Federico Carpi

List of Publications by Year
in descending order

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159 papers	5,852 citations	147726 31 h-index	85498 71 g-index
172 all docs	172 docs citations	172 times ranked	4409 citing authors

#	Article	IF	Citations
1	LEAP Motion Technology and Psychology: A Mini-Review on Hand Movements Sensing for Neurodevelopmental and Neurocognitive Disorders. International Journal of Environmental Research and Public Health, 2021, 18, 4006.	1.2	15
2	A Soft Touch: Wearable Tactile Display of Softness Made of Electroactive Elastomers. Advanced Materials Technologies, 2021, 6, 2100016.	3.0	11
3	Electrically Tunable Lenses: A Review. Frontiers in Robotics and AI, 2021, 8, 678046.	2.0	37
4	Wearable Detection of Trunk Flexions: Capacitive Elastomeric Sensors Compared to Inertial Sensors. Sensors, 2021, 21, 5453.	2.1	7
5	Monitoring Flexions and Torsions of the Trunk via Gyroscope-Calibrated Capacitive Elastomeric Wearable Sensors. Sensors, 2021, 21, 6706.	2.1	3
6	Tactile display of softness on fingertip. Scientific Reports, 2020, 10, 20491.	1.6	28
7	Bioreactor With Electrically Deformable Curved Membranes for Mechanical Stimulation of Cell Cultures. Frontiers in Bioengineering and Biotechnology, 2020, 8, 22.	2.0	26
8	Electrically tunable directional light scattering from soft thin membranes. Optics Express, 2020, 28, 20669.	1.7	7
9	An Unexpected Mossotti: His Formula at the Basis of Dielectrophoresis in Modern Molecular Biology. URSI Radio Science Bulletin, 2020, 2020, 83-85.	0.2	1
10	Bioinspired Electromechanically Active Polymer-Based Robotics. , 2020, , 1-19.		1
11	Smart Lenses with Electrically Tuneable Astigmatism. Scientific Reports, 2019, 9, 16127.	1.6	30
12	Electrically tuning soft membranes to both a higher and a lower transparency. Scientific Reports, 2019, 9, 20125.	1.6	2
13	Wearable Kinematic Monitoring System Based on Piezocapacitive Sensors. Studies in Health Technology and Informatics, 2019, 261, 103-108.	0.2	2
14	Enabling portable multiple-line refreshable Braille displays with electroactive elastomers. Medical Engineering and Physics, 2018, 60, 86-93.	0.8	24
15	Active Compression Bandage Made of Electroactive Elastomers. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2328-2337.	3.7	25
16	Soft wearable non-vibratory tactile displays. , 2018, , .		17
17	A dielectric elastomer actuator-based tactile display for multiple fingertip interaction with virtual soft bodies. , 2017, , .		8
18	Electrical breakdown detection system for dielectric elastomer actuators. Proceedings of SPIE, 2017, , .	0.8	3

