

Rajendra Kumar Singh

List of Publications by Year in descending order

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74
papers

2,692
citations

159585

30
h-index

197818

49
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76
all docs

76
docs citations

76
times ranked

2736
citing authors

#	ARTICLE	IF	CITATIONS
1	Influence of synthesis route on the structure and electrochemical performance of biphasic (O ₃ /O ₃) NaNi _{0.815} Co _{0.15} Al _{0.035} O ₂ cathode for sodium-ion batteries. <i>Electrochimica Acta</i> , 2022, 419, 140403.	5.2	11
2	Diffusion mechanism in a sodium superionic sulfide-based solid electrolyte: Na ₁₁ Sn ₂ AsS ₁₂ . <i>Journal Physics D: Applied Physics</i> , 2022, 55, 355503.	2.8	6
3	Dead Ashoka (<i>Saraca asoca</i>) leaves-derived porous activated carbons and flexible iongel polymer electrolyte for high-energy-density electric double-layer capacitors. <i>Materials Today Sustainability</i> , 2021, 11-12, 100062.	4.1	10
4	Momentous past and key advancements in ionic liquid mediated polymer electrolyte for application in energy storage. <i>International Journal of Energy Research</i> , 2021, 45, 15646-15675.	4.5	5
5	Polar β -Phase PVdF-HFP-Based Freestanding and Flexible Gel Polymer Electrolyte for Better Cycling Stability in a Na Battery. <i>Energy & Fuels</i> , 2021, 35, 15153-15165.	5.1	27
6	Improved High Voltage Performance of Li-ion Conducting Coated Ni-rich NMC Cathode Materials for Rechargeable Li Battery. <i>ACS Applied Energy Materials</i> , 2021, 4, 13878-13889.	5.1	10
7	Ionic liquid mediated nano-composite polymer gel electrolyte for rechargeable battery application. <i>Polymer-Plastics Technology and Materials</i> , 2020, 59, 952-958.	1.3	5
8	Dynamics of Ionic Liquids in Confinement by Means of NMR Relaxometry—EMIM-FSI in a Silica Matrix as an Example. <i>Materials</i> , 2020, 13, 4351.	2.9	14
9	Behaviour of ionic liquid adsorbed on the surface of nano silica particles and in confined system of silica matrices. <i>Surface Science</i> , 2020, 701, 121701.	1.9	7
10	High Voltage Nickel-Rich NMC Cathode Material with Ionic-Liquid-Based Polymer Electrolytes for Rechargeable Lithium-Metal Batteries. <i>ChemElectroChem</i> , 2020, 7, 3597-3605.	3.4	22
11	Electrochemical performance of Li-rich NMC cathode material using ionic liquid based blend polymer electrolyte for rechargeable Li-ion batteries. <i>Journal of Alloys and Compounds</i> , 2020, 843, 155615.	5.5	35
12	Fabrication and electrochemical characterization of lithium metal battery using IL-based polymer electrolyte and Ni-rich NCA cathode. <i>Ionics</i> , 2020, 26, 4835-4851.	2.4	17
13	Enhanced structural and cycling stability of Li ₂ CuO ₂ -coated LiNi _{0.33} Mn _{0.33} Co _{0.33} O ₂ cathode with flexible ionic liquid-based gel polymer electrolyte for lithium polymer batteries. <i>Electrochimica Acta</i> , 2020, 343, 136122.	5.2	37
14	Influence of Lanthanum Doping on Structural and Electrical/Electrochemical Properties of Double Perovskite Sr ₂ CoMoO ₆ as Anode Materials for Intermediate-Temperature Solid Oxide Fuel Cells. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 24659-24667.	8.0	16
15	Development of Polymer Electrolyte and Cathode Material for Li-Batteries. <i>Journal of the Electrochemical Society</i> , 2019, 166, A5187-A5192.	2.9	26
16	Electrochemical characterization of ionic liquid based gel polymer electrolyte for lithium battery application. <i>Ionics</i> , 2018, 24, 1895-1906.	2.4	28
17	Performance of EMIMFSI ionic liquid based gel polymer electrolyte in rechargeable lithium metal batteries. <i>Journal of Industrial and Engineering Chemistry</i> , 2018, 65, 137-145.	5.8	38
18	Lithium salt assisted enhanced performance of supercapacitor based on quasi solid-state electrolyte. <i>Journal of Saudi Chemical Society</i> , 2018, 22, 838-845.	5.2	10

