Ho-Young Kim

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

89 papers	2,742 citations	28 h-index	50 g-index
98 ext. papers	3,317 ext. citations	6.5 avg, IF	5.31 L-index

#	Paper	IF	Citations
89	Flutter-driven triboelectrification for harvesting wind energy. *Nature Communications*, **2014**, 5, 4929	17.4	265
88	Water harvest via dewing. *Langmuir*, **2012**, 28, 10183-91	4	220
87	BIOMECHANICS. Jumping on water: Surface tension-dominated jumping of water striders and robotic insects. *Science*, **2015**, 349, 517-21	33.3	188
86	Hygrobot: A self-locomotive ratcheted actuator powered by environmental humidity. *Science Robotics*, **2018**, 3,	18.6	178
85	Sliding of liquid drops down an inclined solid surface. *Journal of Colloid and Interface Science*, **2002**, 247, 372-80	9.3	173
84	Nanoscale patterning of microtextured surfaces to control superhydrophobic robustness. *Langmuir* , **2010**, 26, 8319-26	4	113
83	Capillary rise between elastic sheets. *Journal of Fluid Mechanics*, **2006**, 548, 141	3.7	106
82	Nanopottery: coiling of electrospun polymer nanofibers. *Nano Letters*, **2010**, 10, 2138-40	11.5	70
81	Mechanism of particle removal by megasonic waves. *Applied Physics Letters*, **2009**, 94, 081908	3.4	66
80	Liquid spreading on superhydrophilic micropillar arrays. *Journal of Fluid Mechanics*, **2011**, 680, 477-487	3.7	65
79	Kinematic Condition for Maximizing the Thrust of a Robotic Fish Using a Compliant Caudal Fin. *IEEE Transactions on Robotics*, **2012**, 28, 1216-1227	6.5	60
78	Extreme water repellency of nanostructured low-surface-energy non-woven fabrics. *Soft Matter*, **2012**, 8, 1817-1823	3.6	52
77	Hydrodynamics of writing with ink. *Physical Review Letters*, **2011**, 107, 264501	7.4	47
76	UV-responsive nano-sponge for oil absorption and desorption. *Scientific Reports*, **2015**, 5, 12908	4.9	46
75	Dynamics of hemiwicking. *Journal of Fluid Mechanics*, **2016**, 800, 57-71	3.7	46
74	Selective preconcentration and online collection of charged molecules using ion concentration polarization. *RSC Advances*, **2015**, 5, 66178-66184	3.7	45
73	Disruptive bubble behaviour leading to microstructure damage in an ultrasonic field. *Journal of Fluid Mechanics*, **2014**, 750, 355-371	3.7	38

72	Self-burial mechanics of hygroscopically responsive awns. *Integrative and Comparative Biology*, **2014**, 54, 1034-42	2.8	38
71	Drop impact on microwetting patterned surfaces. *Physics of Fluids*, **2010**, 22, 072101	4.4	37
70	Experimental study of drop spreading on textured superhydrophilic surfaces. *Physics of Fluids*, **2013** , 25, 092110	4.4	35
69	Tilted Janus polymer pillars. *Soft Matter*, **2010**, 6, 3924	3.6	33
68	Non-Negligible Diffusio-Osmosis Inside an Ion Concentration Polarization Layer. *Physical Review Letters*, **2016**, 116, 254501	7.4	32
67	Long-lasting hydrophilicity on nanostructured Si-incorporated diamond-like carbon films. *Langmuir*, **2010**, 26, 17203-9	4	32
66	Capillarity ion concentration polarization as spontaneous desalting mechanism. *Nature Communications*, **2016**, 7, 11223	17.4	32
65	The role of superhydrophobicity in the adhesion of a floating cylinder. *Journal of Fluid Mechanics*, **2009**, 624, 23-32	3.7	30
64	Dynamics of surfactant-driven fracture of particle rafts. *Physical Review Letters*, **2006**, 96, 178301	7.4	30
63	Poro-elasto-capillary wicking of cellulose sponges. *Science Advances*, **2018**, 4, eaao7051	14.3	28
62	Capillarity Guided Patterning of Microliquids. *Small*, **2015**, 11, 2789-97	11	28
61	Imaging the high-speed impact of microdrop on solid surface. *Review of Scientific Instruments*, **2003**, 74, 4930-4937	1.7	28
60	Vapor transport deposited tin monosulfide for thin-film solar cells: effect of deposition temperature and duration. *Journal of Materials Chemistry A*, **2019**, 7, 7186-7193	13	26
59	Drop impact on super-wettability-contrast annular patterns. *Journal of Fluid Mechanics*, **2013**, 730, 328-342	3.7	26
58	Equilibrium of an elastically confined liquid drop. *Journal of Applied Physics*, **2008**, 103, 093519	2.5	25
57	Multi-curvature liquid meniscus in a nanochannel: evidence of interplay between intermolecular and surface forces. *Lab on A Chip*, **2009**, 9, 3255-60	7.2	24
56	Bending of floating flexible legs. *Journal of Fluid Mechanics*, **2008**, 610, 381-390	3.7	24
55	Effects of surface nanostructures on self-cleaning and anti-fogging characteristics of transparent glass. *Journal of Mechanical Science and Technology*, **2017**, 31, 5407-5414	1.6	23

