

Ian W Hunter

List of Publications by Year in descending order

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98
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citations

201385

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99
docs citations

99
times ranked

3242
citing authors

#	ARTICLE	IF	CITATIONS
1	Artificial Muscles: Mechanisms, Applications, and Challenges. <i>Advanced Materials</i> , 2018, 30, 1704407.	11.1	701
2	Fast contracting polypyrrole actuators. <i>Synthetic Metals</i> , 2000, 113, 185-192.	2.1	264
3	Needle-free jet injection using real-time controlled linear Lorentz-force actuators. <i>Medical Engineering and Physics</i> , 2012, 34, 1228-1235.	0.8	131
4	A Teleoperated Microsurgical Robot and Associated Virtual Environment for Eye Surgery. <i>Presence: Teleoperators and Virtual Environments</i> , 1993, 2, 265-280.	0.3	128
5	The effect of fin ray flexural rigidity on the propulsive forces generated by a biorobotic fish pectoral fin. <i>Journal of Experimental Biology</i> , 2010, 213, 4043-4054.	0.8	125
6	Encapsulated polypyrrole actuators. <i>Synthetic Metals</i> , 1999, 105, 61-64.	2.1	124
7	Multidirectional Artificial Muscles from Nylon. <i>Advanced Materials</i> , 2017, 29, 1604734.	11.1	106
8	Actuation of untethered pneumatic artificial muscles and soft robots using magnetically induced liquid-to-gas phase transitions. <i>Science Robotics</i> , 2020, 5, .	9.9	101
9	The Development of a Biologically Inspired Propulsor for Unmanned Underwater Vehicles. <i>IEEE Journal of Oceanic Engineering</i> , 2007, 32, 533-550.	2.1	100
10	The identification of nonlinear biological systems: Wiener kernel approaches. <i>Annals of Biomedical Engineering</i> , 1990, 18, 629-654.	1.3	98
11	The identification of nonlinear biological systems: Volterra kernel approaches. <i>Annals of Biomedical Engineering</i> , 1996, 24, 250-268.	1.3	91
12	A perceptual analysis of viscosity. <i>Experimental Brain Research</i> , 1993, 94, 343-51.	0.7	77
13	Fast Torsional Artificial Muscles from NiTi Twisted Yarns. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 16321-16326.	4.0	71
14	Force sensation in isometric contractions: a relative force effect. <i>Brain Research</i> , 1982, 244, 186-189.	1.1	68
15	Creep and cycle life in polypyrrole actuators. <i>Sensors and Actuators A: Physical</i> , 2007, 133, 210-217.	2.0	67
16	Needle-free delivery of macromolecules through the skin using controllable jet injectors. <i>Expert Opinion on Drug Delivery</i> , 2015, 12, 1637-1648.	2.4	66
17	Nonlinear identification of stretch reflex dynamics. <i>Annals of Biomedical Engineering</i> , 1988, 16, 79-94.	1.3	63
18	A Superhydrophobic to Superhydrophilic In Situ Wettability Switch of Microstructured Polypyrrole Surfaces. <i>Macromolecular Rapid Communications</i> , 2011, 32, 718-723.	2.0	52

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19	Simple and strong: twisted silver painted nylon artificial muscle actuated by Joule heating. Proceedings of SPIE, 2014, , .	0.8	44
20	Polypyrrole actuators: modeling and performance. , 2001, , .		43
21	Vertically Aligned Niobium Nanowire Arrays for Fastâ€Charging Microâ€Supercapacitors. Advanced Materials, 2017, 29, 1700671.	11.1	42
22	<title>Conducting polymer actuators as engineering materials</title>. , 2002, 4695, 176.		40
23	High-Performance Supercapacitors from Niobium Nanowire Yarns. ACS Applied Materials & Interfaces, 2015, 7, 13882-13888.	4.0	39
24	Perceived force in fatiguing isometric contractions. Perception & Psychophysics, 1983, 33, 369-374.	2.3	38
25	Changes in Pinch Force with Bidirectional Load Forces. Journal of Motor Behavior, 1992, 24, 157-164.	0.5	37
26	Laser Raman Spectroscopic Analysis of Polymorphic Forms in Microliter Fluid Volumes. Journal of Pharmaceutical Sciences, 2003, 92, 149-160.	1.6	36
27	Two Methods for Identifying Wiener Cascades Having Noninvertible Static Nonlinearities. Annals of Biomedical Engineering, 1999, 27, 793-804.	1.3	33
28	3D-1D threading methods for protein fold recognition. Pharmacogenomics, 2000, 1, 445-455.	0.6	32
29	In situ observation of dynamic elastic modulus in polypyrrole actuators. Polymer, 2008, 49, 2008-2013.	1.8	31
30	A complete high performance heterodyne interferometer displacement transducer for microactuator control. Review of Scientific Instruments, 1992, 63, 241-248.	0.6	30
31	Development and Performance of a Controllable Autoloading Needle-Free Jet Injector. Journal of Medical Devices, Transactions of the ASME, 2011, 5, .	0.4	26
32	Direct Absorption and Photoacoustic Spectroscopy for Gas Sensing and Analysis: A Critical Review. Laser and Photonics Reviews, 2022, 16, .	4.4	25
33	Volumetric Raman Microscopy Through a Turbid Medium. Journal of Raman Spectroscopy, 1996, 27, 561-570.	1.2	24
34	Microfluidics control the ballistic energy of thermocavitation liquid jets for needle-free injections. Journal of Applied Physics, 2020, 127, .	1.1	24
35	Chemical imaging with a confocal scanning Fourier-transformâ€Raman microscope. Applied Optics, 1994, 33, 7520.	2.1	23
36	Modular continuum robotic endoscope design and path planning. , 2014, , .		23