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19	A bioreactor with an electro-responsive elastomeric membrane for mimicking intestinal peristalsis. Bioinspiration and Biomimetics, 2017, 12, 016001.	1.5	19
20	Enabling Wearable Soft Tactile Displays with Electroactive Smart Elastomers. Lecture Notes in Computer Science, 2016, , 326-334.	1.0	1
21	Dielectric Elastomers as EAPs: Applications. , 2016, , 739-765.		3
22	Electrically tunable soft solid lens inspired by reptile and bird accommodation. Bioinspiration and Biomimetics, 2016, 11, 065003.	1.5	28
23	Dielectric Elastomers as EAPs: Applications. , 2016, , 1-27.		1
24	Electrical breakdown of dielectric elastomers: influence of compression, electrode's curvature and environmental humidity. Proceedings of SPIE, 2016, , .	0.8	11
25	Electrical breakdown of an acrylic dielectric elastomer: effects of hemispherical probing electrodeâ€™s size and force. International Journal of Smart and Nano Materials, 2015, 6, 290-303.	2.0	5
26	Tunable Optics: Ultrafast Allâ€Polymer Electrically Tunable Silicone Lenses (Adv. Funct. Mater. 11/2015). Advanced Functional Materials, 2015, 25, 1614-1614.	7.8	4
27	Ultrafast Allâ€Polymer Electrically Tunable Silicone Lenses. Advanced Functional Materials, 2015, 25, 1656-1665.	7.8	222
28	Soft dielectrics for capacitive sensing in robot skins: Performance of different elastomer types. Sensors and Actuators A: Physical, 2015, 226, 37-47.	2.0	60
29	Standards for dielectric elastomer transducers. Smart Materials and Structures, 2015, 24, 105025.	1.8	245
30	Stretchable optical device with electrically tunable absorbance and fluorescence. Smart Materials and Structures, 2014, 23, 015009.	1.8	5
31	BIOINSPIRED ARTIFICIAL MUSCLES BASED ON DIELECTRIC ELASTOMERS. World Scientific Series in Nanoscience and Nanotechnology, 2014, , 17-30.	0.1	1
32	Enabling variable-stiffness hand rehabilitation orthoses with dielectric elastomer transducers. Medical Engineering and Physics, 2014, 36, 205-211.	0.8	58
33	A Novel Platform for Simultanoues Mechanical Stimulation and Characterization of Single Cells Based on Dielectric Elastomers and Atomic Force Microscopy. Biophysical Journal, 2014, 106, 798a.	0.2	0
34	Wearable Wireless Tactile Display for Virtual Interactions with Soft Bodies. Frontiers in Bioengineering and Biotechnology, 2014, 2, 31.	2.0	59
35	Grand challenges in magnetic capsule endoscopy. Expert Review of Medical Devices, 2013, 10, 433-436.	1.4	15
36	Effects of plasticization of a soft silicone for dielectric elastomer actuation. Smart Materials and Structures, 2013, 22, 104020.	1.8	23

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37	Electromechanically active polymer transducers: research in Europe. Smart Materials and Structures, 2013, 22, 100301.	1.8	1
38	Predictive stressâ€“stretch models of elastomers up to the characteristic flex. Smart Materials and Structures, 2013, 22, 104011.	1.8	6
39	Computational Model of Hydrostatically Coupled Dielectric Elastomer Actuators. Journal of Applied Mechanics, Transactions ASME, 2012, 79, .	1.1	50
40	Effects of Corona treatment on electrical and mechanical properties of a porous dielectric elastomer. IEEE Transactions on Dielectrics and Electrical Insulation, 2012, 19, 1203-1207.	1.8	8
41	Electroactive elastomeric actuators for biomedical and bioinspired systems. , 2012, , .		4
42	Modeling and experimental validation of buckling dielectric elastomer actuators. Smart Materials and Structures, 2012, 21, 094005.	1.8	28
43	Contractile Hydrostatically Coupled Dielectric Elastomer Actuators. IEEE/ASME Transactions on Mechatronics, 2012, 17, 987-994.	3.7	4
44	Small-Strain Modeling of Helical Dielectric Elastomer Actuators. IEEE/ASME Transactions on Mechatronics, 2012, 17, 318-325.	3.7	5
45	Electroactive polymer actuators as artificial muscles: are they ready for bioinspired applications?. Bioinspiration and Biomimetics, 2011, 6, 045006.	1.5	173
46	Magnetically Controllable Gastrointestinal Steering of Video Capsules. IEEE Transactions on Biomedical Engineering, 2011, 58, 231-234.	2.5	159
47	Modelling and Experimental Validation of Buckling Dielectric Elastomer Actuators. , 2011, , .		0
48	Granularly Coupled Dielectric Elastomer Actuators. IEEE/ASME Transactions on Mechatronics, 2011, 16, 16-23.	3.7	25
49	Guest Editorial Introduction to the Focused Section on Electroactive Polymer Mechatronics. IEEE/ASME Transactions on Mechatronics, 2011, 16, 1-8.	3.7	25
50	Bioinspired Tunable Lens with Muscleâ€Like Electroactive Elastomers. Advanced Functional Materials, 2011, 21, 4152-4158.	7.8	361
51	Optics: Bioinspired Tunable Lens with Muscleâ€Like Electroactive Elastomers (Adv. Funct. Mater. 21/2011). Advanced Functional Materials, 2011, 21, 4002-4002.	7.8	12
52	Seeking the â€˜holy Braille' display: might electromechanically active polymers be the solution?. Expert Review of Medical Devices, 2011, 8, 529-532.	1.4	21
53	Electroactive polymer patches for wearable haptic interfaces. , 2011, 2011, 8369-72.		11
54	Soft elastomeric electrets for electro-active polymers. , 2011, , .		0

