

Christoph Keplinger

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.

57
papers

7,980
citations

31
h-index

66
g-index

66
ext. papers

9,411
ext. citations

12.5
avg, IF

6.16
L-index

#	Paper	IF	Citations
57	Stretchable, transparent, ionic conductors. <i>Science</i> , 2013 , 341, 984-7	33.3	1133
56	A highly stretchable autonomous self-healing elastomer. <i>Nature Chemistry</i> , 2016 , 8, 618-24	17.6	858
55	Pneumatic Networks for Soft Robotics that Actuate Rapidly. <i>Advanced Functional Materials</i> , 2014 , 24, 2163-2170	15.6	763
54	Ionic skin. <i>Advanced Materials</i> , 2014 , 26, 7608-14	24	760
53	25th anniversary article: A soft future: from robots and sensor skin to energy harvesters. <i>Advanced Materials</i> , 2014 , 26, 149-61	24	620
52	Hydraulically amplified self-healing electrostatic actuators with muscle-like performance. <i>Science</i> , 2018 , 359, 61-65	33.3	424
51	A Transparent, Self-Healing, Highly Stretchable Ionic Conductor. <i>Advanced Materials</i> , 2017 , 29, 1605099	24	321
50	Harnessing snap-through instability in soft dielectrics to achieve giant voltage-triggered deformation. <i>Soft Matter</i> , 2012 , 8, 285-288	3.6	321
49	Dielectric Elastomer Generators: How Much Energy Can Be Converted?. <i>IEEE/ASME Transactions on Mechatronics</i> , 2011 , 16, 33-41	5.5	253
48	Giant voltage-induced deformation in dielectric elastomers near the verge of snap-through instability. <i>Journal of the Mechanics and Physics of Solids</i> , 2013 , 61, 611-628	5	246
47	Peano-HASEL actuators: Muscle-mimetic, electrohydraulic transducers that linearly contract on activation. <i>Science Robotics</i> , 2018 , 3,	18.6	216
46	Inkjet printing of conductive inks with high lateral resolution on omniphobic "R(F) paper" for paper-based electronics and MEMS. <i>Advanced Materials</i> , 2014 , 26, 4677-82	24	189
45	Röntgen electrode-free elastomer actuators without electromechanical pull-in instability. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 4505-10	11.5	182
44	Flexible ferroelectret field-effect transistor for large-area sensor skins and microphones. <i>Applied Physics Letters</i> , 2006 , 89, 073501	3.4	159
43	Soft Actuators and Robots that Are Resistant to Mechanical Damage. <i>Advanced Functional Materials</i> , 2014 , 24, 3003-3010	15.6	152
42	Buckling Pneumatic Linear Actuators Inspired by Muscle. <i>Advanced Materials Technologies</i> , 2016 , 1, 1600035	3.5	151
41	Flexible-foam-based capacitive sensor arrays for object detection at low cost. <i>Applied Physics Letters</i> , 2008 , 92, 013506	3.4	135

40	Capacitive extensometry for transient strain analysis of dielectric elastomer actuators. <i>Applied Physics Letters</i> , 2008 , 92, 192903	3.4	112
39	Natural rubber for sustainable high-power electrical energy generation. <i>RSC Advances</i> , 2014 , 4, 27905-27913	5.7	104
38	Stretch dependence of the electrical breakdown strength and dielectric constant of dielectric elastomers. <i>Smart Materials and Structures</i> , 2013 , 22, 104012	3.4	104
37	Method for measuring energy generation and efficiency of dielectric elastomer generators. <i>Applied Physics Letters</i> , 2011 , 99, 162904	3.4	91
36	Performance of dissipative dielectric elastomer generators. <i>Journal of Applied Physics</i> , 2012 , 111, 094102	7.5	73
35	An Easy-to-Implement Toolkit to Create Versatile and High-Performance HASEL Actuators for Untethered Soft Robots. <i>Advanced Science</i> , 2019 , 6, 1900178	13.6	69
34	High-performance electromechanical transduction using laterally-constrained dielectric elastomers part I: Actuation processes. <i>Journal of the Mechanics and Physics of Solids</i> , 2017 , 105, 81-94	5	36
33	An analytical model for the design of Peano-HASEL actuators with drastically improved performance. <i>Extreme Mechanics Letters</i> , 2019 , 29, 100449	3.9	36
32	Electric-field-tuned color in photonic crystal elastomers. <i>Applied Physics Letters</i> , 2012 , 100, 101902	3.4	36
31	Dynamically Actuated Liquid-Infused Poroelastic Film with Precise Control over Droplet Dynamics. <i>Advanced Functional Materials</i> , 2018 , 28, 1802632	15.6	33
30	A Lesson from Plants: High-Speed Soft Robotic Actuators. <i>Advanced Science</i> , 2020 , 7, 1903391	13.6	32
29	HASEL Artificial Muscles for a New Generation of Lifelike Robots-Recent Progress and Future Opportunities. <i>Advanced Materials</i> , 2021 , 33, e2003375	24	32
28	Stretchable Conductive Composites Based on Metal Wools for Use as Electrical Vias in Soft Devices. <i>Advanced Functional Materials</i> , 2015 , 25, 1418-1425	15.6	31
27	High-Strain Peano-HASEL Actuators. <i>Advanced Functional Materials</i> , 2020 , 30, 1908821	15.6	26
26	Dynamics of electrohydraulic soft actuators. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 16207-16213	11.5	23
25	Shaping the future of robotics through materials innovation. <i>Nature Materials</i> , 2021 , 20, 1582-1587	27	17
24	Charge localization instability in a highly deformable dielectric elastomer. <i>Applied Physics Letters</i> , 2014 , 104, 022905	3.4	16
23	How inhomogeneous zipping increases the force output of Peano-HASEL actuators. <i>Extreme Mechanics Letters</i> , 2019 , 31, 100542	3.9	15

