

# Song-yul Choe

## List of Publications by Year in descending order

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62  
papers

2,576  
citations

172457  
29  
h-index

189892  
50  
g-index

62  
all docs

62  
docs citations

62  
times ranked

2127  
citing authors

#	ARTICLE	IF	CITATIONS
1	Micromachined PZT cantilever based on SOI structure for low frequency vibration energy harvesting. Sensors and Actuators A: Physical, 2009, 154, 103-108.	4.1	226
2	An improved stator flux estimation for speed sensorless stator flux orientation control of induction motors. IEEE Transactions on Power Electronics, 2000, 15, 312-318.	7.9	197
3	A high dynamic PEM fuel cell model with temperature effects. Journal of Power Sources, 2005, 145, 30-39.	7.8	125
4	Modeling, validation and analysis of mechanical stress generation and dimension changes of a pouch type high power Li-ion battery. Journal of Power Sources, 2013, 224, 211-224.	7.8	115
5	Coolant controls of a PEM fuel cell system. Journal of Power Sources, 2008, 179, 252-264.	7.8	99
6	Analysis of Piezoelectric Materials for Energy Harvesting Devices under High-g Vibrations. Japanese Journal of Applied Physics, 2007, 46, 6755.	1.5	96
7	Modeling of degradation effects considering side reactions for a pouch type Li-ion polymer battery with carbon anode. Journal of Power Sources, 2014, 261, 120-135.	7.8	95
8	Development of a physics-based degradation model for lithium ion polymer batteries considering side reactions. Journal of Power Sources, 2015, 278, 506-521.	7.8	92
9	Modeling and simulation of a PEM fuel cell stack considering temperature effects. Journal of Power Sources, 2006, 158, 274-286.	7.8	91
10	Theoretical and experimental analysis of heat generations of a pouch type LiMn <sub>2</sub> O <sub>4</sub> /carbon high power Li-polymer battery. Journal of Power Sources, 2013, 241, 46-55.	7.8	90
11	Dynamic Simulator for a PEM Fuel Cell System With a PWM DC/DC Converter. IEEE Transactions on Energy Conversion, 2008, 23, 669-680.	5.2	80
12	An adaptive sigma-point Kalman filter with state equality constraints for online state-of-charge estimation of a Li(NiMnCo)O <sub>2</sub> /Carbon battery using a reduced-order electrochemical model. Applied Energy, 2020, 258, 113925.	10.1	70
13	Dynamic modeling and analysis of a 20-cell PEM fuel cell stack considering temperature and two-phase effects. Journal of Power Sources, 2008, 179, 660-672.	7.8	69
14	Analysis and control of a hybrid fuel delivery system for a polymer electrolyte membrane fuel cell. Journal of Power Sources, 2008, 185, 973-984.	7.8	69
15	New fast charging method of lithium-ion batteries based on a reduced order electrochemical model considering side reaction. Journal of Power Sources, 2019, 423, 367-379.	7.8	68
16	Electrochemical-thermal modeling of lithium plating/stripping of Li(Ni <sub>0.6</sub> Mn <sub>0.2</sub> Co <sub>0.2</sub> )O <sub>2</sub> /Carbon lithium-ion batteries at subzero ambient temperatures. Journal of Power Sources, 2019, 418, 61-73.	7.8	68
17	Reliability and life study of hydraulic solenoid valve. Part 1: A multi-physics finite element model. Engineering Failure Analysis, 2009, 16, 874-887.	4.0	64
18	Reliability and life study of hydraulic solenoid valve. Part 2: Experimental study. Engineering Failure Analysis, 2009, 16, 944-963.	4.0	61

