Alexei P Sokolov

List of Publications by Year
in descending order

207 papers	11,810 citations	17405 63 h-index	34900 98 g-index
212 all docs	212 docs citations	212 times ranked	8543 citing authors

#	Article	IF	Citations
1	Poisson's ratio and the fragility of glass-forming liquids. Nature, 2004, 431, 961-963.	13.7	435
2	Dynamics of strong and fragile glass formers: Differences and correlation with low-temperature properties. Physical Review Letters, 1993, 71, 2062-2065.	2.9	361
3	Role of Chemical Structure in Fragility of Polymers: A Qualitative Picture. Macromolecules, 2008, 41, 7232-7238.	2.2	294
4	Dynamics at the Polymer/Nanoparticle Interface in Poly(2-vinylpyridine)/Silica Nanocomposites. Macromolecules, 2014, 47, 1837-1843.	2.2	248
5	Universal Form of the Low-Energy (2 to 10 meV) Vibrational Spectrum of Glasses. Europhysics Letters, 1990, 11, 43-47.	0.7	238
6	Onsets of Anharmonicity in Protein Dynamics. Physical Review Letters, 2005, 95, 038101.	2.9	223
7	Perspectives for Polymer Electrolytes: A View from Fundamentals of Ionic Conductivity. Macromolecules, 2020, 53, 4141-4157.	2.2	221
8	Influence of Hydration on the Dynamics of Lysozyme. Biophysical Journal, 2006, 91, 2573-2588.	0.2	200
9	Big Effect of Small Nanoparticles: A Shift in Paradigm for Polymer Nanocomposites. ACS Nano, 2017, 11, 752-759.	7.3	177
10	Influence of Hydration on Protein Dynamics: Combining Dielectric and Neutron Scattering Spectroscopy Data. Journal of Physical Chemistry B, 2008, 112, 14273-14280.	1.2	165
11	Superstretchable, Selfâ€Healing Polymeric Elastomers with Tunable Properties. Advanced Functional Materials, 2018, 28, 1800741.	7.8	162
12	Ion Conduction in Polymerized Ionic Liquids with Different Pendant Groups. Macromolecules, 2015, 48, 4461-4470.	2.2	158
13	Controlling Interfacial Dynamics: Covalent Bonding versus Physical Adsorption in Polymer Nanocomposites. ACS Nano, 2016, 10, 6843-6852.	7.3	152
14	The origin of the dynamic transition in proteins. Journal of Chemical Physics, 2008, 128, 195106.	1.2	149
15	Low-Temperature Anomalies in Strong and Fragile Glass Formers. Physical Review Letters, 1997, 78, 2405-2408.	2.9	144
16	Unraveling the Mechanism of Nanoscale Mechanical Reinforcement in Glassy Polymer Nanocomposites. Nano Letters, 2016, 16, 3630-3637.	4.5	142
17	Decoupling of Ionic Transport from Segmental Relaxation in Polymer Electrolytes. Physical Review Letters, 2012, 108, 088303.	2.9	139
18	Protein and solvent dynamics: How strongly are they coupled?. Journal of Chemical Physics, 2004, 121, 1978-1983.	1.2	138

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19	Examination of the fundamental relation between ionic transport and segmental relaxation in polymer electrolytes. Polymer, 2014, 55, 4067-4076.	1.8	136
20	Unexpected Molecular Weight Effect in Polymer Nanocomposites. Physical Review Letters, 2016, 116, 038302.	2.9	134
21	Breakdown of Timeâ^'Temperature Superposition Principle and Universality of Chain Dynamics in Polymers. Macromolecules, 2006, 39, 3322-3326.	2.2	132
22	Dynamics of Protein and its Hydration Water: Neutron Scattering Studies on Fully Deuterated GFP. Biophysical Journal, 2012, 103, 1566-1575.	0.2	121
23	Effect of Molecular Weight on the Ion Transport Mechanism in Polymerized Ionic Liquids. Macromolecules, 2016, 49, 4557-4570.	2.2	121