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55	Opportunities of hydrostatically coupled dielectric elastomer actuators for haptic interfaces. Proceedings of SPIE, 2011, , .	0.8	8
56	Special section on biomimetics of movement. Bioinspiration and Biomimetics, 2011, 6, 040201.	1.5	0
57	Hydrostatically Coupled Dielectric Elastomer Actuators: New Opportunities for Haptics. Materials Research Society Symposia Proceedings, 2011, 1312, 1.	0.1	2
58	Dielectric elastomer actuators with granular coupling. Proceedings of SPIE, 2011, , .	0.8	1
59	Front Matter: Volume 7976. Proceedings of SPIE, 2011, , .	0.8	1
60	Walking with springs. , 2011, , .		5
61	Hydrostatically coupled dielectric elastomer actuators for tactile displays and cutaneous stimulators. Proceedings of SPIE, 2010, , .	0.8	6
62	Millimetreâ€scale bubbleâ€like dielectric elastomer actuators. Polymer International, 2010, 59, 407-414.	1.6	43
63	Realâ€time control of dielectric elastomer actuators via bioelectric and biomechanical signals. Polymer International, 2010, 59, 422-429.	1.6	10
64	Perspectives for new dielectric elastomers with improved electromechanical actuation performance: composites versus blends. Polymer International, 2010, 59, 400-406.	1.6	117
65	Electromechanically Active Polymers. Polymer International, 2010, 59, 277-278.	1.6	30
66	Pattern reconfigurable antenna based on moving V-shaped parasitic elements actuated by dielectric elastomer. Electronics Letters, 2010, 46, 886.	0.5	11
67	Magnetic capsule endoscopy: the future is around the corner. Expert Review of Medical Devices, 2010, 7, 161-164.	1.4	26
68	Galectin-3 detection on large-needle aspiration biopsy improves preoperative selection of thyroid nodules: A prospective cohort study. Annals of Medicine, 2010, 42, 70-78.	1.5	22
69	Stretching Dielectric Elastomer Performance. Science, 2010, 330, 1759-1761.	6.0	471
70	Electroactive Elastomeric Actuator for All-Polymer Linear Peristaltic Pumps. IEEE/ASME Transactions on Mechatronics, 2010, 15, 460-470.	3.7	79
71	Hydrostatically Coupled Dielectric Elastomer Actuators. IEEE/ASME Transactions on Mechatronics, 2010, 15, 308-315.	3.7	78
72	Electroactive polymer artificial muscles: an overview. WIT Transactions on Ecology and the Environment, 2010, , .	0.0	3

