Bahareh Behkam

List of Publications by Year
in descending order

71 papers	1,649 citations	393982 19 h-index	315357 38 g-index
74 all docs	74 docs citations	74 times ranked	1587 citing authors

#	Article	IF	Citations
1	Bacterial flagella-based propulsion and on/off motion control of microscale objects. Applied Physics Letters, 2007, 90, 023902.	1.5	300
2	Design Methodology for Biomimetic Propulsion of Miniature Swimming Robots. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2006, 128, 36-43.	0.9	180
3	Effect of quantity and configuration of attached bacteria on bacterial propulsion of microbeads. Applied Physics Letters, 2008, 93, .	1.5	140
4	Nanoscale Bacteriaâ€Enabled Autonomous Drug Delivery System (NanoBEADS) Enhances Intratumoral Transport of Nanomedicine. Advanced Science, 2019, 6, 1801309.	5.6	104
5	Controlling bacterial adhesion to surfaces using topographical cues: a study of the interaction of Pseudomonas aeruginosa with nanofiber-textured surfaces. Soft Matter, 2012, 8, 10254.	1.2	60
6	Directed transport of bacteria-based drug delivery vehicles: bacterial chemotaxis dominates particle shape. Biomedical Microdevices, 2014, 16, 717-725.	1.4	58
7	Effect of body shape on the motile behavior of bacteria-powered swimming microrobots (BacteriaBots). Biomedical Microdevices, 2012, 14, 999-1007.	1.4	51
8	Antimicrobial Surfaces Using Covalently Bound Polyallylamine. Biomacromolecules, 2014, 15, 169-176.	2.6	50
9	Modeling of stochastic motion of bacteria propelled spherical microbeads. Journal of Applied Physics, 2011, 109, 114702.	1.1	40
10	Computational and experimental study of chemotaxis of an ensemble of bacteria attached to a microbead. Physical Review E, 2011, 84, 061908.	0.8	40
11	Aligned fibers direct collective cell migration to engineer closing and nonclosing wound gaps. Molecular Biology of the Cell, 2017, 28, 2579-2588.	0.9	40
12	Crosshatch nanofiber networks of tunable interfiber spacing induce plasticity in cell migration and cytoskeletal response. FASEB Journal, 2019, 33, 10618-10632.	0.2	40
13	Modeling and Testing of a Biomimetic Flagellar Propulsion Method for Microscale Biomedical Swimming Robots. , 0, , .		38
14	Cancer Protrusions on a Tightrope: Nanofiber Curvature Contrast Quantitates Single Protrusion Dynamics. ACS Nano, 2017, 11, 12037-12048.	7.3	34
15	Off-chip passivated-electrode, insulator-based dielectrophoresis (OÏ€DEP). Analytical and Bioanalytical Chemistry, 2013, 405, 6657-6666.	1.9	28
16	3D Insulatorâ€based dielectrophoresis using DCâ€biased, AC electric fields for selective bacterial trapping. Electrophoresis, 2015, 36, 277-283.	1.3	28
17	Biomanufacturing and self-propulsion dynamics of nanoscale bacteria-enabled autonomous delivery systems. Applied Physics Letters, 2014, 105, .	1.5	27
18	Bacterial chemotaxis-enabled autonomous sorting of nanoparticles of comparable sizes. Lab on A Chip, 2016, 16, 1254-1260.	3.1	26

#	Article	IF	Citations
19	Cancer Cells Sense Fibers by Coiling on them in a Curvature-Dependent Manner. IScience, 2019, 19, 905-915.	1.9	26
20	A PEG-DA microfluidic device for chemotaxis studies. Journal of Micromechanics and Microengineering, 2013, 23, 085014.	1.5	24
21	Cell-Fiber Interactions on Aligned and Suspended Nanofiber Scaffolds. Journal of Biomaterials and Tissue Engineering, 2013, 3, 355-368.	0.0	21
22	Active Targeting Significantly Outperforms Nanoparticle Size in Facilitating Tumor-Specific Uptake in Orthotopic Pancreatic Cancer. ACS Applied Materials & Interfaces, 2021, 13, 49614-49630.	4.0	21
23	Thermal conductivity model for thin silicon-on-insulator layers at high temperatures. , 2002, , .		20
24	Optimizing the restored chemotactic behavior of anticancer agent Salmonella enterica serovar Typhimurium VNP20009. Journal of Biotechnology, 2017, 251, 76-83.	1.9	20
25	Thermal property measurement of thin aluminum oxide layers for giant magnetoresistive (GMR) head applications. International Journal of Heat and Mass Transfer, 2005, 48, 2023-2031.	2.5	18
26	Effect of electrode sub-micron surface feature size on current generation of Shewanella oneidensis in microbial fuel cells. Journal of Power Sources, 2017, 347, 270-276.	4.0	17
27	Imaging Inflammation and Infection in the Gastrointestinal Tract. International Journal of Molecular Sciences, 2020, 21, 243.	1.8	17
28	E. Coli Inspired Propulsion for Swimming Microrobots. , 2004, , 1037.		14
29	Quantitative Investigation of the Role of Intra-/Intercellular Dynamics in Bacterial Quorum Sensing. ACS Synthetic Biology, 2018, 7, 1030-1042.	1.9	14
30	Towards Hybrid Swimming Microrobots: Bacteria Assisted Propulsion of Polystyrene Beads. , 2006, 2006, 2421-4.		12
31	Characterization of bacterial actuation of micro-objects. , 2009, , .		12
32	Bromide ion-functionalized nanoprobes for sensitive and reliable pH measurement by surface-enhanced Raman spectroscopy. Analyst, The, 2019, 144, 7326-7335.	1.7	12
33	Toward Development of an Autonomous Network of Bacteria-Based Delivery Systems (BacteriaBots): Spatiotemporally High-Throughput Characterization of Bacterial Quorum-Sensing Response. Analytical Chemistry, 2014, 86, 11489-11493.	3.2	11
34	Bacteria Integrated Swimming Microrobots. , 2007, , 154-163.		9
35	Embedded passivated-electrode insulator-based dielectrophoresis (EÏ€DEP). Analytical and Bioanalytical Chemistry, 2013, 405, 9825-9833.	1.9	9
36	Improved pentamethine cyanine nanosensors for optoacoustic imaging of pancreatic cancer. Scientific Reports, 2021, 11, 4366.	1.6	9