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19	Electrochemical investigations of Na _{0.7} CoO ₂ cathode with PEO-NaTFSI-BMIMTFSI electrolyte as promising material for Na-rechargeable battery. Journal of Solid State Electrochemistry, 2018, 22, 1909-1919.	2.5	41
20	Development of ionic liquid and lithium salt immobilized MCM-41 quasi solid-liquid electrolytes for lithium batteries. Journal of Energy Storage, 2018, 15, 283-291.	8.1	33
21	Immobilization induced molecular compression of ionic liquid in ordered mesoporous matrix. Journal Physics D: Applied Physics, 2018, 51, 075301.	2.8	17
22	Improved electrochemical performance of EMIMFSI ionic liquid based gel polymer electrolyte with temperature for rechargeable lithium battery. Energy, 2018, 150, 890-900.	8.8	64
23	Electrochemical study of Ionic Liquid based polymer electrolyte with graphene oxide coated LiFePO ₄ cathode for Li battery. Solid State Ionics, 2018, 320, 186-192.	2.7	40
24	Effect of Ionic Liquids on the Crystallization Kinetics of Various Polymers and Polymer Electrolytes. , 2018, , 509-533.		1
25	Flexible gel polymer electrolyte based on ionic liquid EMIMTFSI for rechargeable battery application. Electrochimica Acta, 2017, 230, 123-131.	5.2	112
26	Solid polymer electrolytes based on Li ⁺ /ionic liquid for lithium secondary batteries. Journal of Solid State Electrochemistry, 2017, 21, 1713-1723.	2.5	36
27	Effect of temperature on electrochemical performance of ionic liquid based polymer electrolyte with Li/LiFePO ₄ electrodes. Solid State Ionics, 2017, 309, 192-199.	2.7	50
28	Dynamical properties of EMIM-SCN confined in a SiO ₂ matrix by means of ¹ H NMR relaxometry. Physical Chemistry Chemical Physics, 2017, 19, 32605-32616.	2.8	33
29	Quasi solid-state electrolytes based on ionic liquid (IL) and ordered mesoporous matrix MCM-41 for supercapacitor application. Journal of Solid State Electrochemistry, 2017, 21, 3365-3371.	2.5	21
30	Development of ionic liquid mediated novel polymer electrolyte membranes for application in Na-ion batteries. RSC Advances, 2016, 6, 40199-40210.	3.6	54
31	Interface and core relaxation dynamics of IL molecules in nanopores of ordered mesoporous MCM-41: a dielectric spectroscopy study. RSC Advances, 2016, 6, 45147-45157.	3.6	12
32	Effect of phosphonium based ionic liquid on structural, electrochemical and thermal behaviour of polymer poly(ethylene oxide) containing salt lithium bis(trifluoromethylsulfonyl)imide. RSC Advances, 2016, 6, 87878-87887.	3.6	50
33	Mixed anion effect on the ionic transport behavior, complexation and various physicochemical properties of ionic liquid based polymer gel electrolyte membranes. RSC Advances, 2016, 6, 73028-73039.	3.6	29
34	Dynamics of ionic liquids in bulk and in confinement by means of ¹ H NMR relaxometry $\hat{\epsilon}''$ BMIM-OcSO ₄ in an SiO ₂ matrix as an example. Physical Chemistry Chemical Physics, 2016, 18, 23184-23194.	2.8	38
35	Role of reduced precursor and solvolytic reagent molar ratio on preparation and properties of ionogel. Journal of Solid State Chemistry, 2016, 242, 29-37.	2.9	7
36	Development of ion conducting polymer gel electrolyte membranes based on polymer PVdF-HFP, BMIMTFSI ionic liquid and the Li-salt with improved electrical, thermal and structural properties. Journal of Materials Chemistry C, 2015, 3, 7305-7318.	5.5	251