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37	A needle-free technique for interstitial fluid sample acquisition using a lorentz-force actuated jet injector. <i>Journal of Controlled Release</i> , 2015, 211, 37-43.	4.8	22
38	Automatic Classification of Protein Sequences into Structure/Function Groups via Parallel Cascade Identification: A Feasibility Study. <i>Annals of Biomedical Engineering</i> , 2000, 28, 803-811.	1.3	20
39	Design and optimization strategies for muscle-like direct-drive linear permanent-magnet motors. <i>International Journal of Robotics Research</i> , 2011, 30, 834-845.	5.8	19
40	Noninvasive Confocal Raman Imaging of Immiscible Liquids in a Porous Medium. <i>Analytical Chemistry</i> , 1997, 69, 45-50.	3.2	16
41	A liquid-in-glass thermometer read by an interferometer. <i>Sensors and Actuators A: Physical</i> , 2005, 121, 31-34.	2.0	16
42	A biorobotic flapping fin for propulsion and maneuvering. , 2008, , .		15
43	Influence of the mechanical properties of a manipulandum on human operator dynamics. II. Viscosity. <i>Biological Cybernetics</i> , 1993, 69, 295-303.	0.6	14
44	Prospects for Teleradiology Using Ultrasound. <i>Telemedicine and E-Health</i> , 1996, 2, 87-100.	1.3	14
45	Self-Assembled, Nanostructured Polypyrrole Films Grown in a High-Gravity Environment. <i>Langmuir</i> , 2012, 28, 4805-4810.	1.6	14
46	Optimal voice coil actuators for needle-free jet injection. , 2014, 2014, 2144-8.		14
47	Analysis of Moving-Coil Actuator Jet Injectors for Viscous Fluids. <i>IEEE Transactions on Biomedical Engineering</i> , 2016, 63, 1099-1106.	2.5	14
48	Characterization and use of a novel optical position sensor for microposition control of a linear motor. <i>Review of Scientific Instruments</i> , 1993, 64, 349-356.	0.6	13
49	Delivery of immunoreactive antigen using a controllable needle-free jet injector. <i>Journal of Controlled Release</i> , 2017, 258, 73-80.	4.8	13
50	Anisotropic actuation of mechanically textured polypyrrole films. <i>Polymer</i> , 2008, 49, 1338-1349.	1.8	12
51	Design and Characterization of a Visible-Light Fourier Transform Raman Spectrometer. <i>Applied Spectroscopy</i> , 1995, 49, 1086-1093.	1.2	11
52	<title>Thiophene-based conducting polymer molecular actuators</title>. , 2002, , .		11
53	Large strain actuation in polypyrrole actuators. , 2004, 5385, 380.		11
54	Stochastic System Identification of Skin Properties: Linear and Wiener Static Nonlinear Methods. <i>Annals of Biomedical Engineering</i> , 2012, 40, 2277-2291.	1.3	11

