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	Fluorinated interphase enables reversible aqueous zinc battery chemistries. Nature Nanotechnology, 2021, 16, 902-910.	31.5	560
2	4.0ÂV Aqueous Li-Ion Batteries. Joule, 2017, 1, 122-132.	24.0	441
3	Concentrated electrolytes: decrypting electrolyte properties and reassessing Al corrosion mechanisms. Energy and Environmental Science, 2014, 7, 416-426.	30.8	332
4	Hybrid Aqueous/Non-aqueous Electrolyte for Safe and High-Energy Li-Ion Batteries. Joule, 2018, 2, 927-937.	24.0	303
5	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
6	Modeling Insight into Battery Electrolyte Electrochemical Stability and Interfacial Structure. Accounts of Chemical Research, 2017, 50, 2886-2894.	15.6	234
7	A 63 m Superconcentrated Aqueous Electrolyte for High-Energy Li-Ion Batteries. ACS Energy Letters, 2020, 5, 968-974.	17.4	197
8	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
9	Observation of two-step nucleation in methane hydrates. Physical Chemistry Chemical Physics, 2010, 12, 15065.	2.8	185
10	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
11	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
12	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
13	Molecular Insights into the Heterogeneous Crystal Growth of sI Methane Hydrate. Journal of Physical Chemistry B, 2006, 110, 15896-15904.	2.6	144
14	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
15	Improving Electrochemical Stability and Lowâ€Temperature Performance with Water/Acetonitrile Hybrid Electrolytes. Advanced Energy Materials, 2020, 10, 1902654.	19.5	144
16	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
17	Overlooked electrolyte destabilization by manganese (II) in lithium-ion batteries. Nature Communications, 2019, 10, 3423.	12.8	119
18	Hydrolysis of LiPF₆-Containing Electrolyte at High Voltage. ACS Energy Letters, 2021, 6, 2096-2102.	17.4	119

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19	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
20	Unusual Crystalline and Polycrystalline Structures in Methane Hydrates. Journal of the American Chemical Society, 2006, 128, 15588-15589.	13.7	113
21	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
22	Non-Faradaic Energy Storage by Room Temperature Ionic Liquids in Nanoporous Electrodes. ACS Nano, 2015, 9, 5999-6017.	14.6	108
23	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
24	Capacitive Energy Storage: Current and Future Challenges. Journal of Physical Chemistry Letters, 2015, 6, 3594-3609.	4.6	99
25	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
26	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
27	Heterogeneous Crystal Growth of Methane Hydrate on Its sII [001] Crystallographic Face. Journal of Physical Chemistry B, 2008, 112, 2399-2404.	2.6	66
28	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
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	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
31	Expanding the low-temperature and high-voltage limits of aqueous lithium-ion battery. Energy Storage Materials, 2022, 45, 903-910.	18.0	58
32	Molecular dynamics methodology to investigate steady-state heterogeneous crystal growth. Journal of Chemical Physics, 2007, 126, 124703.	3.0	56
33	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
34	The nanoscale structure of the electrolyteâ€“metal oxide interface. Energy and Environmental Science, 2018, 11, 594-602.	30.8	46
35	Ionic liquids at charged surfaces: Insight from molecular simulations. Journal of Non-Crystalline Solids, 2015, 407, 339-348.	3.1	41
36	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

#	ARTICLE	IF	CITATIONS
37	Tailoring graphene-based electrodes from semiconducting to metallic to increase the energy density in supercapacitors. Nanotechnology, 2015, 26, 464001.	2.6	35
38	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
39	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
40	On anodic stability and decomposition mechanism of sulfolane in high-voltage lithium ion battery. Electrochimica Acta, 2014, 133, 117-122.	5.2	27
41	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
42	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
43	Inhibiting manganese (II) from catalyzing electrolyte decomposition in lithium-ion batteries. Journal of Energy Chemistry, 2022, 65, 1-8.	12.9	15
44	Microfaceting and its implication in the nonrandom stacking in fcc crystals. Physical Review B, 2007, 76, .	3.2	9
45	Racemic fluids of hard molecules. Journal of Chemical Physics, 2001, 114, 7993-8007.	3.0	8
46	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
47	Evaluation of site-site bridge diagrams for molecular fluids. Journal of Chemical Physics, 2004, 121, 6922-6934.	3.0	4
48	(Invited) Bulk and Interfacial Behavior of Ionic Liquids from Molecular Dynamics Simulations. ECS Transactions, 2010, 33, 583-599.	0.5	4
49	Discrimination in racemates of small chiral molecules. Molecular Physics, 2003, 101, 3085-3102.	1.7	2
50	Capacitance with Different Electrode Surface Topology. , 2021, , 1-9.		0
51	Modeling Methods of Ionic Liquids at Charged Electrode Surfaces. , 2021, , 1-9.		0