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73	Natural and artificial helical structures. WIT Transactions on Ecology and the Environment, 2010, , .	0.0	4
74	The vectorial organization of the human myocardium is designed for optimal electrical and contractile activity: clinical implications of its alterations. , 2010, , .		0
75	Electroactive Elastomeric Haptic Displays of Organ Motility and Tissue Compliance for Medical Training and Surgical Force Feedback. IEEE Transactions on Biomedical Engineering, 2009, 56, 2327-2330.	2.5	33
76	Wearable kinesthetic systems and emerging technologies in actuation for upperlimb neurorehabilitation. , 2009, 2009, 6830-3.		8
77	Chapter 1 Emgâ€Based and Gazeâ€Trackingâ€Based Manâ€“Machine Interfaces. International Review of Neurobiology, 2009, 86, 3-21.	0.9	1
78	Magnetic Maneuvering of Endoscopic Capsules by Means of a Robotic Navigation System. IEEE Transactions on Biomedical Engineering, 2009, 56, 1482-1490.	2.5	113
79	Prospects of brainâ€“machine interfaces for space system control. Acta Astronautica, 2009, 64, 448-456.	1.7	27
80	Concept design of novel bio-inspired distributed actuators for space applications. Acta Astronautica, 2009, 65, 825-833.	1.7	17
81	Polyurethane unimorph bender microfabricated with Pressure Assisted Microsyringe (PAM) for biomedical applications. Materials Science and Engineering C, 2009, 29, 1835-1841.	3.8	20
82	Electroretinographic wet electrode. Medical Engineering and Physics, 2009, 31, 923-929.	0.8	2
83	Dielectric elastomer actuators with hydrostatic coupling. , 2009, , .		1
84	A new concept for dielectric elastomer actuators: hydrostatic coupling. Proceedings of SPIE, 2009, , .	0.8	1
85	Non-invasive Wet Electrocochleography. IEEE Transactions on Biomedical Engineering, 2009, 56, 2744-2747.	2.5	2
86	Stereotaxis Niobe^{Â®}magnetic navigation system for endocardial catheter ablation and gastrointestinal capsule endoscopy. Expert Review of Medical Devices, 2009, 6, 487-498.	1.4	92
87	Electromechanically Active Polymers: New Opportunities for Biomaterials and Tissue Engineering. IFMBE Proceedings, 2009, , 53-56.	0.2	1
88	CARPI, FEDERICO / ORTELLS, M. (editores). Oralidad y escritura en un proceso civil eficiente. Revista De Derecho, 2009, 22, .	0.0	0
89	Siliconeâ€“Poly(hexylthiophene) Blends as Elastomers with Enhanced Electromechanical Transduction Properties. Advanced Functional Materials, 2008, 18, 235-241.	7.8	231
90	ENHANCING THE DIELECTRIC PERMITTIVITY OF ELASTOMERS. , 2008, , 51-68.		45

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91	Enhancement of the electromechanical transduction properties of a silicone elastomer by blending with a conjugated polymer. , 2008, , .		5
92	Magnetic robotic manoeuvring of gastrointestinal video capsules: preliminary phantom tests. Biomedicine and Pharmacotherapy, 2008, 62, 546-549.	2.5	15
93	MRI Compatibility of Silicone-Made Contractile Dielectric Elastomer Actuators. IEEE/ASME Transactions on Mechatronics, 2008, 13, 370-374.	3.7	32
94	Enhancing the Electro-Mechanical Response of Maxwell Stress Actuators. Advances in Science and Technology, 2008, 61, 46-53.	0.2	6
95	Tunable Dielectric Resonator Antennas Using Voltage-Controlled Mechanical Deformation. Advances in Science and Technology, 2008, 56, 614-619.	0.2	3
96	Contractile and Buckling Actuators Based on Dielectric Elastomers: Devices and Applications. Advances in Science and Technology, 2008, 61, 186-191.	0.2	8
97	Bio-Inspired Distributed Electroactive Polymer Actuators for Possible Space Applications: Concept Design. Advances in Science and Technology, 2008, 61, 180-185.	0.2	3
98	Elastomeric contractile actuators for hand rehabilitation splints. , 2008, , .		18
99	Silicone Made Contractile Dielectric Elastomer Actuators Inside 3-Tesla MRI Environment. , 2008, , .		5
100	CONTRACTILE MONOLITHIC LINEAR ACTUATORS. , 2008, , 123-131.		2
101	BUCKLING ACTUATORS WITH INTEGRATED DISPLACEMENT SENSOR. , 2008, , 132-140.		5
102	Dielectric Elastomers as Electromechanical Transducers. , 2008, , .		50
103	Electroactive Polymers as Smart Materials with Intrinsic Actuation Properties. , 2008, , 483-503.		2
104	Bioinspired actuation of the eyeballs of an android robotic face: concept and preliminary investigations. Bioinspiration and Biomimetics, 2007, 2, S50-S63.	1.5	27
105	Contractile folded dielectric elastomer actuators. , 2007, , .		19
106	Folded dielectric elastomer actuators. Smart Materials and Structures, 2007, 16, S300-S305.	1.8	193
107	Martian jumping rover equipped with electroactive polymer actuators: A preliminary study. IEEE Transactions on Aerospace and Electronic Systems, 2007, 43, 79-92.	2.6	8
108	Dielectric constant enhancement in a silicone elastomer filled with lead magnesium niobateâ€“lead titanate. Materials Science and Engineering C, 2007, 27, 110-116.	3.8	236