24	Decoupling of ionic conductivity from structural dynamics in polymerized ionic liquids. Soft Matter, 2014, 10, 3536-3540.	1.2	120
25	Interfacial Properties of Polymer Nanocomposites: Role of Chain Rigidity and Dynamic Heterogeneity Length Scale. Macromolecules, 2017, 50, 2397-2406.	2.2	115
26	Focus: Structure and dynamics of the interfacial layer in polymer nanocomposites with attractive interactions. Journal of Chemical Physics, 2017, 146, 203201.	1.2	114
27	Resolving the Grain Boundary and Lattice Impedance of Hotâ€Pressed Li₇La₃Zr₂O₁₂ Garnet Electrolytes. ChemElectroChem, 2014, 1, 375-378.	1.7	112
28	Untangling the Effects of Chain Rigidity on the Structure and Dynamics of Strongly Adsorbed Polymer Melts. Macromolecules, 2015, 48, 4207-4219.	2.2	109
29	Rational Design of a Multifunctional Binder for High-Capacity Silicon-Based Anodes. ACS Energy Letters, 2019, 4, 1171-1180.	8.8	108
30	Dynamic Transition in tRNA is Solvent Induced. Journal of the American Chemical Society, 2006, 128, 32-33.	6.6	105
31	Light-scattering spectra of fast relaxation in glasses. Physical Review B, 1998, 58, 14888-14891.	1.1	104
32	Decoupling Ionic Conductivity from Structural Relaxation: A Way to Solid Polymer Electrolytes?. Macromolecules, 2011, 44, 4410-4414.	2.2	104
33	Protein dynamics: from rattling in a cage to structural relaxation. Soft Matter, 2015, 11, 4984-4998.	1.2	104
34	Dynamics of Biological Macromolecules: Not a Simple Slaving by Hydration Water. Biophysical Journal, 2010, 98, 1321-1326.	0.2	103
35	Fundamental Limitations of Ionic Conductivity in Polymerized Ionic Liquids. Macromolecules, 2018, 51, 8637-8645.	2.2	103
36	Mechanism of Conductivity Relaxation in Liquid and Polymeric Electrolytes: Direct Link between Conductivity and Diffusivity. Journal of Physical Chemistry B, 2016, 120, 11074-11083.	1.2	101

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37	Unraveling the Nanoscale Heterogeneity of Solid Electrolyte Interphase Using Tip-Enhanced Raman Spectroscopy. Joule, 2019, 3, 2001-2019.	11.7	99
38	When Does a Molecule Become a Polymer?. Macromolecules, 2004, 37, 161-166.	2.2	98
39	Resolving the Mystery of the Chain Friction Mechanism in Polymer Liquids. Physical Review Letters, 2009, 102, 248301.	2.9	92
40	Chain and Segmental Dynamics of Poly(2-vinylpyridine) Nanocomposites. Macromolecules, 2013, 46, 4168-4173.	2.2	92
41	Influence of Molecular Weight on Fast Dynamics and Fragility of Polymers. Macromolecules, 2004, 37, 9264-9272.	2.2	90
42	Elastic vitrimers: Beyond thermoplastic and thermoset elastomers. Matter, 2022, 5, 1391-1422.	5.0	90
43	Conductivity in Hydrated Proteins: No Signs of the Fragile-to-Strong Crossover. Physical Review Letters, 2008, 100, 108103.	2.9	89
44	Polymer-Grafted Nanoparticle Membranes with Controllable Free Volume. Macromolecules, 2017, 50, 7111-7120.	2.2	88
45	Analyzing the Interfacial Layer Properties in Polymer Nanocomposites by Broadband Dielectric Spectroscopy. Macromolecules, 2017, 50, 6149-6163.	2.2	86
46	Examination of methods to determine free-ion diffusivity and number density from analysis of electrode polarization. Physical Review E, 2013, 87, 042308.	0.8	84
47	Connection between quasielastic Raman scattering and free volume in polymeric glasses and supercooled liquids. Journal of Chemical Physics, 1997, 107, 1057-1065.	1.2	82
48	Influence of Chain Rigidity and Dielectric Constant on the Glass Transition Temperature in Polymerized Ionic Liquids. Journal of Physical Chemistry B, 2017, 121, 11511-11519.	1.2	82
