

Christopher D Rahn

List of Publications by Year in descending order

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50
papers

4,049
citations

331259

21
h-index

360668

35
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52
all docs

52
docs citations

52
times ranked

3899
citing authors

#	ARTICLE	IF	CITATIONS
1	Soft Robotics: Biological Inspiration, State of the Art, and Future Research. Applied Bionics and Biomechanics, 2008, 5, 99-117.	0.5	1,168
2	Control oriented 1D electrochemical model of lithium ion battery. Energy Conversion and Management, 2007, 48, 2565-2578.	4.4	349
3	Geometrically Exact Models for Soft Robotic Manipulators. IEEE Transactions on Robotics, 2008, 24, 773-780.	7.3	326
4	Model-Based Electrochemical Estimation and Constraint Management for Pulse Operation of Lithium Ion Batteries. IEEE Transactions on Control Systems Technology, 2010, 18, 654-663.	3.2	290
5	Least Squares Galvanostatic Intermittent Titration Technique (LS-GITT) for Accurate Solid Phase Diffusivity Measurement. Journal of the Electrochemical Society, 2013, 160, A1842-A1846.	1.3	206
6	Model based identification of aging parameters in lithium ion batteries. Journal of Power Sources, 2013, 232, 79-85.	4.0	183
7	In Situ Measurement of Radial Temperature Distributions in Cylindrical Li-Ion Cells. Journal of the Electrochemical Society, 2014, 161, A1499-A1507.	1.3	161
8	State of charge estimation of a lithium ion cell based on a temperature dependent and electrolyte enhanced single particle model. Energy, 2015, 80, 731-739.	4.5	115
9	Variable Stiffness Structures Utilizing Fluidic Flexible Matrix Composites. Journal of Intelligent Material Systems and Structures, 2009, 20, 443-456.	1.4	110
10	Model Order Reduction of 1D Diffusion Systems Via Residue Grouping. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2008, 130, .	0.9	103
11	A Temperature Dependent, Single Particle, Lithium Ion Cell Model Including Electrolyte Diffusion. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2015, 137, .	0.9	103
12	In-Situ Measurement of Current Distribution in a Li-Ion Cell. Journal of the Electrochemical Society, 2013, 160, A610-A615.	1.3	95
13	Nonlinear-elastic finite axisymmetric deformation of flexible matrix composite membranes under internal pressure and axial force. Composites Science and Technology, 2006, 66, 3053-3063.	3.8	85
14	Aging formula for lithium ion batteries with solid electrolyte interphase layer growth. Journal of Power Sources, 2015, 294, 239-247.	4.0	84
15	Effects of Non-Uniform Current Distribution on Energy Density of Li-Ion Cells. Journal of the Electrochemical Society, 2013, 160, A2299-A2305.	1.3	72
16	High-concentration planar microtracking photovoltaic system exceeding 30% efficiency. Nature Energy, 2017, 2, .	19.8	56
17	Model-based electrochemical estimation of lithium-ion batteries. , 2008, , .		55
18	Geometrically exact dynamic models for soft robotic manipulators. , 2007, , .		48