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37	Studies of dispersed liquid crystals in binary mixtures with ionic liquid and their excitation by electric signals. RSC Advances, 2015, 5, 86291-86302.	3.6	10
38	Thermal, electrical and structural studies on ionic liquid confined in ordered mesoporous MCM-41. Journal of Materials Chemistry A, 2015, 3, 23809-23820.	10.3	73
39	Conformational States of Ionic Liquid 1-Ethyl-3-methylimidazolium Bis(trifluoromethylsulfonyl)imide in Bulk and Confined Silica Nanopores Probed by Crystallization Kinetics Study. Journal of Physical Chemistry C, 2015, 119, 24381-24392.	3.1	29
40	Electrical, mechanical, structural, and thermal behaviors of polymeric gel electrolyte membranes of poly(vinylidene fluoride-co-hexafluoropropylene) with the ionic liquid 1-butyl-3-methylimidazolium tetrafluoroborate plus lithium tetrafluoroborate. Journal of Applied Polymer Science, 2015, 132, .	2.6	30
41	Studies on an Ionic Liquid Confined in Silica Nanopores: Change in T_g and Evidence of Organic-Inorganic Linkage at the Pore Wall Surface. Journal of Physical Chemistry C, 2014, 118, 1530-1539.	3.1	69
42	Ionic liquid template assisted synthesis of porous nano-silica nails. RSC Advances, 2014, 4, 39978-39983.	3.6	10
43	Crystallization kinetics behavior of ionic liquid [EMIM][BF ₄] confined in mesoporous silica matrices. RSC Advances, 2014, 4, 22277-22287.	3.6	23
44	Ionic liquids confined in porous matrices: Physicochemical properties and applications. Progress in Materials Science, 2014, 64, 73-120.	32.8	264
45	Changes in dynamical behavior of ionic liquid in silica nano-pores. Ionics, 2014, 20, 507-516.	2.4	25
46	Viscoelastic, Surface, and Volumetric Properties of Ionic Liquids [BMIM][O ₄ S], [BMIM][PF ₆], and [EMIM][MeSO ₃]. Journal of Chemical & Engineering Data, 2014, 59, 2349-2359.	1.9	40
47	Preparation and characterisation of ionic liquid confined hybrid porous silica derived from ultrasonic assisted non-hydrolytic sol-gel process. Microporous and Mesoporous Materials, 2014, 195, 143-153.	4.4	18
48	Studies on mesoporous silica ionogels prepared by sol-gel method at different gelation temperatures. RSC Advances, 2013, 3, 13869.	3.6	15
49	Studies on polymer electrolyte poly(vinyl pyrrolidone) (PVP) complexed with ionic liquid: Effect of complexation on thermal stability, conductivity and relaxation behaviour. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2013, 178, 231-238.	3.5	91
50	Ion-polymer complexation and ion-pair formation in a polymer electrolyte PEO:LiPF ₆ containing an ionic liquid having same anion: A Raman study. Vibrational Spectroscopy, 2013, 68, 190-195.	2.2	34
51	Effect of Ultrasonic Irradiation on Preparation and Properties of Ionogels. Journal of Nanomaterials, 2012, 2012, 1-6.	2.7	24
52	Ionic liquid assisted synthesis of nano-porous TiO ₂ and studies on confined ionic liquid. Materials Letters, 2012, 86, 73-76.	2.6	42
53	Phase diagrams and morphology of polymer-dispersed liquid crystals: An analysis. Liquid Crystals, 2012, 39, 1402-1413.	2.2	12
54	Low density ionogels obtained by rapid gellification of tetraethyl orthosilane assisted by ionic liquids. Dalton Transactions, 2012, 41, 6263.	3.3	50