49	Dynamics of tRNA at Different Levels of Hydration. Biophysical Journal, 2009, 96, 2755-2762.	0.2	81
50	Why many polymers are so fragile. Journal of Physics Condensed Matter, 2007, 19, 205116.	0.7	79
51	Appearance of a Debye process at the conductivity relaxation frequency of a viscous liquid. Journal of Chemical Physics, 2011, 134, 104508.	1.2	79
52	Effect of Chain Rigidity on the Decoupling of Ion Motion from Segmental Relaxation in Polymerized Ionic Liquids: Ambient and Elevated Pressure Studies. Macromolecules, 2017, 50, 6710-6721.	2.2	78
53	Effect of Binder Architecture on the Performance of Silicon/Graphite Composite Anodes for Lithium Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 3470-3478.	4.0	77
54	A broad glass transition in hydrated proteins. Biochimica Et Biophysica Acta - Proteins and Proteomics, 2010, 1804, 15-19.	1.1	76

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55	Three Classes of Motion in the Dynamic Neutron-Scattering Susceptibility of a Globular Protein. Physical Review Letters, 2011, 107, 148102.	2.9	76
56	Pressure and density dependence of the boson peak in polymers. Physical Review B, 2008, 78, .	1.1	75
57	Glassy dynamics in DNA: Ruled by water of hydration?. Journal of Chemical Physics, 1999, 110, 7053-7057.	1.2	74
58	Molecular cooperativity in the dynamics of glass-forming systems: A new insight. Journal of Chemical Physics, 2009, 131, 194511.	1.2	72
59	Spectrum of fast dynamics in glass forming liquids: Does the â€œkneeâ€•exist?. Journal of Chemical Physics, 1999, 110, 2312-2315.	1.2	70
60	Highly Stable, Protected Plasmonic Nanostructures for Tip Enhanced Raman Spectroscopy. Journal of Physical Chemistry C, 2009, 113, 8158-8161.	1.5	70
61	Carbon nanomaterial produced by microwave exfoliation of graphite oxide: new insights. RSC Advances, 2014, 4, 587-592.	1.7	70
62	Ionic Liquidâ€Directed Nanoporous TiNb₂O₇ Anodes with Superior Performance for Fastâ€Rechargeable Lithiumâ€Ion Batteries. Small, 2020, 16, e2001884.	5.2	69
63	Rigidity, Secondary Structure, and the Universality of the Boson Peak in Proteins. Biophysical Journal, 2014, 106, 2667-2674.	0.2	66
64	Polymers with Dynamic Bonds: Adaptive Functional Materials for a Sustainable Future. Journal of Physical Chemistry B, 2021, 125, 9389-9401.	1.2	66
65	Design of tough adhesive from commodity thermoplastics through dynamic crosslinking. Science Advances, 2021, 7, eabk2451.	4.7	66
66	Secondary structure and rigidity in model proteins. Soft Matter, 2013, 9, 9548.	1.2	65
67	High Pressure as a Key Factor to Identify the Conductivity Mechanism in Protic Ionic Liquids. Physical Review Letters, 2013, 111, 225703.	2.9	65
68	Unraveling the Molecular Weight Dependence of Interfacial Interactions in Poly(2-vinylpyridine)/Silica Nanocomposites. ACS Macro Letters, 2017, 6, 68-72.	2.3	65
69	Protein dynamics in viscous solvents. Journal of Chemical Physics, 2003, 118, 4230-4236.	1.2	64
70	Engineering the Interlayer Spacing by Preâ€Intercalation for High Performance Supercapacitor MXene Electrodes in Room Temperature Ionic Liquid. Advanced Functional Materials, 2021, 31, 2104007.	7.8	64
71	Protein dynamics in a broad frequency range: Dielectric spectroscopy studies. Journal of Non-Crystalline Solids, 2015, 407, 478-485.	1.5	63
