

# Samuel Rosset

## List of Publications by Year in descending order

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Version: 2024-02-01

120  
papers

4,569  
citations

136885

32  
h-index

106281

65  
g-index

124  
all docs

124  
docs citations

124  
times ranked

3569  
citing authors

#	ARTICLE	IF	CITATIONS
1	Versatile Soft Grippers with Intrinsic Electrode Adhesion Based on Multifunctional Polymer Actuators. <i>Advanced Materials</i> , 2016, 28, 231-238.	11.1	593
2	Flexible and stretchable electrodes for dielectric elastomer actuators. <i>Applied Physics A: Materials Science and Processing</i> , 2013, 110, 281-307.	1.1	419
3	Standards for dielectric elastomer transducers. <i>Smart Materials and Structures</i> , 2015, 24, 105025.	1.8	245
4	Ultrafast All-Polymer Electrically Tunable Silicone Lenses. <i>Advanced Functional Materials</i> , 2015, 25, 1656-1665.	7.8	222
5	Rollable Multisegment Dielectric Elastomer Minimum Energy Structures for a Deployable Microsatellite Gripper. <i>IEEE/ASME Transactions on Mechatronics</i> , 2015, 20, 438-446.	3.7	209
6	Metal Ion Implantation for the Fabrication of Stretchable Electrodes on Elastomers. <i>Advanced Functional Materials</i> , 2009, 19, 470-478.	7.8	175
7	Variable stiffness actuator for soft robotics using dielectric elastomer and low-melting-point alloy. , 2015, , .		140
8	Printing low-voltage dielectric elastomer actuators. <i>Applied Physics Letters</i> , 2015, 107, .	1.5	128
9	3-dimensional electrode patterning within a microfluidic channel using metal ion implantation. <i>Lab on A Chip</i> , 2010, 10, 783.	3.1	113
10	Self-sensing dielectric elastomer actuators in closed-loop operation. <i>Smart Materials and Structures</i> , 2013, 22, 104018.	1.8	112
11	Small, fast, and tough: Shrinking down integrated elastomer transducers. <i>Applied Physics Reviews</i> , 2016, 3, 031105.	5.5	110
12	Voltage Control of the Resonance Frequency of Dielectric Electroactive Polymer (DEAP) Membranes. <i>Journal of Microelectromechanical Systems</i> , 2008, 17, 1072-1081.	1.7	102
13	High-Resolution, Large-Area Fabrication of Compliant Electrodes via Laser Ablation for Robust, Stretchable Dielectric Elastomer Actuators and Sensors. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 18046-18053.	4.0	102
14	Inkjet 3D printing of UV and thermal cure silicone elastomers for dielectric elastomer actuators. <i>Smart Materials and Structures</i> , 2017, 26, 125022.	1.8	100
15	Flexible Zinc-Tin Oxide Thin Film Transistors Operating at 1 kV for Integrated Switching of Dielectric Elastomer Actuators Arrays. <i>Advanced Materials</i> , 2017, 29, 1700880.	11.1	94
16	Flexible Active Skin: Large Reconfigurable Arrays of Individually Addressed Shape Memory Polymer Actuators. <i>Advanced Materials Technologies</i> , 2017, 2, 1700102.	3.0	94
17	Large-Stroke Dielectric Elastomer Actuators With Ion-Implanted Electrodes. <i>Journal of Microelectromechanical Systems</i> , 2009, 18, 1300-1308.	1.7	82
18	Mechanical characterization of a dielectric elastomer microactuator with ion-implanted electrodes. <i>Sensors and Actuators A: Physical</i> , 2008, 144, 185-193.	2.0	77

