

# Shiro Seki

## List of Publications by Year in descending order

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46  
papers

2,950  
citations

236925

25  
h-index

243625

44  
g-index

46  
all docs

46  
docs citations

46  
times ranked

3314  
citing authors

#	ARTICLE	IF	CITATIONS
1	Solid Gel Electrolytes with Highly Concentrated Liquid Electrolyte in Polymer Networks and Their Physical and Electrochemical Properties and Application to Sodium Secondary Batteries. <i>Journal of the Electrochemical Society</i> , 2022, 169, 040535.	2.9	1
2	Investigation for Charge-Discharge Operations of $\text{Li}_4\text{Ti}_5\text{O}_{12}$ -Sulfur Batteries by Suitable Choice of Materials and Cell Preparation Processes. <i>Electrochemistry</i> , 2022, , .	1.4	0
3	Analysis of Ionic Transport and Electrode Interfacial Reaction, and NMR One-Dimensional Imaging of Ether-Based Polymer Electrolytes. <i>Journal of the Electrochemical Society</i> , 2021, 168, 060501.	2.9	3
4	Lithium-Sulfur Batteries. , 2021, , 393-402.		0
5	Thermodynamic aspect of sulfur, polysulfide anion and lithium polysulfide: plausible reaction path during discharge of lithium-sulfur battery. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 6832-6840.	2.8	11
6	Mouse Acidic Chitinase Effectively Degrades Random-Type Chitosan to Chitooligosaccharides of Variable Lengths under Stomach and Lung Tissue pH Conditions. <i>Molecules</i> , 2021, 26, 6706.	3.8	3
7	Precise Analysis of Resistance Components and Estimation of Number of Particles in Li-Ion Battery Electrode Sheets Using $\text{LiCoO}_2$ Single-Particle Electrochemical Properties. <i>Journal of Physical Chemistry C</i> , 2020, 124, 16758-16762.	3.1	7
8	Polyether/ $\text{Na}_3\text{Zr}_2\text{Si}_2\text{PO}_{12}$ Composite Solid Electrolytes for All-Solid-State Sodium Batteries. <i>Journal of Physical Chemistry C</i> , 2020, 124, 21948-21956.	3.1	25
9	Effects of Anion on Liquid Structures of Ionic Liquids at Graphene Electrode Interface Analyzed by Molecular Dynamics Simulations. <i>Batteries and Supercaps</i> , 2020, 3, 658-667.	4.7	4
10	Investigation of the Ionic Conduction Mechanism of Polyether/ $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$ Composite Solid Electrolytes by Electrochemical Impedance Spectroscopy. <i>Journal of the Electrochemical Society</i> , 2020, 167, 070559.	2.9	24
11	Speciation Analysis and Thermodynamic Criteria of Solvated Ionic Liquids: Ionic Liquids or Superconcentrated Solutions?. <i>Journal of Physical Chemistry Letters</i> , 2020, 11, 4517-4523.	4.6	16
12	Fluoride Ion Conductive Polymer Electrolytes for All-solid-state Fluoride Shuttle Batteries. <i>Electrochemistry</i> , 2020, 88, 310-313.	1.4	3
13	Physicochemical compatibility of highly-concentrated solvate ionic liquids and a low-viscosity solvent. <i>RSC Advances</i> , 2019, 9, 24922-24927.	3.6	6
14	Effect of Electrolyte Composition on Performance and Stability of Lithium-Sulfur Batteries. <i>Energy Technology</i> , 2019, 7, 1900197.	3.8	12
15	Dynamic Chelate Effect on the $\text{Li}^+$ -Ion Conduction in Solvate Ionic Liquids. <i>Journal of Physical Chemistry C</i> , 2019, 123, 30228-30233.	3.1	10
16	Densities, Viscosities, and Refractive Indices of Binary Room-Temperature Ionic Liquids with Common Cations/Anions. <i>Journal of Chemical &amp; Engineering Data</i> , 2019, 64, 433-441.	1.9	14
17	Density, Viscosity, Ionic Conductivity, and Self-Diffusion Coefficient of Organic Liquid Electrolytes: Part I. Propylene Carbonate + Li, Na, Mg and Ca Cation Salts. <i>Journal of the Electrochemical Society</i> , 2018, 165, A542-A546.	2.9	25
18	$^7\text{Li}$ NMR diffusion studies in micrometre-space for perovskite-type $\text{Li}_{0.33}\text{La}_{0.55}\text{TiO}_3$ (LLTO) influenced by grain boundaries. <i>Solid State Ionics</i> , 2018, 326, 37-47.	2.7	20

