Islam S M Khalil

List of Publications by Year
in descending order

71 papers	1,595 citations	361413 20 h-index	377865 34 g-index
79 all docs	79 docs citations	79 times ranked	1114 citing authors

#	Article	IF	Citations
1	Modeling and Characterization of the Passive Bending Stiffness of Nanoparticleâ€Coated Sperm Cells using Magnetic Excitation. Advanced Theory and Simulations, 2022, 5, .	2.8	5
2	2D Magnetic Actuation and Localization of a Surface Milli-Roller in Low Reynolds Numbers. IEEE Robotics and Automation Letters, 2022, 7, 3874-3881.	5.1	3
3	Magnetic Actuation Methods in Bio/Soft Robotics. Advanced Functional Materials, 2021, 31, 2005137.	14.9	126
4	Impact of Segmented Magnetization on the Flagellar Propulsion of Spermâ€Templated Microrobots. Advanced Science, 2021, 8, 2004037.	11.2	29
5	Serial imaging of micro-agents and cancer cell spheroids in a microfluidic channel using multicolor fluorescence microscopy. PLoS ONE, 2021, 16, e0253222.	2.5	7
6	Open-Loop Magnetic Actuation of Helical Robots using Position-Constrained Rotating Dipole Field. , 2021, , .		1
7	Fabrication of Magnetic Molecularly Imprinted Beaded Fibers for Rosmarinic Acid. Nanomaterials, 2020, 10, 1478.	4.1	13
8	Bidirectional Propulsion of Arcâ€Shaped Microswimmers Driven by Precessing Magnetic Fields. Advanced Intelligent Systems, 2020, 2, 2000064.	6.1	10
9	Controlled Noncontact Manipulation of Nonmagnetic Untethered Microbeads Orbiting Two-Tailed Soft Microrobot. IEEE Transactions on Robotics, 2020, 36, 1320-1332.	10.3	15
10	IRONSperm: Sperm-templated soft magnetic microrobots. Science Advances, 2020, 6, eaba5855.	10.3	137
11	Resemblance between motile and magnetically actuated sperm cells. Applied Physics Letters, 2020, 116, .	3.3	20
12	Contactless acoustic micro/nano manipulation: a paradigm for next generation applications in life sciences. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200621.	2.1	51
13	Control of Magnetically-Driven Screws in a Viscoelastic Medium. , 2020, , .		0
14	Development of a Coil Driver for Magnetic Manipulation Systems. IEEE Magnetics Letters, 2019, 10, 1-5.	1.1	3
15	Characterization of Flagellar Propulsion of Soft Microrobotic Sperm in a Viscous Heterogeneous Medium. Frontiers in Robotics and AI, 2019, 6, 65.	3.2	7
16	Modeling of Spermbots in a Viscous Colloidal Suspension. Advanced Theory and Simulations, 2019, 2, 1900072.	2.8	8
17	Characterization of Helical Propulsion Inside In Vitro and Ex Vivo Models of a Rabbit Aorta. , 2019, 2019, 5283-8286.		3
18	Magnetic localization and control of helical robots for clearing superficial blood clots. APL Bioengineering, 2019, 3, 026104.	6.2	49

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19	Magnetic Localization for an Electromagnetic-Based Haptic Interface. IEEE Magnetics Letters, 2019, 10, 1-5.	1.1	13
20	Independent Actuation of Two-Tailed Microrobots. IEEE Robotics and Automation Letters, 2018, 3, 1703-1710.	5.1	43
21	Swimming Back and Forth Using Planar Flagellar Propulsion at Low Reynolds Numbers. Advanced Science, 2018, 5, 1700461.	11.2	33
22	Mechanical Rubbing of Blood Clots Using Helical Robots Under Ultrasound Guidance. IEEE Robotics and Automation Letters, 2018, 3, 1112-1119.	5.1	66
23	An Investigation of the Sensing Capabilities of Magnetotactic Bacteria. , 2018, 2018, 1739-1742.		0
24	The Influence of Mechanical Rubbing on the Dissolution of Blood Clots. , 2018, 2018, 1660-1663.		2
25	Manipulation of Non-Magnetic Microbeads Using Soft Microrobotic Sperm. , 2018, , .		1
26	Controllable switching between planar and helical flagellar swimming of a soft robotic sperm. PLoS ONE, 2018, 13, e0206456.	2.5	24
27	Realization of a Soft Microrobot with Multiple Flexible Flagella. , 2018, , .		3
28	Near Surface Effects on the Flagellar Propulsion of Soft Robotic Sperms. , 2018, , .		2
29	Rubbing Against Blood Clots Using Helical Robots: Modeling and In Vitro Experimental Validation. IEEE Robotics and Automation Letters, 2017, 2, 927-934.	5.1	59
30	Near-surface effects on the controlled motion of magnetotactic bacteria. , 2017, , .		10
31	A magnetic bilateral tele-manipulation system using paramagnetic microparticles for micromanipulation of nonmagnetic objects. , 2017, , .		6
32	Positioning of drug carriers using permanent magnet-based robotic system in three-dimensional space. , 2017, , .		4
33	Rendering 3D virtual objects in mid-air using controlled magnetic fields. , 2017, , .		7
34	Swimming in low reynolds numbers using planar and helical flagellar waves. , 2017, , .		4
35	Experimental characterization of helical propulsion in Newtonian and viscoelastic mediums. , 2017, , .		0
36	Modeling of Unidirectional-Overloaded Transition in Catalytic Tubular Microjets. Journal of Physical Chemistry C, 2017, 121, 14854-14863.	3.1	9