#	ARTICLE	IF	CITATIONS
19	Fast and safe charging method suppressing side reaction and lithium deposition reaction in lithium ion battery. Journal of Power Sources, 2019, 436, 226835.	7.8	58
20	Analysis and control of a fuel delivery system considering a two-phase anode model of the polymer electrolyte membrane fuel cell stack. Journal of Power Sources, 2011, 196, 4655-4670.	7.8	55
21	Online state of health and aging parameter estimation using a physics-based life model with a particle filter. Journal of Power Sources, 2020, 476, 228655.	7.8	55
22	Actively temperature controlled health-aware fast charging method for lithium-ion battery using nonlinear model predictive control. Applied Energy, 2020, 271, 115232.	10.1	52
23	Unsteady 2D PEM fuel cell modeling for a stack emphasizing thermal effects. Journal of Power Sources, 2007, 165, 196-209.	7.8	45
24	Dynamic modeling and analysis of a pouch type LiMn2O4/Carbon high power Li-polymer battery based on electrochemical-thermal principles. Journal of Power Sources, 2012, 218, 357-367.	7.8	36
25	Modeling of degradation effects and its integration into electrochemical reduced order model for Li(MnNiCo)O2/Graphite polymer battery for real time applications. Electrochimica Acta, 2018, 270, 440-452.	5.2	35
26	Integrated modeling and control of a PEM fuel cell power system with a PWM DC/DC converter. Journal of Power Sources, 2007, 164, 614-623.	7.8	34
27	Reduced order model (ROM) of a pouch type lithium polymer battery based on electrochemical thermal principles for real time applications. Electrochimica Acta, 2013, 97, 66-78.	5.2	31
28	Analysis of the Heat Generation Rate of Lithium-Ion Battery Using an Electrochemical Thermal Model. Journal of the Electrochemical Society, 2020, 167, 120503.	2.9	31
29	Analysis of effects of the state of charge on the formation and growth of the deposit layer on graphite electrode of pouch type lithium ion polymer batteries. Journal of Power Sources, 2014, 270, 213-220.	7.8	29
30	Measurement of heat generation rate and heat sources of pouch type Li-ion cells. Applied Thermal Engineering, 2021, 189, 116709.	6.0	29
31	A reduced order electrochemical and thermal model for a pouch type lithium ion polymer battery with Li <sub>x</sub> M <sub>y</sub> Co <sub>1-x-y</sub> O <sub>2</sub> /LiFePO <sub>4</sub> blended cathode. Journal of Power Sources, 2015, 294, 545-555.	7.8	25
32	A highly efficient reduced order electrochemical model for a large format LiMn2O4/Carbon polymer battery for real time applications. Electrochimica Acta, 2015, 164, 97-107.	5.2	21
33	Hybridized time-frequency method for the measurement of entropy coefficient of lithium-ion battery. Electrochimica Acta, 2020, 362, 137124.	5.2	19
34	Modeling and analysis of LiFePO <sub>4</sub> /Carbon battery considering two-phase transition during galvanostatic charging/discharging. Electrochimica Acta, 2015, 155, 447-457.	5.2	18
35	Modeling and Analysis of Vibration-Induced Changes in Connector Resistance of High Power Electrical Connectors for Hybrid Vehicles. Mechanics Based Design of Structures and Machines, 2012, 40, 349-365.	4.7	17
36	Impedance model of lithium ion polymer battery considering temperature effects based on electrochemical principle: Part I for high frequency. Journal of Power Sources, 2015, 277, 403-415.	7.8	17