54	Optimal lamellar arrangement in fish gills. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 8067-70	11.5	23
53	Towards a biologically inspired small-scale water jumping robot **2008**,		23
52	Water striders adjust leg movement speed to optimize takeoff velocity for their morphology. *Nature Communications*, **2016**, 7, 13698	17.4	23
51	Spontaneous Marangoni Mixing of Miscible Liquids at a Liquid-Liquid-Air Contact Line. *Langmuir*, **2015**, 31, 8726-31	4	22
50	Ultrasonic washing of textiles. *Ultrasonics Sonochemistry*, **2016**, 29, 563-7	8.9	20
49	Ionic spiderwebs. *Science Robotics*, **2020**, 5,	18.6	20
48	A scaling law for the lift of hovering insects. *Journal of Fluid Mechanics*, **2015**, 782, 479-490	3.7	18
47	Capillary rise of non-aqueous liquids in cellulose sponges. *Journal of Fluid Mechanics*, **2017**, 818,	3.7	16
46	Jumping dynamics of aquatic animals. *Journal of the Royal Society Interface*, **2019**, 16, 20190014	4.1	16
45	Does liquid slippage within a rough channel always increase the flow rate?. *Physics of Fluids*, **2014**, 26, 072002	4.4	16
44	Shape of a large drop on a rough hydrophobic surface. *Physics of Fluids*, **2013**, 25, 022102	4.4	15
43	Bending and buckling of wet paper. *Physics of Fluids*, **2016**, 28, 042101	4.4	15
42	Hydrogel-based strong and fast actuators by electroosmotic turgor pressure.. *Science*, **2022**, 376, 301-307	33.3	15
41	Reduction of granular drag inspired by self-burrowing rotary seeds. *Physics of Fluids*, **2017**, 29, 041702	4.4	14
40	Dewetting of liquid film via vapour-mediated Marangoni effect. *Journal of Fluid Mechanics*, **2019**, 872, 100-114	3.7	14
39	Capillarity in Soft Porous Solids. *Annual Review of Fluid Mechanics*, **2020**, 52, 263-284	22	14
38	Pseudo 1-D Micro/Nanofluidic Device for Exact Electrokinetic Responses. *Langmuir*, **2016**, 32, 6478-85	4	13
37	Capillary rise in superhydrophilic rough channels. *Physics of Fluids*, **2020**, 32, 032105	4.4	11

