Mahmut Selman Sakar

List of Publications by Year in Descending Order

64 papers	3,247 citations	27 h-index	56 g-index
72 ext. papers	3,923 ext. citations	10.5 avg, IF	5.4 L-index

#	Paper	IF	Citations
64	Dynamics of entrapped microbubbles with multiple openings. *Physics of Fluids*, **2022**, 34, 012012	4.4	1
63	Tissue Engineering with Mechanically Induced Solid-Fluid Transitions. *Advanced Materials*, **2021**, e2106149	29	2
62	Investigating Tissue Mechanics Using Untethered Soft Robotic Microdevices. *Frontiers in Robotics and AI*, **2021**, 8, 649765	2.8	1
61	A model for 3D deformation and reconstruction of contractile microtissues. *Soft Matter*, **2021**, 17, 10198-10209	3.8	1
60	Active biomaterials for mechanobiology. *Biomaterials*, **2021**, 267, 120497	15.6	28
59	Engineered Extracellular Matrices with Integrated Wireless Microactuators to Study Mechanobiology. *Advanced Materials*, **2021**, 33, e2102641	24	4
58	Flow Driven Robotic Navigation of Endovascular Microscopic Devices. *The Abstracts of the International Conference on Advanced Mechatronics Toward Evolutionary Fusion of IT and Mechatronics ICAM*, **2021**, 2021.7, OS1-5		
57	Cancer-cell stiffening via cholesterol depletion enhances adoptive T-cell immunotherapy. *Nature Biomedical Engineering*, **2021**,	19	14
56	Flow driven robotic navigation of microengineered endovascular probes. *Nature Communications*, **2020**, 11, 6356	17.4	20
55	Immune evasion by designer microrobots. *Science Robotics*, **2020**, 5,	18.6	3
54	Remotely Controlled Colloidal Assembly of Soft Microrobotic Artificial Muscle. *Advanced Intelligent Systems*, **2020**, 2, 2000062	6	8
53	BAF restricts cGAS on nuclear DNA to prevent innate immune activation. *Science*, **2020**, 369, 823-828	33.3	50
52	Addressable Acoustic Actuation of 3D Printed Soft Robotic Microsystems. *Advanced Science*, **2020**, 7, 2001120	13.6	21
51	Pulsatile Flow-Induced Fatigue-Resistant Photopolymerizable Hydrogels for the Treatment of Intracranial Aneurysms. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 619858	5.8	2
50	Biomanipulation: Universal Soft Robotic Microgripper (Small 4/2019). *Small*, **2019**, 15, 1970022	11	1
49	Modular soft robotic microdevices for dexterous biomanipulation. *Lab on A Chip*, **2019**, 19, 778-788	7.2	16
48	Compound micromachines powered by acoustic streaming **2019**,		4

47	Surface and Bulk Stresses Drive Morphological Changes in Fibrous Microtissues. *Biophysical Journal*, **2019**, 117, 975-986	2.9	7
46	Adaptive locomotion of artificial microswimmers. *Science Advances*, **2019**, 5, eaau1532	14.3	127
45	Universal Soft Robotic Microgripper. *Small*, **2019**, 15, e1803870	11	33
44	Engineering Control over 3D Morphogenesis by Tissue Origami. *Developmental Cell*, **2018**, 44, 131-132	10.2	2
43	A model for cellular mechanotransduction and contractility at finite strain. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **2018**, 98, 1754-1770	1	3
42	A model for cellular mechanotransduction and contractility at finite strain. *ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik*, **2018**, 98, 2047-2047	1	
41	Optimization of Tail Geometry for the Propulsion of Soft Microrobots. *IEEE Robotics and Automation Letters*, **2017**, 2, 727-732	4.2	23
40	Magnetic microrobots for microbiology **2017**, 163-195		1
39	Robotically controlled microprey to resolve initial attack modes preceding phagocytosis. *Science Robotics*, **2017**, 2,	18.6	37
38	Self-folding hydrogel bilayer for enhanced drug loading, encapsulation, and transport. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2016**, 2016, 2103-2106	0.9	6
37	Cellular forces and matrix assembly coordinate fibrous tissue repair. *Nature Communications*, **2016**, 7, 11036	17.4	74
36	Soft micromachines with programmable motility and morphology. *Nature Communications*, **2016**, 7, 12263	17.4	356
35	Magnetically Driven Silver-Coated Nanocoils for Efficient Bacterial Contact Killing. *Advanced Functional Materials*, **2016**, 26, 1063-1069	15.6	96
34	Magnetoelectric micromachines with wirelessly controlled navigation and functionality. *Materials Horizons*, **2016**, 3, 113-118	14.4	53
33	Magnetic microrobots with addressable shape control **2016**,		9
32	Real-time automated characterization of 3D morphology and mechanics of developing plant cells. *International Journal of Robotics Research*, **2015**, 34, 1136-1146	5.7	24
31	Mechanical Characterization and Shape Optimization of Fascicle-Like 3D Skeletal Muscle Tissues Contracted with Electrical and Optical Stimuli. *Tissue Engineering - Part A*, **2015**, 21, 1848-58	3.9	16
30	Shape-switching microrobots for medical applications: the influence of shape in drug delivery and locomotion. *ACS Applied Materials & Interfaces*, **2015**, 7, 6803-11	9.5	97