22	Rapid 3D Printing of Electrohydraulic (HASEL) Tentacle Actuators. <i>Advanced Functional Materials</i> , 2020 , 30, 2005244	15.6	14
21	Spider-Inspired Electrohydraulic Actuators for Fast, Soft-Actuated Joints. <i>Advanced Science</i> , 2021 , 8, e2100916	13.6	13
20	Towards enduring autonomous robots via embodied energy.. <i>Nature</i> , 2022 , 602, 393-402	50.4	13
19	Identification and Control of a Nonlinear Soft Actuator and Sensor System. <i>IEEE Robotics and Automation Letters</i> , 2020 , 5, 3783-3790	4.2	10
18	Design of a High-Speed Prosthetic Finger Driven by Peano-HASEL Actuators. <i>Frontiers in Robotics and AI</i> , 2020 , 7, 586216	2.8	9
17	Miniaturized Circuitry for Capacitive Self-Sensing and Closed-Loop Control of Soft Electrostatic Transducers. <i>Soft Robotics</i> , 2021 , 8, 673-686	9.2	8
16	System Identification and Closed-Loop Control of a Hydraulically Amplified Self-Healing Electrostatic (HASEL) Actuator 2018 ,		8
15	Dielectric elastomers: from the beginning of modern science to applications in actuators and energy harvesters 2011 ,		7
14	Liquid Crystal Elastomers with Enhanced Directional Actuation to Electric Fields. <i>Advanced Materials</i> , 2021 , 33, e2103806	24	7
13	Mechanical-to-Electrical Energy Conversion with Variable Electric Double Layers. <i>Energy Technology</i> , 2019 , 7, 1801007	3.5	5
12	A Pocket-Sized Ten-Channel High Voltage Power Supply for Soft Electrostatic Actuators. <i>Advanced Materials Technologies</i> , 2101469	6.8	3
11	Modeling guided design of dielectric elastomer generators and actuators 2012 ,		1
10	Analysis of safe and failure mode regimes of dielectric elastomer actuators 2008 ,		1
9	Cellular ferroelectrets for electroactive polymer hybrid systems: soft matter integrated devices with advanced functionality 2008 ,		1
8	Simulation-driven design to reduce pull-in voltage of donut HASEL actuators 2019 ,		1
7	Hasel Actuators: HASEL Artificial Muscles for a New Generation of Lifelike RobotsRecent Progress and Future Opportunities (Adv. Mater. 19/2021). <i>Advanced Materials</i> , 2021 , 33, 2170149	24	1
6	Linear Actuators: Buckling Pneumatic Linear Actuators Inspired by Muscle (Adv. Mater. Technol. 3/2016). <i>Advanced Materials Technologies</i> , 2016 , 1,	6.8	1
5	Electromechanics of planar HASEL actuators. <i>Extreme Mechanics Letters</i> , 2021 , 48, 101408	3.9	1

- 4 Electro-Hydraulic Rolling Soft Wheel: Design, Hybrid Dynamic Modeling, and Model Predictive Control. *IEEE Transactions on Robotics*, **2022**, 1-20 6.5 0
- 3 Piezoelectric polymers. *Materials Research Society Symposia Proceedings*, **2005**, 889, 1
- 2 Electrohydraulic Tentacle Actuators: Rapid 3D Printing of Electrohydraulic (HASEL) Tentacle Actuators (Adv. Funct. Mater. 40/2020). *Advanced Functional Materials*, **2020**, 30, 2070266 15.6
- 1 Droplet Dynamics: Dynamically Actuated Liquid-Infused Poroelastic Film with Precise Control over Droplet Dynamics (Adv. Funct. Mater. 39/2018). *Advanced Functional Materials*, **2018**, 28, 1870277 15.6