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109	Percutaneous large-needle aspiration biopsy histology of palpable thyroid nodules: technical and diagnostic performance. Histopathology, 2007, 51, 249-257.	1.6	18
110	Controlled Navigation of Endoscopic Capsules: Concept and Preliminary Experimental Investigations. IEEE Transactions on Biomedical Engineering, 2007, 54, 2028-2036.	2.5	89
111	Actuators in Adaptronics. , 2007, , 95-300.		3
112	Magnetic shells forÂgastrointestinal endoscopic capsules asÂaÂmeans toÂcontrol theirÂmotion. Biomedicine and Pharmacotherapy, 2006, 60, 370-374.	2.5	46
113	Non-invasive electroretinography. Biomedicine and Pharmacotherapy, 2006, 60, 375-379.	2.5	10
114	Novel bio-inspired distributed actuator for space applications. , 2006, , .		3
115	Buckling dielectric elastomer actuators and their use as motors for the eyeballs of an android face. , 2006, , .		9
116	Activation of dielectric elastomer actuators by means of human electrophysiological signals. , 2006, , .		1
117	Colours from electroactive polymers: Electrochromic, electroluminescent and laser devices based on organic materials. Optics and Laser Technology, 2006, 38, 292-305.	2.2	87
118	Contractile dielectric elastomer actuator with folded shape. , 2006, , .		14
119	Realization of conducting polymer actuators using a controlled volume microsyringe system. Smart Materials and Structures, 2006, 15, 279-287.	1.8	20
120	Eyeball pseudo-muscular actuators for an android face. , 2005, , .		8
121	Polymer based interfaces as bioinspired â€˜smart skinsâ€™. Advances in Colloid and Interface Science, 2005, 116, 165-178.	7.0	50
122	Helical dielectric elastomer actuators. Smart Materials and Structures, 2005, 14, 1210-1216.	1.8	128
123	Electroactive Polymer-Based Devices for e-Textiles in Biomedicine. IEEE Transactions on Information Technology in Biomedicine, 2005, 9, 295-318.	3.6	256
124	Correction to â€œElectroactive Polymer-Based Devices for e-Textiles in Biomedicineâ€• IEEE Transactions on Information Technology in Biomedicine, 2005, 9, 574-574.	3.6	11
125	A new contractile linear actuator made of dielectric elastomers (Invited Paper). , 2005, 5759, 64.		8
126	Electroactive fabrics and wearable manâ€“machine interfaces. , 2005, , 59-80.		8