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19	Dielectric elastomer generators that stack up. <i>Smart Materials and Structures</i> , 2015, 24, 015014.	1.8	72
20	Fabrication Process of Silicone-based Dielectric Elastomer Actuators. <i>Journal of Visualized Experiments</i> , 2016, , e53423.	0.2	70
21	Zippering dielectric elastomer actuators: characterization, design and modeling. <i>Smart Materials and Structures</i> , 2013, 22, 104013.	1.8	67
22	Model and design of dielectric elastomer minimum energy structures. <i>Smart Materials and Structures</i> , 2014, 23, 085021.	1.8	66
23	Stretchable composite monolayer electrodes for low voltage dielectric elastomer actuators. <i>Sensors and Actuators B: Chemical</i> , 2018, 261, 135-143.	4.0	64
24	Peta-pico-Voltron: An open-source high voltage power supply. <i>HardwareX</i> , 2018, 4, e00039.	1.1	64
25	Improved electromechanical behavior in castable dielectric elastomer actuators. <i>Applied Physics Letters</i> , 2013, 102, .	1.5	60
26	A Foldable Antagonistic Actuator. <i>IEEE/ASME Transactions on Mechatronics</i> , 2015, 20, 1997-2008.	3.7	60
27	Microactuators based on ion implanted dielectric electroactive polymer (EAP) membranes. <i>Sensors and Actuators A: Physical</i> , 2006, 130-131, 147-154.	2.0	55
28	Multifunctional shape memory electrodes for dielectric elastomer actuators enabling high holding force and low-voltage multisegment addressing. <i>Smart Materials and Structures</i> , 2017, 26, 025015.	1.8	52
29	High-cycle electromechanical aging of dielectric elastomer actuators with carbon-based electrodes. <i>Smart Materials and Structures</i> , 2018, 27, 074002.	1.8	49
30	A Review of Dielectric Elastomer Generator Systems. <i>Advanced Intelligent Systems</i> , 2020, 2, 2000125.	3.3	49
31	Dielectric elastomer actuator for mechanical loading of 2D cell cultures. <i>Lab on A Chip</i> , 2016, 16, 3788-3794.	3.1	47
32	High-speed mechano-active multielectrode array for investigating rapid stretch effects on cardiac tissue. <i>Nature Communications</i> , 2019, 10, 834.	5.8	45
33	An ultra-fast mechanically active cell culture substrate. <i>Scientific Reports</i> , 2018, 8, 9895.	1.6	39
34	Maximizing the displacement of compact planar dielectric elastomer actuators. <i>Extreme Mechanics Letters</i> , 2015, 3, 72-81.	2.0	30
35	Tunable millimeter-wave phase shifter based on dielectric elastomer actuation. <i>Applied Physics Letters</i> , 2014, 104, 024104.	1.5	27
36	Understanding Graphics on a Scalable Latching Assistive Haptic Display Using a Shape Memory Polymer Membrane. <i>IEEE Transactions on Haptics</i> , 2018, 11, 30-38.	1.8	27

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37	Microstructure of 5 keV gold-implanted polydimethylsiloxane. Scripta Materialia, 2008, 59, 893-896.	2.6	26
38	A Review of Dielectric Elastomer Generator Systems. Advanced Intelligent Systems, 2020, 2, 2070103.	3.3	26
39	<i>In Vitro</i> Models of Traumatic Brain Injury: A Systematic Review. Journal of Neurotrauma, 2021, 38, 2336-2372.	1.7	26
40	Inkjet Printing of Complex Soft Machines with Densely Integrated Electrostatic Actuators. Advanced Intelligent Systems, 2020, 2, 2000136.	3.3	20
41	An open-loop control scheme to increase the speed and reduce the viscoelastic drift of dielectric elastomer actuators. Extreme Mechanics Letters, 2019, 27, 20-26.	2.0	19
42	Inkjet printing of carbon black electrodes for dielectric elastomer actuators. Proceedings of SPIE, 2017, , .	0.8	18
43	Array of lenses with individually tunable focal-length based on transparent ion-implanted EAPs. , 2010, , .		15
44	Towards a deployable satellite gripper based on multisegment dielectric elastomer minimum energy structures. Proceedings of SPIE, 2014, , .	0.8	15
45	Assessing the degradation of compliant electrodes for soft actuators. Review of Scientific Instruments, 2017, 88, 105002.	0.6	15
46	Mechanical properties of electroactive polymer microactuators with ion-implanted electrodes. , 2007, 6524, 266.		14
47	An electroactive polymer energy harvester for wireless sensor networks. Journal of Physics: Conference Series, 2013, 476, 012117.	0.3	14
48	DEA for soft robotics: 1-gram actuator picks up a 60-gram egg. Proceedings of SPIE, 2015, , .	0.8	14
49	The Integrated Self Priming Circuit: An Autonomous Electrostatic Energy Harvester With Voltage Boosting. IEEE Transactions on Industrial Electronics, 2021, 68, 6982-6991.	5.2	12
50	Glove-Based Hand Gesture Recognition for Diver Communication. IEEE Transactions on Neural Networks and Learning Systems, 2023, 34, 9874-9886.	7.2	12
51	The need for speed. Proceedings of SPIE, 2012, , .	0.8	11
52	Soft tunable diffractive optics with multifunctional transparent electrodes enabling integrated actuation. Applied Physics Letters, 2016, 109, .	1.5	11
53	Ion-implanted compliant and patternable electrodes for miniaturized dielectric elastomer actuators. , 2008, , .		10
54	Mm-size bistable zipping dielectric elastomer actuators for integrated microfluidics. , 2013, , .		10

