Babu R Chalamala

List of Publications by Year
in descending order

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83 papers	3,712 citations	236925 25 h-index	128289 60 g-index
84 all docs	84 docs citations	84 times ranked	3336 citing authors

#	Article	IF	Citations
1	Optimal sizing of distributed energy resources for planning 100% renewable electric power systems. Energy, 2022, 239, 122436.	8.8	17
2	Sizing of Energy Storage for Grid Inertial Support in Presence of Renewable Energy. IEEE Transactions on Power Systems, 2022, 37, 3769-3778.	6.5	17
3	Driving Zn-MnO2 grid-scale batteries: A roadmap to cost-effective energy storage. MRS Energy & Sustainability, 2022, 9, 13-18.	3.0	8
4	Electrification, decarbonization, and the future carbon-free grid: the role of energy storage in the electric grid infrastructure [point of view]. Proceedings of the IEEE, 2022, 110, 324-333.	21.3	12
5	Cyberphysical Security of Grid Battery Energy Storage Systems. IEEE Access, 2022, 10, 59675-59722.	4.2	11
6	Dissipativity-based Voltage Control in Distribution Grids. , 2022, , .		1
7	Rechargeable alkaline zincâ€“manganese oxide batteries for grid storage: Mechanisms, challenges and developments. Materials Science and Engineering Reports, 2021, 143, 100593.	31.8	49
8	Data-Driven Incident Detection in Power Distribution Systems. , 2021, , .		0
9	Open Data, Models, and Codes for Vanadium Redox Batch Cell Systems: A Systems Approach Using Zero-Dimensional Models. Journal of Electrochemical Energy Conversion and Storage, 2020, 17, .	2.1	13
10	Predictive-Maintenance Practices: For Operational Safety of Battery Energy Storage Systems. IEEE Power and Energy Magazine, 2020, 18, 86-97.	1.6	15
11	Perspectiveâ€”On the Need for Reliability and Safety Studies of Grid-Scale Aqueous Batteries. Journal of the Electrochemical Society, 2020, 167, 090545.	2.9	22
12	Maximising the investment returns of a gridâ€connected battery considering degradation cost. IET Generation, Transmission and Distribution, 2020, 14, 4711-4718.	2.5	10
13	Degradation of Commercial Lithium-Ion Cells as a Function of Chemistry and Cycling Conditions. Journal of the Electrochemical Society, 2020, 167, 120532.	2.9	221
14	Multi-scale thermal stability study of commercial lithium-ion batteries as a function of cathode chemistry and state-of-charge. Journal of Power Sources, 2019, 435, 226777.	7.8	60
15	Market Evaluation of Energy Storage Systems Incorporating Technology-Specific Nonlinear Models. IEEE Transactions on Power Systems, 2019, 34, 3706-3715.	6.5	31
16	Energy Management and Optimization Methods for Grid Energy Storage Systems. IEEE Access, 2018, 6, 13231-13260.	4.2	247
17	Ab Initio Studies of Hydrogen Ion Insertion into Î²-, R-, and Î³-MnO₂Polymorphs and the Implications for Shallow-Cycled Rechargeable Zn/MnO₂Batteries. Journal of the Electrochemical Society, 2018, 165, A3517-A3524.	2.9	16
18	Engineering Energy-Storage Projects: Applications and Financial Aspects [Viewpoint]. IEEE Electrification Magazine, 2018, 6, 4-12.	1.8	5