72	Observation of constant loss in fast relaxation spectra of polymers. Physical Review B, 2001, 63, .	1.1	61

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73	Dielectric Spectroscopy Investigation of Relaxation in C₆₀â"Polyisoprene Nanocomposites. Macromolecules, 2009, 42, 3201-3206.	2.2	60
74	Enhancing the Mechanical Properties of Glassy Nanocomposites by Tuning Polymer Molecular Weight. ACS Applied Materials & Interfaces, 2018, 10, 33601-33610.	4.0	58
75	Anomalously large isotope effect in the glass transition of water. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17402-17407.	3.3	57
76	Revealing spatially heterogeneous relaxation in a model nanocomposite. Journal of Chemical Physics, 2015, 143, 194704.	1.2	57
77	Fundamental parameters governing ion conductivity in polymer electrolytes. Electrochimica Acta, 2019, 299, 191-196.	2.6	56
78	Impact of Hydrogen Bonding on Dynamics of Hydroxyl-Terminated Polydimethylsiloxane. Macromolecules, 2016, 49, 3138-3147.	2.2	55
79	Design of superionic polymersâ€"New insights from Walden plot analysis. Solid State Ionics, 2014, 262, 782-784.	1.3	54
80	Diffusion of Sticky Nanoparticles in a Polymer Melt: Crossover from Suppressed to Enhanced Transport. Macromolecules, 2018, 51, 2268-2275.	2.2	52
81	Recent Developments and Challenges in Hybrid Solid Electrolytes for Lithium-Ion Batteries. Frontiers in Energy Research, 2020, 8, .	1.2	52
82	Effects of backbone rigidity on the local structure and dynamics in polymer melts and glasses. Physical Chemistry Chemical Physics, 2013, 15, 4604.	1.3	51
83	Identification of Structural Relaxation in the Dielectric Response of Water. Physical Review Letters, 2016, 116, 237601.	2.9	48
84	The puzzling first-order phase transition in waterâ€"glycerol mixtures. Physical Chemistry Chemical Physics, 2015, 17, 18063-18071.	1.3	47
85	Neutron scattering in the biological sciences: progress and prospects. Acta Crystallographica Section D: Structural Biology, 2018, 74, 1129-1168.	1.1	47
86	Nanosecond Relaxation Dynamics of Hydrated Proteins: Water versus Protein Contributions. Journal of Physical Chemistry B, 2011, 115, 6222-6226.	1.2	46
87	Design of superionic polymer electrolytes. Current Opinion in Chemical Engineering, 2015, 7, 113-119.	3.8	46
88	Accessing Siloxane Functionalized Polynorbornenes via Vinyl-Addition Polymerization for CO₂ Separation Membranes. ACS Macro Letters, 2016, 5, 879-883.	2.3	46
89	Strong Reduction in Amplitude of the Interfacial Segmental Dynamics in Polymer Nanocomposites. Macromolecules, 2020, 53, 4126-4135.	2.2	46
90	A star-shaped single lithium-ion conducting copolymer by grafting a POSS nanoparticle. Polymer, 2017, 124, 117-127.	1.8	45

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91	Reviewâ€"Polymer/Ceramic Interface Barriers: The Fundamental Challenge for Advancing Composite Solid Electrolytes for Li-Ion Batteries. Journal of the Electrochemical Society, 2020, 167, 160514.	1.3	45
92	Dynamics and Rigidity in an Intrinsically Disordered Protein, Î²-Casein. Journal of Physical Chemistry B, 2014, 118, 7317-7326.	1.2	44
93	Hydrogen-bond strength changes network dynamics in associating telechelic PDMS. Soft Matter, 2018, 14, 1235-1246.	1.2	43
94	Tailored crosslinking of Poly(ethylene oxide) enables mechanical robustness and improved sodium-ion conductivity. Energy Storage Materials, 2019, 21, 85-96.	9.5	43