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55	Environmental isolation platform for microrobot system development. Review of Scientific Instruments, 1992, 63, 3492-3498.	0.6	10
56	Synthesis and characterization of EDOT-based conducting polymer actuators. , 2003, , .		10
57	Dynamic Fluid-Like Graphene with Ultralow Frictional Molecular Bearing. Advanced Materials, 2019, 31, e1903195.	11.1	10
58	The effect of jet shape on jet injection. , 2015, 2015, 7350-3.		9
59	Confocal Image Properties of a Confocal Scanning Laser Visible Light FT-Raman Microscope. Applied Spectroscopy, 1995, 49, 971-976.	1.2	8
60	The identification of nonlinear biological systems: Volterra kernel approaches. Annals of Biomedical Engineering, 1996, 24, A250-A268.	1.3	8
61	Nonlinear Stochastic System Identification of Skin Using Volterra Kernels. Annals of Biomedical Engineering, 2013, 41, 847-862.	1.3	8
62	Large deformation mechanical testing of biological membranes using speckle interferometry in transmission I: Experimental apparatus. Applied Optics, 1997, 36, 2238.	2.1	7
63	Multidirectional In Vivo Characterization of Skin Using Wiener Nonlinear Stochastic System Identification Techniques. Journal of Biomechanical Engineering, 2017, 139, .	0.6	7
64	System identification of the human vestibulo-ocular reflex during head-free tracking. Journal of Vestibular Research: Equilibrium and Orientation, 2004, 14, 419-441.	0.8	7
65	Impact of a microfluidic jet on a pendant droplet. Soft Matter, 2021, 17, 7466-7475.	1.2	6
66	Design and characterization of a laser-based instrument with spectroscopic feedback control for treatment of vascular lesions: the "Smart Scalpel". Journal of Biomedical Optics, 2000, 5, 375.	1.4	5
67	Parallel cascade identification and its application to protein family prediction. Journal of Biotechnology, 2001, 91, 35-47.	1.9	5
68	Recent advances in thiophene-based molecular actuators. , 2003, , .		5
69	A compact direct-drive linear synchronous motor with muscle-like performance. , 2013, , .		5
70	A torsional artificial muscle from twisted nitinol microwire. Proceedings of SPIE, 2017, , .	0.8	5
71	Optical Design for a Head-Mounted Display. Presence: Teleoperators and Virtual Environments, 1993, 2, 185-202.	0.3	4
72	Characterization and Control of the Wettability of Conducting Polymer Thin Films. Materials Research Society Symposia Proceedings, 2009, 1228, 40301.	0.1	4

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73	High-speed X-ray imaging of needle-free jet injections. , 2014, , .		4
74	Bending artificial muscle from nylon filaments. Proceedings of SPIE, 2016, , .	0.8	4
75	Calibration of a horizontally acting force transducer with the use of a simple pendulum. Review of Scientific Instruments, 2006, 77, 125103.	0.6	3
76	Temperature sensors for use in muscle microcalorimetry. , 2011, , .		3
77	Adaptive controller for a needle free jet-injector system. , 2015, 2015, 7345-9.		3
78	ANALYSIS OF THE HUMAN OPERATOR CONTROLLING A TELEOPERATED MICROSURGICAL ROBOT. , 1995, , 593-597.		2
79	<title>Tissue modification with feedback: the smart scalpel</title>. , 1998, , .		2
80	Laser treatment of nevus flammas (port-wine stain) with spectroscopic feedback: the smart scalpel. , 1999, , .		2
81	Poly(3,4-ethylenedioxythiophene) actuators: the role of cation and anion choice. , 2004, 5385, 182.		2
82	In Vivo characterization of skin using a weiner nonlinear stochastic system identification method. , 2009, 2009, 6010-3.		2
83	An Electronic Force Sensor for Medical Jet Injection. Journal of Medical Devices, Transactions of the ASME, 2019, 13, .	0.4	2
84	Volumetric Raman Microscopy Through a Turbid Medium. , 1996, 27, 561.		2
85	Analysis of the Human Operator Controlling a Teleoperated Microsurgical Robot. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1995, 28, 593-597.	0.4	1
86	Fabrication and Characterization of High Aspect Ratio Conducting Polymer Fibers. Materials Research Society Symposia Proceedings, 2009, 1240, 1.	0.1	1
87	Application of stochastic system identification to the study of the compliance of electroactive polymers. Review of Scientific Instruments, 2011, 82, 025103.	0.6	1
88	Development of a lorentz-force actuated intravitreal jet injector. , 2012, 2012, 984-7.		1
89	Design of a Debridement Device Using Impinging Jets1. Journal of Medical Devices, Transactions of the ASME, 2016, 10, .	0.4	1
90	A Portable Needle-free Jet Injector Based on a Custom High Power-density Voice-coil Actuator. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	1

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91	Performance of ensemble time-varying system identification methods: Analog simulations and biological applications. , 1992, , .		0
92	<title>Three-dimensional chemical imaging with a confocal scanning laser Fourier transform-Raman microscope</title>. , 1994, 2184, 2.		0
93	<title>Volumetric Raman spectral imaging with a confocal Raman microscope: image modalities and applications</title>. , 1996, 2655, 130.		0
94	Volumetric Raman Spectral Imaging With a Confocal Raman Microscope: Image Modalities and Applications. Microscopy and Microanalysis, 1997, 3, 819-820.	0.2	0
95	The Effect of Ion Delivery on Polypyrrole Strain and Strain Rate under Elevated Temperature. Materials Research Society Symposia Proceedings, 2009, 1222, 1.	0.1	0
96	Closed loop performance of polypyrrole linear contractile actuators. , 2010, , .		0
97	Needle-free small-volume liquid injection system powered by a rotary actuator. , 2017, 2017, 292-295.		0
98	Delivery of Active Collagenase to Skin Using a Lorentz-Force Actuated Needle-Free Injector. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2006, , .	0.5	0