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19	Non-uniform lithium-ion migration on micrometre scale for garnet- and NASICON-type solid electrolytes studied by <sup>7</sup> Li PGSE-NMR diffusion spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 17615-17623.	2.8	11
20	Lithium ion micrometer diffusion in a garnet-type cubic Li <sub>7</sub> La <sub>3</sub> Zr <sub>2</sub> O <sub>12</sub> (LLZO) studied using <sup>7</sup> Li NMR spectroscopy. <i>Journal of Chemical Physics</i> , 2017, 146, 024701.	3.0	34
21	Protease resistance of porcine acidic mammalian chitinase under gastrointestinal conditions implies that chitin-containing organisms can be sustainable dietary resources. <i>Scientific Reports</i> , 2017, 7, 12963.	3.3	29
22	Long-range Li ion diffusion in NASICON-type Li <sub>1.5</sub> Al <sub>0.5</sub> Ge <sub>1.5</sub> (PO <sub>4</sub> ) <sub>3</sub> (LAGP) studied by <sup>7</sup> Li pulsed-gradient spin-echo NMR. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 23483-23491.	2.8	37
23	Local Structure of Li <sup>+</sup> in Concentrated Ethylene Carbonate Solutions Studied by Low-Frequency Raman Scattering and Neutron Diffraction with <sup>6</sup> Li/ <sup>7</sup> Li Isotopic Substitution Methods. <i>Journal of Physical Chemistry B</i> , 2017, 121, 10979-10987.	2.6	23
24	Effect of the cation on the stability of cation-glyme complexes and their interactions with the [TFSA] <sup>-</sup> anion. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 18262-18272.	2.8	49
25	Long-cycle-life Lithium-sulfur Batteries with Lithium Solvate Ionic Liquids. <i>Electrochemistry</i> , 2017, 85, 680-682.	1.4	33
26	Li <sup>+</sup> Local Structure in Tetraglyme Solvate Ionic Liquid Revealed by Neutron Total Scattering Experiments with the <sup>6</sup> Li/ <sup>7</sup> Li Isotopic Substitution Technique. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 2832-2837.	4.6	44
27	Effects of non-equimolar lithium salt glyme solvate ionic liquid on the control of interfacial degradation in lithium secondary batteries. <i>RSC Advances</i> , 2016, 6, 33043-33047.	3.6	18
28	Li <sup>+</sup> Local Structure in Hydrofluoroether Diluted Li-Glyme Solvate Ionic Liquid. <i>Journal of Physical Chemistry B</i> , 2016, 120, 3378-3387.	2.6	81
29	Structures of [Li(glyme)] <sup>+</sup> complexes and their interactions with anions in equimolar mixtures of glymes and Li[TFSA]: analysis by molecular dynamics simulations. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 126-129.	2.8	87
30	Transport and Electrochemical Properties of Three Quaternary Ammonium Ionic Liquids and Lithium Salts Doping Effects Studied by NMR Spectroscopy. <i>Journal of Chemical &amp; Engineering Data</i> , 2014, 59, 1944-1954.	1.9	31
31	EQCM Measurement of Deposition and Dissolution of Lithium in Glyme-Li Salt Molten Complex. <i>Journal of the Electrochemical Society</i> , 2013, 160, A1529-A1533.	2.9	38
32	Solvate Ionic Liquid Electrolyte for S Batteries. <i>Journal of the Electrochemical Society</i> , 2013, 160, A1304-A1310.	2.9	421
33	Intermolecular Interactions in Li <sup>+</sup> -glyme and Li <sup>+</sup> -glyme-TFSA <sup>-</sup> Complexes: Relationship with Physicochemical Properties of [Li(glyme)][TFSA] Ionic Liquids. <i>ChemPhysChem</i> , 2013, 14, 1993-2001.	2.1	79
34	Comprehensive Refractive Index Property for Room-Temperature Ionic Liquids. <i>Journal of Chemical &amp; Engineering Data</i> , 2012, 57, 2211-2216.	1.9	191
35	Oxidative-Stability Enhancement and Charge Transport Mechanism in Glyme-Lithium Salt Equimolar Complexes. <i>Journal of the American Chemical Society</i> , 2011, 133, 13121-13129.	13.7	663
36	Physicochemical and Electrochemical Properties of Glyme-LiN(SO <sub>2</sub> F) <sub>2</sub> Complex for Safe Lithium-ion Secondary Battery Electrolyte. <i>Journal of the Electrochemical Society</i> , 2011, 158, A769.	2.9	61

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37	Effects of cation and anion on physical properties of room-temperature ionic liquids. <i>Journal of Molecular Liquids</i> , 2010, 152, 9-13.	4.9	118
38	Origin of the Low-Viscosity of [emim][FSO <sub>2</sub> ] <sub>2</sub> N Ionic Liquid and Its Lithium Salt Mixture: Experimental and Theoretical Study of Self-Diffusion Coefficients, Conductivities, and Intermolecular Interactions. <i>Journal of Physical Chemistry B</i> , 2010, 114, 16329-16336.	2.6	144
39	Relationships between center atom species (N, P) and ionic conductivity, viscosity, density, self-diffusion coefficient of quaternary cation room-temperature ionic liquids. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 3509.	2.8	80
40	Liquid structure and conformation of a low-viscosity ionic liquid, N-methyl-N-propyl-pyrrolidinium bis(fluorosulfonyl) imide studied by high-energy X-ray scattering. <i>Journal of Molecular Liquids</i> , 2008, 143, 64-69.	4.9	75
41	Phase transition and conductive acceleration of phosphonium-cation-based room-temperature ionic liquid. <i>Chemical Communications</i> , 2008, , 5541.	4.1	11
42	Quaternary Ammonium Room-Temperature Ionic Liquid Including an Oxygen Atom in Side Chain/Lithium Salt Binary Electrolytes: Ab Initio Molecular Orbital Calculations of Interactions between Ions. <i>Journal of Physical Chemistry B</i> , 2008, 112, 9914-9920.	2.6	62
43	Anion Conformation of Low-Viscosity Room-Temperature Ionic Liquid 1-Ethyl-3-methylimidazolium Bis(fluorosulfonyl) Imide. <i>Journal of Physical Chemistry B</i> , 2007, 111, 12829-12833.	2.6	127
44	Distinct Difference in Ionic Transport Behavior in Polymer Electrolytes Depending on the Matrix Polymers and Incorporated Salts. <i>Journal of Physical Chemistry B</i> , 2005, 109, 3886-3892.	2.6	154
45	High-Performance Genuine Lithium Polymer Battery Obtained by Fine-Ceramic-Electrolyte Coating of LiCoO <sub>2</sub> . <i>Journal of the Electrochemical Society</i> , 2005, 152, A1985.	2.9	35
46	Effect of binder polymer structures used in composite cathodes on interfacial charge transfer processes in lithium polymer batteries. <i>Electrochimica Acta</i> , 2004, 50, 379-383.	5.2	30