Jenel P VÇtÇmanu

List of Publications by Year
in descending order

51 papers	5,581 citations	101543 36 h-index	197818 49 g-index
51 all docs	51 docs citations	51 times ranked	4519 citing authors

#	Article	IF	Citations
1	Inhibiting manganese (II) from catalyzing electrolyte decomposition in lithium-ion batteries. Journal of Energy Chemistry, 2022, 65, 1-8.	12.9	15
2	Expanding the low-temperature and high-voltage limits of aqueous lithium-ion battery. Energy Storage Materials, 2022, 45, 903-910.	18.0	58
3	Highly reversible Zn metal anode enabled by sustainable hydroxyl chemistry. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	41
4	Capacitance with Different Electrode Surface Topology. , 2021, , 1-9.		0
5	Hydrolysis of LiPF₆-Containing Electrolyte at High Voltage. ACS Energy Letters, 2021, 6, 2096-2102.	17.4	119
6	Fluorinated interphase enables reversible aqueous zinc battery chemistries. Nature Nanotechnology, 2021, 16, 902-910.	31.5	560
7	Modeling Methods of Ionic Liquids at Charged Electrode Surfaces. , 2021, , 1-9.		0
8	Improving Electrochemical Stability and Lowâ€Temperature Performance with Water/Acetonitrile Hybrid Electrolytes. Advanced Energy Materials, 2020, 10, 1902654.	19.5	144
9	A 63 m Superconcentrated Aqueous Electrolyte for High-Energy Li-Ion Batteries. ACS Energy Letters, 2020, 5, 968-974.	17.4	197
10	Overlooked electrolyte destabilization by manganese (II) in lithium-ion batteries. Nature Communications, 2019, 10, 3423.	12.8	119
11	Probing Electric Double-Layer Composition via in Situ Vibrational Spectroscopy and Molecular Simulations. Journal of Physical Chemistry Letters, 2019, 10, 3381-3389.	4.6	27
12	The 1-ethyl-3-methylimidazolium bis(trifluoro-methylsulfonyl)-imide ionic liquid nanodroplets on solid surfaces and in electric field: A molecular dynamics simulation study. Journal of Chemical Physics, 2018, 148, 193833.	3.0	15
13	The nanoscale structure of the electrolyteâ€“metal oxide interface. Energy and Environmental Science, 2018, 11, 594-602.	30.8	46
14	Application of Screening Functions as Cutoff-Based Alternatives to Ewald Summation in Molecular Dynamics Simulations Using Polarizable Force Fields. Journal of Chemical Theory and Computation, 2018, 14, 768-783.	5.3	7
15	Hybrid Aqueous/Non-aqueous Electrolyte for Safe and High-Energy Li-Ion Batteries. Joule, 2018, 2, 927-937.	24.0	303
16	On the application of constant electrode potential simulation techniques in atomistic modelling of electric double layers. Molecular Simulation, 2017, 43, 838-849.	2.0	34
17	Ramifications of Water-in-Salt Interfacial Structure at Charged Electrodes for Electrolyte Electrochemical Stability. Journal of Physical Chemistry Letters, 2017, 8, 4362-4367.	4.6	150
18	Charge storage at the nanoscale: understanding the trends from the molecular scale perspective. Journal of Materials Chemistry A, 2017, 5, 21049-21076.	10.3	58