36	Evaporation-driven clustering of microscale pillars and lamellae. *Physics of Fluids*, **2016**, 28, 022003	4.4	11
35	Wicking and flooding of liquids on vertical porous sheets. *Physics of Fluids*, **2015**, 27, 032105	4.4	10
34	On the dynamics of capillary imbibition. *Journal of Mechanical Science and Technology*, **2012**, 26, 3795-3801	1.6	10
33	Formation, growth, and saturation of dry holes in thick liquid films under vapor-mediated Marangoni effect. *Physics of Fluids*, **2019**, 31, 112105	4.4	10
32	Interfacial waves generated by electrowetting-driven contact line motion. *Physics of Fluids*, **2016**, 28, 102102	4.4	9
31	Wake and thrust of an angularly reciprocating plate. *Journal of Fluid Mechanics*, **2013**, 720, 545-557	3.7	8
30	On Thermocapillary Propulsion of Microliquid Slug. *Nanoscale and Microscale Thermophysical Engineering*, **2007**, 11, 351-362	3.7	7
29	The effect of compliant joint and caudal fin in thrust generation for robotic fish **2010**,		6
28	Comparing cleaning effects of gas and vapor bubbles in ultrasonic fields. *Ultrasonics Sonochemistry*, **2021**, 76, 105618	8.9	6
27	Delicate Fabric Handling Using a Soft Robotic Gripper With Embedded Microneedles. *IEEE Robotics and Automation Letters*, **2020**, 5, 4852-4858	4.2	5
26	Mechanics of jumping on water. *Physical Review Fluids*, **2017**, 2,	2.8	4
25	Crack density in bloodstains. *Soft Matter*, **2020**, 16, 5571-5576	3.6	3
24	Hygroresponsive coiling of seed awns and soft actuators. *Extreme Mechanics Letters*, **2020**, 38, 100746	3.9	3
23	Optimal cold sink temperature for thermoelectric dehumidifiers. *Journal of Mechanical Science and Technology*, **2018**, 32, 885-895	1.6	3
22	Nanostructured Carbon Materials. *Journal of Nanomaterials*, **2015**, 2015, 1-2	3.2	3
21	Soft artificial electroreceptors for noncontact spatial perception. *Science Advances*, **2021**, 7, eabg9203	14.3	3
20	Scalable High-Efficiency Bi-Facial Solar Evaporator with a Dendritic Copper Oxide Wick. *ACS Applied Materials & Interfaces*, **2021**, 13, 11869-11878	9.5	3
19	Behavior of thermal bubbles formed from a single nucleation site. *Journal of Mechanical Science and Technology*, **2010**, 24, 415-420	1.6	2

18	3D micromesh-based hybrid bioprinting: multidimensional liquid patterning for 3D microtissue engineering. *NPG Asia Materials*, **2022**, 14,	10.3	2
17	Water strider females use individual experience to adjust jumping behaviour to their weight within physical constraints of water surface tension. *Scientific Reports*, **2020**, 10, 18657	4.9	2
16	From an elongated cavity to funnel by the impact of a drop train. *Journal of Fluid Mechanics*, **2021**, 921,	3.7	2
15	A design principle of root length distribution of plants. *Journal of the Royal Society Interface*, **2019**, 16, 20190556	4.1	2
14	Direct recovery of spilled oil using hierarchically porous oil scoop with capillary-induced anti-oil-fouling. *Journal of Hazardous Materials*, **2021**, 410, 124549	12.8	2
13	Agile reversible shape-morphing of particle rafts. *Soft Matter*, **2021**, 17, 7554-7564	3.6	2
12	Avian mud nest architecture by self-secreted saliva. *Proceedings of the National Academy of Sciences of the United States of America*, **2021**, 118,	11.5	2
11	Optimal diameter reduction ratio of acinar airways in human lungs. *PLoS ONE*, **2019**, 14, e0204191	3.7	1
10	Dynamics of directional soluble wicking. *Journal of Fluid Mechanics*, **2021**, 915,	3.7	1
9	Interfacial Solar Evaporator - Physical Principles and Fabrication Methods. *International Journal of Precision Engineering and Manufacturing - Green Technology*, **2021**, 8, 1347-1367	3.8	1
8	Directional raids by army ants as an adaption to patchily distributed food: a simulation model. *Animal Cells and Systems*, **2018**, 22, 267-272	2.3	1
7	Critical AC frequency for stable operation of electrowetting-driven optofluidic devices with polymeric electrolyte solutions. *Journal of Mechanical Science and Technology*, **2019**, 33, 1793-1797	1.6	0
6	Aspiration-mediated hydrogel micropatterning using rail-based open microfluidic devices for high-throughput 3D cell culture. *Scientific Reports*, **2021**, 11, 19986	4.9	0
5	Contact behavior of a fluttering flag with an adjacent plate. *Physics of Fluids*, **2021**, 33, 034105	4.4	0
4	Removal of Contaminant Nanoparticles with (hbox {CO}_2) Nanobullets at Atmospheric Conditions. *International Journal of Precision Engineering and Manufacturing - Green Technology*, **2020**, 7, 929-938	3.8	
3	Trails of ants converge or diverge through lens-shaped impediments, resembling principles of optics. *Scientific Reports*, **2020**, 10, 8479	4.9	
2	Dynamics of liquid imbibition through partially soluble porous sheets. *JMST Advances*, **2020**, 2, 53-59	1.9	
1	Coalescence of oil drops and films on micropillared substrates enabled by enhanced water drainage through pillar gaps. *Soft Matter*, **2021**, 17, 5888-5896	3.6	