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37	Design of Nanofiber Coatings for Mitigation of Microbial Adhesion: Modeling and Application to Medical Catheters. ACS Applied Materials & Interfaces, 2018, 10, 15477-15486.	4.0	8
38	Aligned and suspended fiber force probes for drug testing at single cell resolution. Biofabrication, 2014, 6, 045006.	3.7	7
39	Spun-wrapped aligned nanofiber (SWAN) lithography for fabrication of micro/nano-structures on 3D objects. Nanoscale, 2016, 8, 12780-12786.	2.8	7
40	Integrating nanofibers with biochemical gradients to investigate physiologically-relevant fibroblast chemotaxis. Lab on A Chip, 2019, 19, 3641-3651.	3.1	6
41	Hybrid centralized/decentralized control of a network of bacteria-based bio-hybrid microrobots. Journal of Micro-Bio Robotics, 2019, 15, 1-12.	2.1	6
42	Robust and Repeatable Biofabrication of Bacteriaâ€Mediated Drug Delivery Systems: Effect of Conjugation Chemistry, Assembly Process Parameters, and Nanoparticle Size. Advanced Intelligent Systems, 2022, 4, 2100135.	3.3	6
43	Bacterial propulsion of chemically patterned micro-cylinders. , 2008, , .		5
44	Toward a minimally invasive bladder pressure monitoring system: Model bladder for in vitro testing. , 2010, , .		5
45	Data-driven statistical modeling of the emergent behavior of biohybrid microrobots. APL Bioengineering, 2020, 4, 016104.	3.3	5
46	Construction of Bacteria-Based Cargo Carriers for Targeted Cancer Therapy. Methods in Molecular Biology, 2018, 1831, 25-35.	0.4	4
47	Quantitative biophysical metrics for rapid evaluation of ovarian cancer metastatic potential. Molecular Biology of the Cell, 2022, 33, mbcE21080419.	0.9	4
48	A stochastic model for chemotactic motion of micro-beads propelled by attached bacteria. , 2010, , .		2
49	Hybrid Centralized/Decentralized Control of Bacteria-Based Bio-Hybrid Microrobots. , 2018, , .		2
50	Selective E. coli trapping with 3D insulator-based dielectrophoresis using DC-biased, AC electric fields. , 2012, 2012, 6285-8.		1
51	Effect of Anode Surface Roughness on Power Generation in Microbial Fuel Cells. , 2012, , .		1
52	Off-chip electrode insulator based dielectrophoresis. , 2012, , .		1
53	Towards quorum sensing based distributed control for networks of mobile sensors. , 2013, , .		1
54	Outer Membrane Structural Defects in Salmonella enterica Serovar Typhimurium Affect Neutrophil Chemokinesis but Not Chemotaxis. MSphere, 2021, 6, .	1.3	1

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55	Stiffness and temporal optimization in periodic movements: An optimal control approach. , 2011, , .		1
56	Autonomous Sorting of Micro-Particles Using Bacterial Chemotaxis. , 2012, , .		1
57	Thermal Property Measurement of Thin Aluminum Oxide Layers for Giant Magnetoresistive (GMR) Head Applications. , 2003, , .		1
58	A computational framework for investigating bacteria transport in microvasculature. Computer Methods in Biomechanics and Biomedical Engineering, 2022, , 1-12.	0.9	1
59	Bacterial flagella assisted propulsion of patterned latex particles: Effect of particle size. , 2007, , .		0
60	Stochastic dynamics of bacteria propelled spherical micro-robots. , 2011, , .		0
61	Enhanced directionality of bio-hybrid mobile microrobots using non-spherical body geometries. , 2012, 2012, 6580-2.		0
62	Bacterial chemotaxis enabled autonomous sorting of micro-particles. , 2012, 2012, 2823-6.		0
63	Effect of Body Geometry on the Motile Behavior of Bacteriabots. , 2012, , .		0
64	Bioinspired Anti-Biofilm Surfaces Based on Topographical Cues. , 2012, , .		0
65	Computational Model of Human Capillary Hydrodynamics. , 2016, , .		0
66	Candida Albicans Yeast Seek to Adhere in Energetically Optimal Locations. Biophysical Journal, 2017, 112, 310a.	0.2	0
67	Statistical Modeling of a Distributed Network of Bacteria-propelled Microrobots (BacteriaBots). , 2019, , .		0
68	Design and Numerical Modeling of an On-Board Chemical Release Module for Motion Control of Bacteria-Propelled Swimming Micro-Robots. , 2008, , .		0
69	NANOSCALE BACTERIA-ENABLED AUTONOMOUS DELIVERY SYSTEMS (NanoBEADS) FOR CANCER THERAPY. , 2018, , 87-109.		0
70	Towards Hybrid Swimming Microrobots: Bacteria Assisted Propulsion of Polystyrene Beads. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0
71	Stochastic dynamics of bacteria propelled spherical micro-robots. , 2011, , .		0