95	Role of Quantum Effects in the Glass Transition. Physical Review Letters, 2013, 110, 065701.	2.9	42
96	The Role of Chain-End Association Lifetime in Segmental and Chain Dynamics of Telechelic Polymers. Macromolecules, 2018, 51, 8561-8573.	2.2	42
97	Anomalously high elastic modulus of a poly(ethylene oxide)-based composite electrolyte. Energy Storage Materials, 2021, 35, 431-442.	9.5	42
98	Shape Persistent, Highly Conductive Ionogels from Ionic Liquids Reinforced with Cellulose Nanocrystal Network. Advanced Functional Materials, 2021, 31, 2103083.	7.8	42
99	Coupling between lysozyme and glycerol dynamics: Microscopic insights from molecular-dynamics simulations. Journal of Chemical Physics, 2005, 122, 244910.	1.2	41
100	Elastic Single-Ion Conducting Polymer Electrolytes: Toward a Versatile Approach for Intrinsically Stretchable Functional Polymers. Macromolecules, 2020, 53, 3591-3601.	2.2	41
101	Ion transport and structural dynamics in homologous ammonium and phosphonium-based room temperature ionic liquids. Journal of Chemical Physics, 2015, 142, 084501.	1.2	40
102	Why many polymers are so fragile: A new perspective. Journal of Chemical Physics, 2016, 145, 154901.	1.2	40
103	Viscoelasticity in associating oligomers and polymers: experimental test of the bond lifetime renormalization model. Soft Matter, 2020, 16, 390-401.	1.2	40
104	Surpassing the stiffness-extensibility trade-off of elastomers via mastering the hydrogen-bonding clusters. Matter, 2022, 5, 237-252.	5.0	40
105	No fragile-to-strong crossover in LiCl-H2O solution. Journal of Chemical Physics, 2012, 136, 124512.	1.2	38
106	Theory and Simulation of Attractive Nanoparticle Transport in Polymer Melts. Macromolecules, 2018, 51, 2258-2267.	2.2	38
107	Single-Ion Conducting Polymer Nanoparticles as Functional Fillers for Solid Electrolytes in Lithium Metal Batteries. ACS Applied Materials & Interfaces, 2021, 13, 54354-54362.	4.0	38
108	Observation of highly decoupled conductivity in protic ionic conductors. Physical Chemistry Chemical Physics, 2014, 16, 9123-9127.	1.3	37

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109	Atomistic details of protein dynamics and the role of hydration water. Biochimica Et Biophysica Acta - General Subjects, 2017, 1861, 3546-3552.	1.1	37
110	Coupling between lysozyme and trehalose dynamics: Microscopic insights from molecular-dynamics simulations. Journal of Chemical Physics, 2006, 124, 034901.	1.2	36
111	Observation of the slow, Debye-like relaxation in hydrogen-bonded liquids by dynamic light scattering. Journal of Chemical Physics, 2014, 140, 104510.	1.2	35
112	Understanding the Static Interfacial Polymer Layer by Exploring the Dispersion States of Nanocomposites. ACS Applied Materials & Interfaces, 2019, 11, 17863-17872.	4.0	35
113	Ionic Conductivity and Glass Transition of Phosphoric Acids. Journal of Physical Chemistry B, 2013, 117, 8003-8009.	1.2	34
114	Adhesive Polymers as Efficient Binders for High-Capacity Silicon Electrodes. ACS Applied Energy Materials, 2020, 3, 3387-3396.	2.5	34
115	Collective Nanoparticle Dynamics Associated with Bridging Network Formation in Model Polymer Nanocomposites. ACS Nano, 2021, 15, 11501-11513.	7.3	34
116	Slow relaxation process in DNA. Journal of Biological Physics, 2001, 27, 313-327.	0.7	33
117	Comment on the dynamic bead size and Kuhn segment length in polymers: Example of polystyrene. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 3505-3511.	2.4	32