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55	Effect of mechanical parameters on dielectric elastomer minimum energy structures. Proceedings of SPIE, 2013, , .	0.8	10
56	Towards fast, reliable, and manufacturable DEAs: miniaturized motor and Rupert the rolling robot. Proceedings of SPIE, 2015, , .	0.8	10
57	Identification of a Nonlinear Dielectric Elastomer Actuator Based on the Harmonic Balance Method. IEEE/ASME Transactions on Mechatronics, 2021, 26, 2664-2675.	3.7	10
58	Large deformation balloon micro-actuator based on pyrotechnics on chip. Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS), 2008, , .	0.0	9
59	Fully printed 3 microns thick dielectric elastomer actuator. Proceedings of SPIE, 2016, , .	0.8	9
60	Interdigitated Sensor Based on a Silicone Foam for Subtle Robotic Manipulation. Macromolecular Rapid Communications, 2021, 42, 2000560.	2.0	9
61	Ion-implanted compliant electrodes used in dielectric electroactive polymer actuators with large displacement. Procedia Chemistry, 2009, 1, 702-705.	0.7	8
62	An instrument to obtain the correct biaxial hyperelastic parameters of silicones for accurate DEA modelling. Proceedings of SPIE, 2014, , .	0.8	8
63	Optimization of thin-film highly-compliant elastomer sensors for contractility measurement of muscle cells. Extreme Mechanics Letters, 2016, 9, 1-10.	2.0	8
64	Comparison of two Metal Ion Implantation Techniques for Fabrication of Gold and Titanium Based Compliant Electrodes on Polydimethylsiloxane. Materials Research Society Symposia Proceedings, 2009, 1188, 77.	0.1	7
65	Pump it up. Proceedings of SPIE, 2012, , .	0.8	7
66	Cutting the fat: artificial muscle oscillators for lighter, cheaper, and slimmer devices. Proceedings of SPIE, 2012, , .	0.8	7
67	Versatile fabrication of PDMS-carbon electrodes for silicone dielectric elastomer transducers. , 2015, , .		7
68	Performance characterization of miniaturized dielectric elastomer actuators fabricated using metal ion implantation. Proceedings of the IEEE International Conference on Micro Electro Mechanical Systems (MEMS), 2008, , .	0.0	6
69	More than 10-fold increase in the actuation strain of silicone dielectric elastomer actuators by applying prestrain. Proceedings of SPIE, 2013, , .	0.8	6
70	Inflatable dielectric elastomer robots for space. , 2019, , .		6
71	Ion implanted dielectric elastomer circuits. Applied Physics A: Materials Science and Processing, 2013, 111, 943-950.	1.1	5
72	Interfacing dielectric elastomer actuators with liquids. Proceedings of SPIE, 2015, , .	0.8	5

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73	Fabrication of transmissive dielectric elastomer actuator driven tunable optical gratings with improved tunability. <i>Optical Engineering</i> , 2016, 55, 047104.	0.5	5
74	Fabrication and characterization of silicone-based dielectric elastomer actuators for mechanical stimulation of living cells. , 2018, , .		5
75	A tunable millimeter-wave phase shifter driven by dielectric elastomer actuators. , 2014, , .		4
76	Tunable Optics: Ultrafast All-Polymer Electrically Tunable Silicone Lenses ( <i>Adv. Funct. Mater.</i> 11/2015). <i>Advanced Functional Materials</i> , 2015, 25, 1614-1614.	7.8	4
77	Thin-film dielectric elastomer sensors to measure the contraction force of smooth muscle cells. <i>Proceedings of SPIE</i> , 2015, , .	0.8	4
78	The challenges of hand gesture recognition using dielectric elastomer sensors. , 2020, , .		4
79	Ion-implanted compliant electrodes for mm-size dielectric elastomer actuators. , 2009, , .		3
80	Tunable grating with active feedback. <i>Proceedings of SPIE</i> , 2013, , .	0.8	3
81	Toward compression of small cell population: harnessing stress in passive regions of dielectric elastomer actuators. <i>Proceedings of SPIE</i> , 2014, , .	0.8	3
82	Flexible haptic display with 768 independently controllable shape memory polymers taxels. , 2017, , .		3
83	Taming the viscoelastic creep of dielectric elastomer actuators. , 2019, , .		3
84	Optimization of prestretch and actuation stretch of a DEA-based cell stretcher. , 2020, , .		3
85	Squeezing More Juice out of Dielectric Elastomer Generators. <i>Frontiers in Robotics and AI</i> , 2022, 9, 825148.	2.0	3
86	Voltage tuning of the resonance frequency of electroactive polymer membranes over a range of more than 75%. <i>Proceedings of SPIE</i> , 2009, , .	0.8	2
87	Stretching cells with DEAs. , 2012, , .		2
88	Maximizing strain in miniaturized dielectric elastomer actuators. , 2015, , .		2
89	Thin Film Transistors: Flexible Zinc-Tin Oxide Thin Film Transistors Operating at 1 kV for Integrated Switching of Dielectric Elastomer Actuators Arrays ( <i>Adv. Mater.</i> 30/2017). <i>Advanced Materials</i> , 2017, 29, .	11.1	2
90	Dielectric elastomer actuator for the measurement of cell traction forces with sub-cellular resolution. <i>Proceedings of SPIE</i> , 2017, , .	0.8	2