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37	Sperm-shaped magnetic microrobots: Fabrication using electrospinning, modeling, and characterization. , 2016, , .		18
38	Robust and Optimal Control of Magnetic Microparticles inside Fluidic Channels with Time-Varying Flow Rates. International Journal of Advanced Robotic Systems, 2016, 13, 123.	2.1	17
39	Targeting of cell mockups using sperm-shaped microrobots in vitro. , 2016, , .		2
40	Influence of the magnetic field on the two-dimensional control of Magnetospirillum gryphiswaldense strain MSR-1. , 2016, , .		7
41	In vitro validation of clearing clogged vessels using microrobots. , 2016, , .		17
42	Magnetic propulsion of robotic sperms at low-Reynolds number. Applied Physics Letters, 2016, 109, .	3.3	59
43	Feeling paramagnetic micro-particles trapped inside gas bubbles: A tele-manipulation study. , 2016, , .		2
44	Targeted penetration of MCF-7 cells using iron-oxide nanoparticles in vitro. , 2016, , .		3
45	Disturbance observer-based motion control of paramagnetic microparticles against time-varying flow rates. , 2016, , .		2
46	Wireless motion control of paramagnetic microparticles using a magnetic-based robotic system with an open-configuration. , 2015, , .		4
47	Non-Contact manipulation of microbeads via pushing and pulling using magnetically controlled clusters of paramagnetic microparticles. , 2015, , .		14
48	Propulsion and steering of helical magnetic microrobots using two synchronized rotating dipole fields in three-dimensional space. , 2015, , .		19
49	Precise Localization and Control of Catalytic Janus Micromotors Using Weak Magnetic Fields. International Journal of Advanced Robotic Systems, 2015, 12, 2.	2.1	26
50	Paramagnetic microparticles sliding on a surface: Characterization and closed-loop motion control. , 2015, , .		8
51	Magnetic-based motion control of sperm-shaped microrobots using weak oscillating magnetic fields. , 2014, , .		17
52	Magnetic-Based Motion Control of Paramagnetic Microparticles With Disturbance Compensation. IEEE Transactions on Magnetics, 2014, 50, 1-10.	2.1	37
53	Magnetic-based closed-loop control of paramagnetic microparticles using ultrasound feedback. , 2014, , .		41
54	Control Characteristics of Magnetotactic Bacteria: <italic>Magnetospirillum Magnetotacticum</italic> Strain MS-1 and <italic>Magnetospirillum Magneticum</italic> Strain AMB-1. IEEE Transactions on Magnetics, 2014, 50, 1-11.	2.1	7

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55	The Control of Self-Propelled Microjets Inside a Microchannel With Time-Varying Flow Rates. IEEE Transactions on Robotics, 2014, 30, 49-58.	10.3	61
56	Magnetic-based motion control of a helical robot using two synchronized rotating dipole fields. , 2014, , .		14
57	MagnetoSperm: A microrobot that navigates using weak magnetic fields. Applied Physics Letters, 2014, 104, .	3.3	145
58	Biocompatible, accurate, and fully autonomous: a sperm-driven micro-bio-robot. Journal of Micro-Bio Robotics, 2014, 9, 79-86.	2.1	34
59	Wireless Magnetic-Based Closed-Loop Control of Self-Propelled Microjets. PLoS ONE, 2014, 9, e83053.	2.5	27
60	Three-dimensional closed-loop control of self-propelled microjets. Applied Physics Letters, 2013, 103, .	3.3	52
61	Closed-loop control of magnetotactic bacteria. International Journal of Robotics Research, 2013, 32, 637-649.	8.5	62
62	Magnetic control of potential microrobotic drug delivery systems: Nanoparticles, magnetotactic bacteria and self-propelled microjets. , 2013, 2013, 5299-302.		18
63	Magnetic-based minimum input motion control of paramagnetic microparticles in three-dimensional space. , 2013, , .		9
64	Microassembly using a cluster of paramagnetic microparticles. , 2013, , .		17
65	Control of magnetotactic bacterium in a micro-fabricated maze. , 2013, , .		17
66	Magnetotactic bacteria and microjets: A comparative study. , 2013, , .		2
67	Characterization and Control of Biological Microrobots. Springer Tracts in Advanced Robotics, 2013, , 617-631.	0.4	14
68	Interaction force estimation during manipulation of microparticles. , 2012, , .		14
69	An energy-based state observer for dynamical subsystems with inaccessible state variables. , 2012, , .		3
70	Wireless magnetic-based control of paramagnetic microparticles. , 2012, , .		26
71	Understanding Robustness of Magnetically Driven Helical Propulsion in Viscous Fluids Using Sensitivity Analysis. Advanced Theory and Simulations, 0, , 2100519.	2.8	7