29	Magnetically driven Bi2O3/BiOCl-based hybrid microrobots for photocatalytic water remediation. *Journal of Materials Chemistry A*, **2015**, 3, 23670-23676	13	82
28	Cell-mediated fibre recruitment drives extracellular matrix mechanosensing in engineered fibrillar microenvironments. *Nature Materials*, **2015**, 14, 1262-8	27	356
27	The biocompatibility and anti-biofouling properties of magnetic core-multishell Fe@C NWs-AAO nanocomposites. *Physical Chemistry Chemical Physics*, **2015**, 17, 13274-9	3.6	3
26	3D Printed Microtransporters: Compound Micromachines for Spatiotemporally Controlled Delivery of Therapeutic Agents. *Advanced Materials*, **2015**, 27, 6644-50	24	148
25	Hybrid helical magnetic microrobots obtained by 3D template-assisted electrodeposition. *Small*, **2014**, 10, 1284-8	11	93
24	An integrated microrobotic platform for on-demand, targeted therapeutic interventions. *Advanced Materials*, **2014**, 26, 952-7	24	200
23	Generating mobile fluidic traps for selective three-dimensional transport of microobjects. *Applied Physics Letters*, **2014**, 105, 114102	3.4	35
22	Formation of elongated fascicle-inspired 3D tissues consisting of high-density, aligned cells using sacrificial outer molding. *Lab on A Chip*, **2014**, 14, 1907-16	7.2	41
21	Cooperative manipulation and transport of microobjects using multiple helical microcarriers. *RSC Advances*, **2014**, 4, 26771-26776	3.7	37
20	High-throughput analysis of the morphology and mechanics of tip growing cells using a microrobotic platform **2014**,		1
19	Three-dimensionally printed biological machines powered by skeletal muscle. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 10125-30	11.5	262
18	Lithography: Hybrid Helical Magnetic Microrobots Obtained by 3D Template-Assisted Electrodeposition (Small 7/2014). *Small*, **2014**, 10, 1234-1234	11	2
17	Self-folding mobile microrobots for biomedical applications **2014**,		9
16	Targeted Delivery: An Integrated Microrobotic Platform for On-Demand, Targeted Therapeutic Interventions (Adv. Mater. 6/2014). *Advanced Materials*, **2014**, 26, 951-951	24	2
15	Three-dimensional, automated magnetic biomanipulation with subcellular resolution **2013**,		4
14	Necking and failure of constrained 3D microtissues induced by cellular tension. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 20923-8	11.5	38
13	Automated biomanipulation of single cells using magnetic microrobots. *International Journal of Robotics Research*, **2013**, 32, 346-359	5.7	160
12	Non-contact, 3D magnetic biomanipulation for in vivo and in vitro applications **2012**,		2

11	Stochastic Source Seeking by Mobile Robots. *IEEE Transactions on Automatic Control*, **2012**, 57, 2308-2324	5.9	50
10	Formation and optogenetic control of engineered 3D skeletal muscle bioactuators. *Lab on A Chip*, **2012**, 12, 4976-85	7.2	198
9	Modeling, control and experimental characterization of microbiorobots. *International Journal of Robotics Research*, **2011**, 30, 647-658	5.7	63
8	. *Proceedings of the IEEE*, **2011**, 99, 1470-1481	14.3	56
7	Wireless manipulation of single cells using magnetic microtransporters **2011**,		25
6	Electrokinetic and optical control of bacterial microrobots. *Journal of Micromechanics and Microengineering*, **2011**, 21, 035001	2	106
5	Single cell manipulation using ferromagnetic composite microtransporters. *Applied Physics Letters*, **2010**, 96, 043705	3.4	110
4	Nonholonomic source seeking in switching random fields **2010**,		7
3	Long-term imaging of the ventral nerve cord in behaving adult Drosophila		2
2	On-Board Mechanical Control Systems for Untethered Microrobots. *Advanced Intelligent Systems*,2000233	6	4
1	Locomotion of Sensor-Integrated Soft Robotic Devices Inside Sub-Millimeter Arteries with Impaired Flow Conditions. *Advanced Intelligent Systems*,2100247	6	3