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91	Analyzing the changes in the brain material properties after a mild traumatic brain injuryâ€”A pilot study. <i>Engineering Reports</i> , 2021, 3, e12332.	0.9	2
92	Stretchable electrodes for highly flexible electronics. , 2021, , 479-500.		2
93	Jumping into virtual reality with dielectric elastomer sensors. , 2021, , .		2
94	Stretchable microchannel-on-a-chip: A simple model for evaluating the effects of uniaxial strain on neuronal injury. <i>Journal of Neuroscience Methods</i> , 2021, 362, 109302.	1.3	2
95	One Soft Step: Bio-Inspired Artificial Muscle Mechanisms for Space Applications. <i>Frontiers in Robotics and AI</i> , 2021, 8, 792831.	2.0	2
96	Microactuators based on ion-implanted dielectric electroactive polymer membranes (EAP). , 0, , .		1
97	Tuning parameters of metal ion implantation within a microfluidic channel. <i>Proceedings of SPIE</i> , 2010, , .	0.8	1
98	Full integration of a dielectric elastomer actuator with a flexible 1 kV thin-film transistor. , 2017, , .		1
99	A proprioceptive DE sensor skin for a fish-like continuum robot. , 2021, , .		1
100	Protecting dielectric elastomers from a simulated space environment. , 2021, , .		1
101	Capacitive coupling as a new form of signal transmission in underwater dielectric elastomer sensing. , 2018, , .		1
102	The NERD setup: assessing the life time of electrodes for dielectric elastomer transducers. , 2018, , .		1
103	An integrated self priming circuit with electret charge source. , 2018, , .		1
104	Sticky space snakes: hyper-redundant DEA robots with electro-adhesive feet. , 2020, , .		1
105	The Integration of Optical Stimulation in a Mechanically Dynamic Cell Culture Substrate. <i>Frontiers in Bioengineering and Biotechnology</i> , 0, 10, .	2.0	1
106	Modification of Conductivity and of Mechanical Properties of Electroactive Polymer (EAP) Thin Films by Titanium Ion Implantation. <i>Materials Research Society Symposia Proceedings</i> , 2007, 1052, 1.	0.1	0
107	Electromagnetic characterisation of flexible conductive membranes at millimetreâ€”waves. <i>Electronics Letters</i> , 2013, 49, 353-354.	0.5	0
108	Stack design for portable artificial muscle generators: is it dangerous to be short and fat?. <i>Proceedings of SPIE</i> , 2014, , .	0.8	0

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109	Detection of biofouling via surface instabilities of dielectric elastomer. , 2021, , .		0
110	Fabrication of zipping electrostatic actuators incorporating inkjet-printed layers. , 2021, , .		0
111	10.1063/1.4989464.1. , 2017, , .		0
112	Multi-touch capacitive sensor with new sensor arrangement. , 2018, , .		0
113	Drop-on-demand lift-off patterning of compliant electrodes. , 2019, , .		0
114	Ink-jet printed conductive and semi-conductive rubber for dielectric elastomer devices (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 5		0
115	An approach to validate the design and fabrication of dielectric elastomer tactile sensor. , 2019, , .		0
116	Measuring pressure and multi-location with dielectric elastomer capacitive sensors (Conference) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 4		0
117	Active deformation of dielectric elastomer for detection of biofouling. , 2020, , .		0
118	Compressible dielectric elastomer sensor for robotic application. , 2020, , .		0
119	A Study on the Performance of a Novel Hybrid Triboelectric-Dielectric Elastomer Generator Based on PDMS Composites. , 2021, , .		0
120	Reproducing traumatic brain injury in vitro with dielectric elastomer actuators. , 2022, , .		0