#	ARTICLE	IF	CITATIONS
19	Multifunctional structural lithium-ion battery for electric vehicles. <i>Journal of Intelligent Material Systems and Structures</i> , 2017, 28, 1603-1613.	1.4	45
20	Model-Based Shape Estimation for Soft Robotic Manipulators: The Planar Case. <i>Journal of Mechanisms and Robotics</i> , 2014, 6, .	1.5	31
21	Reaction temperature sensing (RTS)-based control for Li-ion battery safety. <i>Scientific Reports</i> , 2015, 5, 18237.	1.6	26
22	How Does Model Reduction Affect Lithium-Ion Battery State of Charge Estimation Errors? Theory and Experiments. <i>Journal of the Electrochemical Society</i> , 2017, 164, A237-A251.	1.3	23
23	Design, manufacture and test of a novel structural battery based on sandwich construction. <i>Journal of Sandwich Structures and Materials</i> , 2015, 17, 666-690.	2.0	22
24	Monolithic SUEX Flapping Wing Mechanisms for Pico Air Vehicle Applications. <i>Journal of Microelectromechanical Systems</i> , 2013, 22, 527-535.	1.7	20
25	Design, Fabrication, and Performance of a Piezoelectric Uniflex Microactuator. <i>Journal of Microelectromechanical Systems</i> , 2009, 18, 616-625.	1.7	17
26	Development of a First Principles Equivalent Circuit Model for a Lithium Ion Battery. , 2012, , .		12
27	Fluidic Composite Tunable Vibration Isolators. <i>Journal of Vibration and Acoustics, Transactions of the ASME</i> , 2012, 134, .	1.0	12
28	Reduced Order Impedance Models of Lithium Ion Batteries. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2014, 136, .	0.9	11
29	Actuation of fluidic flexible matrix composites in structural media. <i>Journal of Intelligent Material Systems and Structures</i> , 2012, 23, 269-278.	1.4	10
30	Elevated temperature for life extension of lithium ion power cells. <i>Energy</i> , 2018, 159, 716-723.	4.5	9
31	Fluidic flexible matrix composites for autonomous structural tailoring. , 2007, , .		8
32	Dexterity and Workspace Analysis of Two Soft Robotic Manipulators. , 2010, , .		6
33	Piezoelectric T-Beam Actuators. <i>Journal of Mechanical Design, Transactions of the ASME</i> , 2011, 133, .	1.7	6
34	Electrolyte-resistant epoxy for bonding batteries based on sandwich structures. <i>Journal of Applied Polymer Science</i> , 2018, 135, 46059.	1.3	6
35	Fabrication and Characterization of Micromachined Piezoelectric T-Beam Actuators. <i>Journal of Microelectromechanical Systems</i> , 2013, 22, 163-169.	1.7	5
36	Model-based sizing of battery packs for minimum cost. , 2017, , .		5

#	ARTICLE	IF	CITATIONS
37	Optimal, Model-Based Design of Soft Robotic Manipulators. , 2007, , 801.		4
38	Fluidic Composite Tuned Vibration Absorbers. , 2009, , .		4
39	Stiffness Shaping for Zero Vibration Fluidic Flexible Matrix Composites. , 2008, , .		3
40	Shape Sensing for Soft Robotic Manipulators. , 2009, , .		3
41	Fluidic Composite Tunable Vibration Isolators. , 2010, , .		3
42	Vibration damping of a cantilever beam utilizing fluidic flexible matrix composites. Proceedings of SPIE, 2013, , .	0.8	3
43	Experimental Characterization of a Cantilever Beam With a Fluidic Flexible Matrix Composite Vibration Treatment. , 2014, , .		2
44	Fluidic Flexible Matrix Composite Vibration Absorber for a Cantilever Beam. Journal of Vibration and Acoustics, Transactions of the ASME, 2015, 137, .	1.0	2
45	Switched Stiffness Vibration Controllers for Fluidic Flexible Matrix Composites. , 2009, , .		1
46	Discretization methods for battery systems modeling. , 2011, , .		1
47	Passive and Switched Stiffness Vibration Controllers Using Fluidic Flexible Matrix Composites. Journal of Vibration and Acoustics, Transactions of the ASME, 2012, 134, .	1.0	1
48	Tunable fluidic composite mounts for vibration absorption. JVC/Journal of Vibration and Control, 2014, 20, 2137-2145.	1.5	1
49	Fluidic flexible matrix composite damping treatment for a cantilever beam. Journal of Sound and Vibration, 2015, 340, 80-94.	2.1	1
50	Vibration Isolation of a Cantilever Beam Using Fluidic Flexible Matrix Composite Tubes. , 2015, , .		0