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19	4.0ÂV Aqueous Li-Ion Batteries. Joule, 2017, 1, 122-132.	24.0	441
20	Modeling Insight into Battery Electrolyte Electrochemical Stability and Interfacial Structure. Accounts of Chemical Research, 2017, 50, 2886-2894.	15.6	234
21	A comparative study of room temperature ionic liquids and their organic solvent mixtures near charged electrodes. Journal of Physics Condensed Matter, 2016, 28, 464002.	1.8	30
22	Importance of Ion Packing on the Dynamics of Ionic Liquids during Micropore Charging. Journal of Physical Chemistry Letters, 2016, 7, 36-42.	4.6	78
23	Non-Faradaic Energy Storage by Room Temperature Ionic Liquids in Nanoporous Electrodes. ACS Nano, 2015, 9, 5999-6017.	14.6	108
24	Capacitive Energy Storage: Current and Future Challenges. Journal of Physical Chemistry Letters, 2015, 6, 3594-3609.	4.6	99
25	Tailoring graphene-based electrodes from semiconducting to metallic to increase the energy density in supercapacitors. Nanotechnology, 2015, 26, 464001.	2.6	35
26	Ionic liquids at charged surfaces: Insight from molecular simulations. Journal of Non-Crystalline Solids, 2015, 407, 339-348.	3.1	41
27	On anodic stability and decomposition mechanism of sulfolane in high-voltage lithium ion battery. Electrochimica Acta, 2014, 133, 117-122.	5.2	27
28	Concentrated electrolytes: decrypting electrolyte properties and reassessing Al corrosion mechanisms. Energy and Environmental Science, 2014, 7, 416-426.	30.8	332
29	Influence of temperature on the capacitance of ionic liquid electrolytes on charged surfaces. Physical Chemistry Chemical Physics, 2014, 16, 5174.	2.8	59
30	A comparative study of alkylimidazolium room temperature ionic liquids with FSI and TFSI anions near charged electrodes. Electrochimica Acta, 2014, 145, 40-52.	5.2	52
31	A molecular dynamics simulation study of the electric double layer and capacitance of [BMIM][PF6] and [BMIM][BF4] room temperature ionic liquids near charged surfaces. Physical Chemistry Chemical Physics, 2013, 15, 14234.	2.8	93
32	Increasing Energy Storage in Electrochemical Capacitors with Ionic Liquid Electrolytes and Nanostructured Carbon Electrodes. Journal of Physical Chemistry Letters, 2013, 4, 2829-2837.	4.6	111
33	On the Atomistic Nature of Capacitance Enhancement Generated by Ionic Liquid Electrolyte Confined in Subnanometer Pores. Journal of Physical Chemistry Letters, 2013, 4, 132-140.	4.6	107
34	Molecular Dynamics Simulation Study of the Interfacial Structure and Differential Capacitance of Alkylimidazolium Bis(trifluoromethanesulfonyl)imide [C_nmim][TFSI] Ionic Liquids at Graphite Electrodes. Journal of Physical Chemistry C, 2012, 116, 7940-7951.	3.1	144
35	Nanopatterning of Electrode Surfaces as a Potential Route to Improve the Energy Density of Electric Double-Layer Capacitors: Insight from Molecular Simulations. Journal of Physical Chemistry Letters, 2012, 3, 1124-1129.	4.6	62
36	Electrode/Electrolyte Interface in Sulfolane-Based Electrolytes for Li Ion Batteries: A Molecular Dynamics Simulation Study. Journal of Physical Chemistry C, 2012, 116, 23871-23881.	3.1	126

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37	Molecular Dynamics Simulation Studies of the Structure of a Mixed Carbonate/LiPF₆ Electrolyte near Graphite Surface as a Function of Electrode Potential. Journal of Physical Chemistry C, 2012, 116, 1114-1121.	3.1	191
38	Molecular Simulations of the Electric Double Layer Structure, Differential Capacitance, and Charging Kinetics for N-Methyl-N-propylpyrrolidinium Bis(fluorosulfonyl)imide at Graphite Electrodes. Journal of Physical Chemistry B, 2011, 115, 3073-3084.	2.6	164
39	On the Influence of Surface Topography on the Electric Double Layer Structure and Differential Capacitance of Graphite/Ionic Liquid Interfaces. Journal of Physical Chemistry Letters, 2011, 2, 2267-2272.	4.6	152
40	(Invited) Bulk and Interfacial Behavior of Ionic Liquids from Molecular Dynamics Simulations. ECS Transactions, 2010, 33, 583-599.	0.5	4
41	Observation of two-step nucleation in methane hydrates. Physical Chemistry Chemical Physics, 2010, 12, 15065.	2.8	185
42	Molecular Insights into the Potential and Temperature Dependences of the Differential Capacitance of a Room-Temperature Ionic Liquid at Graphite Electrodes. Journal of the American Chemical Society, 2010, 132, 14825-14833.	13.7	297
43	Molecular dynamics simulations of atomically flat and nanoporous electrodes with a molten salt electrolyte. Physical Chemistry Chemical Physics, 2010, 12, 170-182.	2.8	114
44	Heterogeneous Crystal Growth of Methane Hydrate on Its sII [001] Crystallographic Face. Journal of Physical Chemistry B, 2008, 112, 2399-2404.	2.6	66
45	Molecular dynamics methodology to investigate steady-state heterogeneous crystal growth. Journal of Chemical Physics, 2007, 126, 124703.	3.0	56
46	Microfaceting and its implication in the nonrandom stacking in fcc crystals. Physical Review B, 2007, 76, .	3.2	9
47	Unusual Crystalline and Polycrystalline Structures in Methane Hydrates. Journal of the American Chemical Society, 2006, 128, 15588-15589.	13.7	113
48	Molecular Insights into the Heterogeneous Crystal Growth of sI Methane Hydrate. Journal of Physical Chemistry B, 2006, 110, 15896-15904.	2.6	144
49	Evaluation of site-site bridge diagrams for molecular fluids. Journal of Chemical Physics, 2004, 121, 6922-6934.	3.0	4
50	Discrimination in racemates of small chiral molecules. Molecular Physics, 2003, 101, 3085-3102.	1.7	2
51	Racemic fluids of hard molecules. Journal of Chemical Physics, 2001, 114, 7993-8007.	3.0	8