	On the flow resistance of wide surface structures. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2012, 12, 569-570.	0.2	2
24	Towards a "Sample-In, Answer-Out" Point-of-Care Platform for Nucleic Acid Extraction and Amplification: Using an HPV E6/E7 mRNA Model System. <i>Journal of Oncology</i> , 2012, 2012, 1-12.	1.3	24
25	Corrigendum to "Enabling the enhancement of electroosmotic flow over superhydrophobic surfaces by induced charges" [<i>Colloids Surf. A: Physicochem. Eng. Aspects</i> 376 (1-3) (2011) 85-88]. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2012, 395, 284-285.	4.7	0
26	Microfluidic centrifuge based on a counterflow configuration. <i>Microfluidics and Nanofluidics</i> , 2012, 12, 317-324.	2.2	4
27	Enabling the enhancement of electroosmotic flow over superhydrophobic surfaces by induced charges. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2011, 376, 85-88.	4.7	19
28	Transport and separation of micron sized particles at isotachophoretic transition zones. <i>Biomicrofluidics</i> , 2011, 5, 14109.	2.4	27
29	Analytical approximations to the flow field induced by electroosmosis during isotachophoretic transport through a channel. <i>Journal of Fluid Mechanics</i> , 2011, 682, 101-119.	3.4	11
30	Three-dimensional CFD modelling of a continuous immunomagnetophoretic cell capture in BioMEMs. <i>Biochemical Engineering Journal</i> , 2010, 51, 110-116.	3.6	12
31	Thermocapillary flow on superhydrophobic surfaces. <i>Physical Review E</i> , 2010, 82, 037301.	2.1	28
32	Modelling immunomagnetic cell capture in CFD. <i>Microfluidics and Nanofluidics</i> , 2009, 7, 205-216.	2.2	27
33	Kinetic study of CO preferential oxidation over Pt-Rh/Al ₂ O ₃ catalyst in a micro-structured recycle reactor. <i>Catalysis Today</i> , 2009, 145, 90-100.	4.4	22
34	Transition zone dynamics in combined isotachophoretic and electro-osmotic transport. <i>Physics of Fluids</i> , 2009, 21, .	4.0	14
35	Hands-free sample preparation platform for nucleic acid analysis. <i>Lab on A Chip</i> , 2009, 9, 3399.	6.0	24
36	Micro contactor based on isotachophoretic sample transport. <i>Lab on A Chip</i> , 2009, 9, 3586.	6.0	26

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37	A micro-structured 5kW complete fuel processor for iso-octane as hydrogen supply system for mobile auxiliary power unitsPart I. Development of autothermal reforming catalyst and reactor. Chemical Engineering Journal, 2008, 137, 653-663.	12.7	46
38	RNA amplification chip with parallel microchannels and droplet positioning using capillary valves. Microsystem Technologies, 2008, 14, 673-681.	2.0	25
39	A micro-structured 5kW complete fuel processor for iso-octane as hydrogen supply system for mobile auxiliary power unitsPart II“Development of water“gas shift and preferential oxidation catalysts reactors and assembly of the fuel processor. Chemical Engineering Journal, 2008, 138, 474-489.	12.7	57
40	Modelling Immunomagnetic Cell Capture in CFD. , 2008, , .		3
41	Mean-field model for heat transfer in multichannel microreactors. AIChE Journal, 2007, 53, 1006-1016.	3.6	8
42	Temperature control of the water gas shift reaction in microstructured reactors. Chemical Engineering Science, 2007, 62, 4602-4611.	3.8	39
43	Determination of the Segregation Index to Sense the Mixing Quality of Pilot- and Production-Scale Microstructured Mixers. Chemical Engineering Research and Design, 2007, 85, 605-611.	5.6	26
44	Antiferromagnetic gap in the Hubbard model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2005, 605, 144-150.	4.1	24
45	A 1/4-Fluidic Mixing Network. Chemical Engineering and Technology, 2005, 28, 362-366.	1.5	9
46	Hermetic Gas-tight Ceramic Microreactors. Chemical Engineering and Technology, 2005, 28, 465-473.	1.5	50
47	Temperature dependence of antiferromagnetic order in the Hubbard model. Physical Review B, 2004, 70, .	3.2	76
48	A MEAN FIELD APPROACH TO THE COLORED HUBBARD MODEL. International Journal of Modern Physics A, 2001, 16, 2003-2008.	1.5	0
49	Spontaneous symmetry breaking in the colored Hubbard model. Physical Review B, 2000, 62, 15471-15479.	3.2	19
50	Anisotropic behaviour of the magnetoresistance in single crystalline iron films. Journal of Magnetism and Magnetic Materials, 1999, 195, 1-8.	2.3	26