#	Article	IF	Citations
19	Maximizing The Revenue of Energy Storage Systems in Market Areas Considering Nonlinear Storage Efficiencies. , 2018, , .		9
20	Opportunities for Energy Storage in CAISO: Day-Ahead and Real-Time Market Arbitrage. , 2018, , .		10
21	Estimation of Transport and Kinetic Parameters of Vanadium Redox Batteries Using Static Cells. ECS Transactions, 2018, 85, 43-64.	0.5	4
22	Maintaining Balance: The Increasing Role of Energy Storage for Renewable Integration. IEEE Power and Energy Magazine, 2017, 15, 31-39.	1.6	43
23	A Database for Comparative Electrochemical Performance of Commercial 18650-Format Lithium-Ion Cells. Journal of the Electrochemical Society, 2017, 164, A2697-A2706.	2.9	35
24	Energy Storageâ€"Part I: Batteries and Energy Conversion Systems. Proceedings of the IEEE, 2014, 102, 936-938.	21.3	6
25	Redox Flow Batteries: An Engineering Perspective. Proceedings of the IEEE, 2014, 102, 976-999.	21.3	188
26	Energy Storageâ€"Part II: Realizing the Value [Scanning the Issue]. Proceedings of the IEEE, 2014, 102, 1050-1051.	21.3	2
27	Prolog to the Section on Advanced Materials for Electronics, Photonics, and Energy Storage. Proceedings of the IEEE, 2012, 100, 1452-1453.	21.3	0
28	3.4: Development of large area lateral edge emitter arrays on 5"×5" glass substrates. , 2010, , .		0
29	Prospects for Growth: High-Tech Enterprises in India. Proceedings of the IEEE, 2007, 95, 1715-1717.	21.3	0
30	Portable Electronics and the Widening Energy Gap. Proceedings of the IEEE, 2007, 95, 2106-2107.	21.3	9
31	Macroelectronics: Perspectives on Technology and Applications. Proceedings of the IEEE, 2005, 93, 1239-1256.	21.3	320
32	Special Issue on Flexible Electronics Technology, Part II: Materials and Devices. Proceedings of the IEEE, 2005, 93, 1391-1393.	21.3	33
33	Special Issue on Flexible Electronics Technology, Part 1: Systems and Applications. Proceedings of the IEEE, 2005, 93, 1235-1238.	21.3	61
34	Big and bendable [flexible plastic-based circuits. IEEE Spectrum, 2005, 42, 50-56.	0.7	13
35	Mechanical Performance of Thin Films in Flexible Displays. Materials Research Society Symposia Proceedings, 2004, 814, 307.	0.1	15
36	Introduction to the Issue on Organic Light-Emitting Diodes. IEEE Journal of Selected Topics in Quantum Electronics, 2004, 10, 1-2.	2.9	10

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37	Highly flexible transparent electrodes for organic light-emitting diode-based displays. Applied Physics Letters, 2004, 85, 3450-3452.	3.3	245
38	Gas-induced current decay of molybdenum field emitter arrays. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 1187.	1.6	10
39	Experimental studies of the cap structure of single-walled carbon nanotubes. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2003, 21, 868.	1.6	47
40	Microelectronics Packaging and Integration. MRS Bulletin, 2003, 28, 11-20.	3.5	7
41	Field emission characteristics of iridium oxide tips. Journal of Applied Physics, 2002, 91, 6141-6146.	2.5	33
42	Feasibility of thin film microfabricated hydrogen ion sources. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2002, 20, 1132.	1.6	4
43	Scanning the issue - Special issue on flat-panel display technology. Proceedings of the IEEE, 2002, 90, 447-452.	21.3	2
44	Real-time measurement of pressure inside field-emission displays. Applied Physics Letters, 2001, 79, 2648-2650.	3.3	13
45	Oxidation of Molybdenum Thin Films and its Impact on Molybdenum Field Emitter Arrays. Materials Research Society Symposia Proceedings, 2001, 685, 1.	0.1	1
46	Anomalies in the Behavior of Mo Field Emitter Arrays in Inert Gases and Some Insights into the Degradation Mechanisms. Materials Research Society Symposia Proceedings, 2001, 685, 1.	0.1	0
47	8.1: New Insights Into the Degradation of Field Emission Displays. Digest of Technical Papers SID International Symposium, 2001, 32, 81.	0.3	3
48	8.3: Operation of FEAs in Hydrogen and the Development of Thin Film Metal Hydrides for Integration into FEDs. Digest of Technical Papers SID International Symposium, 2001, 32, 89.	0.3	1
49	Fabrication of molybdenum carbide and hafnium carbide field emitter arrays. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2001, 19, 42.	1.6	15
50	Argon inclusion in sputtered films and the effect of the gas on molybdenum field emitter arrays. Applied Physics Letters, 2001, 78, 2151-2153.	3.3	20
51	Evaporation of carbon nanotubes during electron field emission. Applied Physics Letters, 2001, 79, 1873-1875.	3.3	180
52	Development of thin-film metal hydrides for integration into field emission displays. Applied Physics Letters, 2001, 78, 2967-2969.	3.3	8
53	Growth and control of nanoprotrusions on iridium field emitters. Applied Physics Letters, 2001, 78, 2375-2377.	3.3	9
54	28.3: Evaluation of Thin Film Materials for Field Emission Displays. Digest of Technical Papers SID International Symposium, 2000, 31, 424-427.	0.3	0