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55	Thermal, dielectric and conductivity studies on PVA/Ionic liquid [EMIM][EtSO ₄] based polymer electrolytes. Journal of Physics and Chemistry of Solids, 2012, 73, 162-168.	4.0	120
56	Studies on Imidazolium-Based Ionic Liquids Having a Large Anion Confined in a Nanoporous Silica Gel Matrix. Journal of Physical Chemistry B, 2011, 115, 7505-7514.	2.6	84
57	Correlation between ultrasonic velocity, surface tension, density and viscosity of ionic liquids. Fluid Phase Equilibria, 2011, 304, 1-6.	2.5	35
58	Structural and transport studies on polymeric membranes of PEO containing ionic liquid, EMIM-TY: Evidence of complexation. Solid State Ionics, 2011, 183, 32-39.	2.7	87
59	Dielectric relaxation and conductivity studies on (PEO:LiClO ₄) polymer electrolyte with added ionic liquid [BMIM][PF ₆]: Evidence of ion-ion interaction. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 291-300.	2.1	70
60	Ion-polymer and ion-ion interaction in PEO-based polymer electrolytes having complexing salt LiClO ₄ and/or ionic liquid, [BMIM][PF ₆]. Journal of Raman Spectroscopy, 2011, 42, 2168-2172.	2.5	55
61	Thermal and morphological studies of liquid crystalline materials dispersed in a polymer matrix. Liquid Crystals, 2011, 38, 849-859.	2.2	18
62	Studies on ionic liquid 1-ethyl-3-methyl imidazolium ethylsulphate complexed with PVA. Phase Transitions, 2011, 84, 231-242.	1.3	17
63	Theoretical study of temperature dependent acoustic attenuation and non-linearity parameters in alkali metal hydride and deuteride. Materials Chemistry and Physics, 2010, 124, 575-579.	4.0	1
64	Properties of Ionic Liquid Confined in Porous Silica Matrix. ChemPhysChem, 2010, 11, 2036-2043.	2.1	49
65	Temperature dependent physical effects of ultrasonic wave in beryllium chalcogenides. Applied Acoustics, 2010, 71, 328-334.	3.3	9
66	Temperature dependent acoustical characterization of alkaline earth monochalcogenides in B1 and B2 phase. Physica B: Condensed Matter, 2010, 405, 77-84.	2.7	6
67	Theoretical study of temperature dependent lattice anharmonicity in TlCl and TlBr. Current Applied Physics, 2010, 10, 1053-1058.	2.4	4
68	Thermal stability of ionic liquid in confined geometry. Journal Physics D: Applied Physics, 2010, 43, 092001.	2.8	30
69	Electrical conductivity studies on composite polymer electrolyte based on ionic liquid. Phase Transitions, 2010, 83, 457-466.	1.3	23
70	Acoustical and elastic properties of transition metal nitrides. Physica B: Condensed Matter, 2009, 404, 95-99.	2.7	7
71	Acoustic wave propagation in barium monochalcogenides in the B1 phase. Acoustical Physics, 2009, 55, 186-191.	1.0	1
72	A new technique for determination of melting temperature of poly(ethylene glycol) by ultrasonic velocimetry. Phase Transitions, 2009, 82, 599-606.	1.3	2

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73	High-Voltage Li/MnO_2 -Driven $\text{Li}_2\text{Mn}_6\text{Ni}_0$ Ni_0 Co_0 . Energy Storage, 0, , .	4.3	1
74	Phosphite-Based Electrodes. ACS Symposium Series, 0, , 39-55.	0.5	0