118	Revealing the Charge Transport Mechanism in Polymerized Ionic Liquids: Insight from High Pressure Conductivity Studies. Chemistry of Materials, 2017, 29, 8082-8092.	3.2	32
119	Robust and Elastic Polymer Membranes with Tunable Properties for Gas Separation. ACS Applied Materials & Interfaces, 2017, 9, 26483-26491.	4.0	32
120	Critical Role of Anionâ€“Solvent Interactions for Dynamics of Solvent-in-Salt Solutions. Journal of Physical Chemistry C, 2020, 124, 8457-8466.	1.5	32
121	Ionic Transport, Microphase Separation, and Polymer Relaxation in Poly(propylene glycol) and Lithium Perchlorate Mixtures. Macromolecules, 2013, 46, 9380-9389.	2.2	31
122	Impact of tuning CO2-philicity in polydimethylsiloxane-based membranes for carbon dioxide separation. Journal of Membrane Science, 2017, 530, 213-219.	4.1	31
123	Improved Single-Ion Conductivity of Polymer Electrolyte via Accelerated Segmental Dynamics. ACS Applied Energy Materials, 2020, 3, 12540-12548.	2.5	31
124	Impact of hydration and temperature history on the structure and dynamics of lignin. Green Chemistry, 2018, 20, 1602-1611.	4.6	30
125	Anti-soiling and highly transparent coatings with multi-scale features. Solar Energy Materials and Solar Cells, 2018, 188, 255-262.	3.0	30
126	What dielectric spectroscopy can tell us about supramolecular networksâ‹†. European Physical Journal E, 2019, 42, 133.	0.7	30

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127	Interplay between local dynamics and mechanical reinforcement in glassy polymer nanocomposites. Physical Review Materials, 2017, 1, .	0.9	29
128	Qualitative change in structural dynamics of some glass-forming systems. Physical Review E, 2015, 92, 062304.	0.8	27
129	Role of methyl groups in dynamics and evolution of biomolecules. Journal of Biological Physics, 2012, 38, 497-505.	0.7	26
130	Solvent effects on protein fast dynamics: implications for biopreservation. Soft Matter, 2013, 9, 5336.	1.2	26
131	The Dynamics of Unfolded versus Folded tRNA: The Role of Electrostatic Interactions. Journal of the American Chemical Society, 2011, 133, 16406-16409.	6.6	25
132	Gas separation mechanism of CO₂ selective amidoxime-poly(1-trimethylsilyl-1-propyne) membranes. Polymer Chemistry, 2017, 8, 3341-3350.	1.9	25
133	Distilling nanoscale heterogeneity of amorphous silicon using tip-enhanced Raman spectroscopy (TERS) via multiresolution manifold learning. Nature Communications, 2021, 12, 578.	5.8	25
134	Coherent Neutron Scattering and Collective Dynamics in the Protein, GFP. Biophysical Journal, 2013, 105, 2182-2187.	0.2	24
135	Protecting TERS probes from degradation: extending mechanical and chemical stability. Journal of Raman Spectroscopy, 2013, 44, 710-716.	1.2	24
136	Heterogeneous Nature of Relaxation Dynamics of Room-Temperature Ionic Liquids (EMIm)₂[Co(NCS)₄] and (BMIm)₂[Co(NCS)₄]. Journal of Physical Chemistry C, 2015, 119, 20363-20368.	1.5	24
137	Graphene Oxide as a Radical Initiator: Free Radical and Controlled Radical Polymerization of Sodium 4-Vinylbenzenesulfonate with Graphene Oxide. ACS Macro Letters, 2016, 5, 199-202.	2.3	24
138	Dynamics in Protein Powders on the Nanosecondâ€“Picosecond Time Scale Are Dominated by Localized Motions. Journal of Physical Chemistry B, 2013, 117, 11548-11555.	1.2	23