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37	A control oriented reduced order electrochemical model considering variable diffusivity of lithium ions in solid. Journal of Power Sources, 2020, 468, 228322.	7.8	17
38	Optimal Fast Charging Method for a Large-Format Lithium-Ion Battery Based on Nonlinear Model Predictive Control and Reduced Order Electrochemical Model. Journal of the Electrochemical Society, 2020, 167, 160559.	2.9	17
39	Parameter sensitivity analysis of a reduced-order electrochemical-thermal model for heat generation rate of lithium-ion batteries. Applied Energy, 2022, 305, 117920.	10.1	17
40	An integrated reduced order model considering degradation effects for LiFePO <sub>4</sub> /graphite cells. Electrochimica Acta, 2018, 280, 41-54.	5.2	16
41	Measurement of two-dimensional heat generation rate of pouch type lithium-ion battery using a multifunctional calorimeter. Journal of Power Sources, 2022, 532, 231350.	7.8	16
42	One-dimensional dynamic modeling and validation of maintenance-free lead-acid batteries emphasizing temperature effects. Journal of Power Sources, 2010, 195, 7102-7114.	7.8	15
43	Analysis of the Deposit Layer from Electrolyte Side Reaction on the Anode of the Pouch Type Lithium Ion Polymer Batteries: The Effect of State of Charge and Charge Rate. Electrochimica Acta, 2014, 149, 1-10.	5.2	14
44	Design of a Calorimeter for Measurement of Heat Generation Rate of Lithium Ion Battery Using Thermoelectric Device. SAE International Journal of Alternative Powertrains, 0, 6, 252-260.	0.8	13
45	Decoupling the thermal and non-thermal effects of discharge C-rate on the capacity fade of lithium-ion batteries. Journal of Power Sources, 2021, 510, 230390.	7.8	11
46	Fast charging method based on estimation of ion concentrations using a reduced order of Electrochemical Thermal Model for lithium ion polymer battery. , 2013, , .		10
47	Simultaneous and continuous characterization of reversible and irreversible heat of lithium-ion battery using wavelet transform technique. Electrochimica Acta, 2021, 375, 137973.	5.2	7
48	Modeling and Analysis of Heat Generation Rate of a Large Format Pouch-Type Lithium-Ion Battery Considering Degradation. Journal of the Electrochemical Society, 2022, 169, 070502.	2.9	6
49	Comparison of Piezoelectric Materials for Vibration Energy Conversion Devices. Materials Research Society Symposia Proceedings, 2006, 966, 1.	0.1	5
50	Modeling and Experimental Analyses of a Two-Cell Polymer Electrolyte Membrane Fuel Cell Stack Emphasizing Individual Cell Characteristics. Journal of Fuel Cell Science and Technology, 2009, 6, .	0.8	5
51	Automatic Estimation of Parameters of a Reduced Order Electrochemical Model for Lithium-Ion Batteries at the Beginning-of-Life. , 2018, , .		5
52	Accelerated equilibration for lithium-ion battery using optimal time control with electrochemical model. Journal of Power Sources, 2020, 480, 228623.	7.8	5
53	Dynamic Simulator and Controls for a PEM Fuel Cell Power System. World Electric Vehicle Journal, 2008, 2, 219-235.	3.0	4
54	Modeling of SEI Formation Based on a Electrochemical Reduced Order Model for Li(MnNiCo)O <sub>2</sub> /Carbon Polymer Battery. , 2015, , .		4

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55	Effect of Ru and LaNiO <sub>3</sub> barrier layers on lead zirconate titanate films grown on nickel-based metal foils by sol-gel process. <i>Ceramics International</i> , 2008, 34, 1261-1265.	4.8	3
56	Development and Validation of a Reduced Order Model Incorporating a Semi-Empirical Degradation Model for Pouch Type LiFePO <sub>4</sub> /Graphite Cells. <i>SAE International Journal of Alternative Powertrains</i> , 2017, 6, 279-289.	0.8	2
57	Evaluation and Modeling of Power Generator with Bimorph PZT Cantilever. <i>Materials Research Society Symposia Proceedings</i> , 2006, 966, 1.	0.1	1
58	A Hybrid State of Charge Estimation Method of a LiFePO <sub>4</sub> /Graphite Cell Using a Reduced Order Model with an Extended Kalman Filter. , 2019, , .		1
59	Integrated Modeling and Simulation of a PEM fuel cell system for active and reactive power compensation. , 0, , .		0
60	Fast Charge and Discharge Characterization and Modeling of Heat Generation at the Cell Level. <i>ECS Meeting Abstracts</i> , 2021, MA2021-02, 484-484.	0.0	0
61	(Invited) Experimental Characterization and Modeling of Heat Generation Rates of Lithium-Ion Batteries with NMC/C Chemistries. <i>ECS Meeting Abstracts</i> , 2020, MA2020-02, 1592-1592.	0.0	0
62	Measurement and Estimation of Heat Generation Rate of Lithium-Ion Battery Considering SEI Growth and Lithium Plating. <i>ECS Meeting Abstracts</i> , 2021, MA2021-02, 1967-1967.	0.0	0