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55	Displaying a bright future [vacuum microelectronics]. IEEE Circuits and Devices: the Magazine of Electronic and Photonic Systems, 2000, 16, 19-30.	0.4	3
56	Stability and chemical composition of thermally grown iridium-oxide thin films. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 1919.	1.6	12
57	Studies on the interaction between thin film materials and Mo field emitter arrays. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 2000, 18, 1825.	1.6	10
58	Fabrication of iridium field emitter arrays. Applied Physics Letters, 2000, 77, 3284-3286.	3.3	18
59	Apparatus for temperature programmed desorption studies of thin films. Review of Scientific Instruments, 2000, 71, 320-321.	1.3	7
60	Apparatus for quantitative analysis of residual gases in flat panel vacuum packages. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2000, 18, 343-348.	2.1	6
61	Current saturation mechanisms in carbon nanotube field emitters. Applied Physics Letters, 2000, 76, 375-377.	3.3	371
62	Spontaneous Ordering of Oxide Nanostructures. Science, 2000, 287, 2235-2237.	12.6	130
63	Surface chemical changes on field emitter arrays due to device aging. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 233.	1.6	26
64	Interaction of H[sub 2]O with active Spindt-type molybdenum field emitter arrays. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 303.	1.6	13
65	Three behavioral states observed in field emission from single-walled carbon nanotubes. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1999, 17, 1959.	1.6	158
66	An improved method for detecting hot spots in field emission cathode arrays. Review of Scientific Instruments, 1999, 70, 3889-3891.	1.3	2
67	Effect of growth conditions on surface morphology and photoelectric work function characteristics of iridium oxide thin films. Applied Physics Letters, 1999, 74, 1394-1396.	3.3	80
68	A compact electron energy analyzer for measuring field emission energy distributions. Review of Scientific Instruments, 1999, 70, 3299-3302.	1.3	5
69	Field emission microscopy of carbon nanotube caps. Journal of Applied Physics, 1999, 85, 3832-3836.	2.5	152
70	The environmental stability of field emission from single-walled carbon nanotubes. Applied Physics Letters, 1999, 75, 3017-3019.	3.3	289
71	Cathode Lifetime Issues in Field Emission Displays. Materials Research Society Symposia Proceedings, 1999, 558, 49.	0.1	2
72	Field Emission Energy Distribution and Current-Voltage Characteristics Using Single Tip Gated Diodes. Materials Research Society Symposia Proceedings, 1999, 558, 85.	0.1	0

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73	FED up with fat tubes. IEEE Spectrum, 1998, 35, 42-51.	0.7	116
74	Poisoning of Spindt-type molybdenum field emitter arrays by CO[sub 2]. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 2866.	1.6	15
75	Surface conditioning of active molybdenum field emission cathode arrays with H[sub 2] and helium. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 2855.	1.6	24
76	Effect of O[sub 2] on the electron emission characteristics of active molybdenum field emission cathode arrays. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 2859.	1.6	55
77	Effect of CH[sub 4] on the electron emission characteristics of active molybdenum field emitter arrays. Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena, 1998, 16, 3073.	1.6	14
78	<title>Device reliability issues in field emission displays</title>. , 1998, 3363, 236.		0
79	9.4: Residual Gas Effects on the Emission Characteristics of Active Mo Field Emission Cathode Arrays. Digest of Technical Papers SID International Symposium, 1998, 29, 107.	0.3	5
80	Branching and anisotropy of barrier tunneling and fluorescent decay inH2. I. Experiment. Physical Review A, 1996, 54, 522-530.	2.5	10
81	Laser-Induced Fluorescence of the B2Î£+-X2Î System of OH: Molecular Constants for B2Î£+ (v = 0, 1) and X2Î (v = 7-9, 11-13). Journal of Molecular Spectroscopy, 1993, 161, 243-252.	1.2	17
82	Ion accelerators and electron scattering. Nuclear Instruments & Methods in Physics Research B, 1993, 79, 85-87.	1.4	0
83	Collision dynamics of OH(Xâ€‰2Î, v=9). Journal of Chemical Physics, 1993, 99, 5807-5811.	3.0	61