139	Unravelling the Mechanism of Viscoelasticity in Polymers with Phase-Separated Dynamic Bonds. ACS Nano, 2022, 16, 4746-4755.	7.3	23
140	Effects of counterion size and backbone rigidity on the dynamics of ionic polymer melts and glasses. Physical Chemistry Chemical Physics, 2017, 19, 27442-27451.	1.3	22
141	Strongly Correlated Ion Dynamics in Plastic Ionic Crystals and Polymerized Ionic Liquids. Journal of Physical Chemistry C, 2020, 124, 17889-17896.	1.5	22
142	Critical Role of the Interfacial Layer in Associating Polymers with Microphase Separation. Macromolecules, 2021, 54, 4246-4256.	2.2	22
143	Effect of Crossâ€Link Density on Carbon Dioxide Separation in Polydimethylsiloxaneâ€Norbornene Membranes. ChemSusChem, 2015, 8, 3595-3604.	3.6	21
144	Quantum effects in the dynamics of deeply supercooled water. Physical Review E, 2015, 91, 022312.	0.8	21

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145	Addition of Short Polymer Chains Mechanically Reinforces Glassy Poly(2-vinylpyridine)â€“Silica Nanoparticle Nanocomposites. ACS Applied Nano Materials, 2020, 3, 3427-3438.	2.4	21
146	Polymer composites prepared by low-temperature post-irradiation polymerization of C₂F₄ in the presence of graphene-like material: synthesis and characterization. RSC Advances, 2015, 5, 9865-9874.	1.7	20
147	Tailored CO₂-philic Gas Separation Membranes via One-Pot Thiolâ€“ene Chemistry. Macromolecules, 2019, 52, 5819-5828.	2.2	20
148	Bridging-Controlled Network Microstructure and Long-Wavelength Fluctuations in Silicaâ€“Poly(2-vinylpyridine) Nanocomposites: Experimental Results and Theoretical Analysis. Macromolecules, 2020, 53, 6984-6994.	2.2	20
149	Correlation between the temperature evolution of the interfacial region and the growing dynamic cooperativity length scale. Journal of Chemical Physics, 2020, 152, 094904.	1.2	19
150	Rational Polymer Design of Stretchable Poly(ionic liquid) Membranes for Dual Applications. Macromolecules, 2021, 54, 896-905.	2.2	19
151	Temperatureâ€“Volume Entropic Model for Viscosities and Structural Relaxation Times of Glass Formers. Journal of Physical Chemistry Letters, 2012, 3, 2643-2648.	2.1	18
152	Correlation between temperature variations of static and dynamic properties in glass-forming liquids. Physical Review E, 2016, 94, 060603.	0.8	18
153	Structure and dynamics of short-chain polymerized ionic liquids. Journal of Chemical Physics, 2019, 151, 034903.	1.2	18
154	Unraveling the Role of Neutral Units for Single-Ion Conducting Polymer Electrolytes. ACS Applied Materials & Interfaces, 2021, 13, 51525-51534.	4.0	18
155	Dynamic crossover and the Debyeâ€“Stokesâ€“Einstein relation in liquid N,N-diethyl-3-methylbenzamide (DEET). Soft Matter, 2013, 9, 10373.	1.2	17
156	Communication: Influence of nanophase segregation on ion transport in room temperature ionic liquids. Journal of Chemical Physics, 2016, 144, 151104.	1.2	16
157	Proton Conductivity in Phosphoric Acid: The Role of Quantum Effects. Physical Review Letters, 2016, 117, 156001.	2.9	16
158	Viscoelastic properties and ion dynamics in star-shaped polymerized ionic liquids. European Polymer Journal, 2018, 109, 326-335.	2.6	16
159	Rapid and Facile Formation of P3HT Organogels via Spin Coating: Tuning Functional Properties of Organic Electronic Thin Films. Advanced Functional Materials, 2015, 25, 5848-5857.	7.8	15