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127	Improvement of electromechanical actuating performances of a silicone dielectric elastomer by dispersion of titanium dioxide powder. IEEE Transactions on Dielectrics and Electrical Insulation, 2005, 12, 835-843.	1.8	230
128	Electroactive fabrics and wearable manâ€“machine interfaces. , 2005, , .		3
129	Bioinspired Macromolecular Actuators. Materials Science Forum, 2004, 455-456, 406-410.	0.3	0
130	Dielectric elastomer cylindrical actuators: electromechanical modelling and experimental evaluation. Materials Science and Engineering C, 2004, 24, 555-562.	3.8	181
131	FACE: facial automaton for conveying emotions. Applied Bionics and Biomechanics, 2004, 1, 91-100.	0.5	16
132	Polymers responding to electrical or electrochemical stimuli for linear actuators. European Journal of Control, 2004, 29, 55-64.	1.6	8
133	Electromechanical characterisation of dielectric elastomer planar actuators: comparative evaluation of different electrode materials and different counterloads. Sensors and Actuators A: Physical, 2003, 107, 85-95.	2.0	229
134	High-strain dielectric elastomer for actuation. , 2003, , .		13
135	‹title›Dielectric elastomer planar actuators for small-scale applications‹/title›. , 2003, , .		1
136	Recruited dielectric elastomer motor units as pseudomuscolar actuator. , 2003, , .		2
137	Biomimetic Dielectric Elastomer Actuators. , 0, , .		3
138	Functional Materials for Wearable Sensing, Actuating and Energy Harvesting. Advances in Science and Technology, 0, , .	0.2	7
139	Thermally Driven Hydrogel Actuator for Controllable Flow Rate Pump in Long-Term Drug Delivery. , 0, , 89-99.		1
140	Conjugated Polymer Actuators: Fundamentals. , 0, , 193-227.		16
141	Nanostructured Conducting Polymer Biomaterials and their Applications in Controlled Drug Delivery. , 0, , 279-299.		2
142	Microfabricated Conjugated Polymer Actuators for Microvalves, Cell Biology, and Microrobotics. , 0, , 249-264.		4
143	Stimuli-Responsive andâ€˜Activeâ€™ Polymers in Drug Delivery. , 0, , 61-88.		0
144	IPMC Assisted Infusion Micropumps. , 0, , 175-191.		1

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145	IPMC Based Tactile Displays for Pressure and Texture Presentation on a Human Finger. , 0, , 161-174.		3
146	Dynamic Splint-Like Hand Orthosis for Finger Rehabilitation. , 0, , 443-461.		6
147	Actuated Pins for Braille Displays. , 0, , 265-277.		7
148	Bio-Responsive Hydrogels for Biomedical Applications. , 0, , 43-59.		4
149	Biomedical Applications of Dielectric Elastomer Actuators. , 0, , 395-410.		3
150	Active Microcatheter and Biomedical Soft Devices Based on IPMC Actuators. , 0, , 121-136.		9
151	Miniature High Frequency Focused Ultrasonic Transducers for Minimally Invasive Imaging Procedures. , 0, , 335-356.		1
152	Catheters for Thrombosis Sample Exfoliation in Blood Vessels Using Piezoelectric Polymer Fibers. , 0, , 357-368.		0
153	Piezoelectric Poly(Vinylidene) Fluoride (PVDF) in Biomedical Ultrasound Exposimetry. , 0, , 369-383.		1
154	Dielectric Elastomer Actuators: Fundamentals. , 0, , 385-393.		1
155	MRI Compatible Device for Robotic Assisted Interventions to Prostate Cancer. , 0, , 411-425.		6
156	A Braille Display System for the Visually Disabled Using a Polymer Based Soft Actuator. , 0, , 427-442.		6
157	Piezoelectric and Electrostrictive Polymer Actuators: Fundamentals. , 0, , 317-334.		3
158	IPMC Actuators: Fundamentals. , 0, , 101-119.		1
159	Electroactive Polymers as Smart Materials. , 0, , 3155-3168.		0