160	Investigation of Unusual Conductivity Behavior and Ion Dynamics in Hexamethylguanidinium Bis(fluorosulfonyl)imide-Based Electrolytes for Sodium Batteries. Journal of Physical Chemistry C, 2021, 125, 12518-12530.	1.5	15
161	Glass-fiber-reinforced polymeric film as an efficient protecting layer for stable Li metal electrodes. Cell Reports Physical Science, 2021, 2, 100534.	2.8	15
162	Quantitative Evidence of Mobile Ion Hopping in Polymerized Ionic Liquids. Journal of Physical Chemistry B, 2021, 125, 372-381.	1.2	15

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163	Nanoscale imaging and identification of a four-component carbon sample. Carbon, 2016, 96, 588-593.	5.4	14
164	Tuning the dynamics of imidazolium-based ionic liquids via hydrogen bonding. I. The viscous regime. Journal of Chemical Physics, 2020, 153, 194501.	1.2	14
165	Controlled Nanopatterning of a Polymerized Ionic Liquid in a Strong Electric Field. Advanced Functional Materials, 2015, 25, 805-811.	7.8	13
166	Decoupling of ion conductivity from segmental dynamics in oligomeric ethylene oxide functionalized oxanorbornene dicarboximide homopolymers. Polymer, 2017, 116, 218-225.	1.8	13
167	Surprising Temperature Scaling of Viscoelastic Properties in Polymers. Macromolecules, 2018, 51, 4874-4881.	2.2	13
168	Transient Nonlinear Response of Dynamically Decoupled Ionic Conductors. Physical Review Letters, 2018, 121, 064503.	2.9	13
169	A Rayleighian approach for modeling kinetics of ionic transport in polymeric media. Journal of Chemical Physics, 2017, 146, 064902.	1.2	12
170	Capacitance of thin films containing polymerized ionic liquids. Science Advances, 2020, 6, eaba7952.	4.7	12
171	Turning Rubber into a Glass: Mechanical Reinforcement by Microphase Separation. ACS Macro Letters, 2021, 10, 197-202.	2.3	12
172	Influence of Attractive Functional Groups on the Segmental Dynamics and Glass Transition in Associating Polymers. Macromolecules, 2022, 55, 2345-2357.	2.2	12
173	Quantum effects in dynamics of water and other liquids of light molecules. European Physical Journal E, 2017, 40, 57.	0.7	11
174	Enzyme Induced Formation of Monodisperse Hydrogel Nanoparticles Tunable in Size. Chemistry of Materials, 2015, 27, 2557-2565.	3.2	10
175	Improving Gas Selectivity in Membranes Using Polymer-Grafted Silica Nanoparticles. ACS Applied Nano Materials, 2021, 4, 5895-5903.	2.4	10
176	Identification of individual isotopes in a polymer blend using tip enhanced Raman spectroscopy. Journal of Raman Spectroscopy, 2015, 46, 447-450.	1.2	9
177	Direct Structural Evidence for Interfacial Gradients in Asymmetric Polymer Nanocomposite Blends. ACS Applied Materials & Interfaces, 2021, 13, 36262-36274.	4.0	8
178	Noncontact tip-enhanced Raman spectroscopy for nanomaterials and biomedical applications. Nanoscale Advances, 2019, 1, 3392-3399.	2.2	7
179	Addition of Chloroform in a Solvent-in-Salt Electrolyte: Outcomes in the Microscopic Dynamics in Bulk and Confinement. Journal of Physical Chemistry C, 2020, 124, 22366-22375.	1.5	7
180	Highly Permeable Oligo(ethylene oxide)â€•co â€poly(dimethylsiloxane) Membranes for Carbon Dioxide Separation. Advanced Sustainable Systems, 2018, 2, 1700113.	2.7	6

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181	Proton Transfer in Phosphoric Acid-Based Protic Ionic Liquids: Effects of the Base. Journal of Physical Chemistry A, 2020, 124, 4141-4149.	1.1	6
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