Vera Bocharova

List of Publications by Year
in descending order

44	2,381	236612	243296
papers	citations	25 h-index	44 g-index

47	47	47	1924
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Dynamics at the Polymer/Nanoparticle Interface in Poly(2-vinylpyridine)/Silica Nanocomposites. Macromolecules, 2014, 47, 1837-1843.	2.2	248
2	Perspectives for Polymer Electrolytes: A View from Fundamentals of Ionic Conductivity. Macromolecules, 2020, 53, 4141-4157.	2.2	221
3	Controlling Interfacial Dynamics: Covalent Bonding versus Physical Adsorption in Polymer Nanocomposites. ACS Nano, 2016, 10, 6843-6852.	7.3	152
4	Unraveling the Mechanism of Nanoscale Mechanical Reinforcement in Glassy Polymer Nanocomposites. Nano Letters, 2016, 16, 3630-3637.	4.5	142
5	Unexpected Molecular Weight Effect in Polymer Nanocomposites. Physical Review Letters, 2016, 116, 038302.	2.9	134
6	Interfacial Properties of Polymer Nanocomposites: Role of Chain Rigidity and Dynamic Heterogeneity Length Scale. Macromolecules, 2017, 50, 2397-2406.	2.2	115
7	Focus: Structure and dynamics of the interfacial layer in polymer nanocomposites with attractive interactions. Journal of Chemical Physics, 2017, 146, 203201.	1.2	114
8	Fundamental Limitations of Ionic Conductivity in Polymerized Ionic Liquids. Macromolecules, 2018, 51, 8637-8645.	2.2	103
9	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
10	Influence of the Bound Polymer Layer on Nanoparticle Diffusion in Polymer Melts. ACS Macro Letters, 2016, 5, 1141-1145.	2.3	91
11	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
12	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
13	Unraveling the Molecular Weight Dependence of Interfacial Interactions in Poly(2-vinylpyridine)/Silica Nanocomposites. ACS Macro Letters, 2017, 6, 68-72.	2.3	65
14	Enhancing the Mechanical Properties of Glassy Nanocomposites by Tuning Polymer Molecular Weight. ACS Applied Materials & Interfaces, 2018, 10, 33601-33610.	4.0	58
15	Revealing spatially heterogeneous relaxation in a model nanocomposite. Journal of Chemical Physics, 2015, 143, 194704.	1.2	57
16	Fundamental parameters governing ion conductivity in polymer electrolytes. Electrochimica Acta, 2019, 299, 191-196.	2.6	56
17	Diffusion of Sticky Nanoparticles in a Polymer Melt: Crossover from Suppressed to Enhanced Transport. Macromolecules, 2018, 51, 2268-2275.	2.2	52
18	Strong Reduction in Amplitude of the Interfacial Segmental Dynamics in Polymer Nanocomposites. Macromolecules, 2020, 53, 4126-4135.	2.2	46

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19	Theory and Simulation of Attractive Nanoparticle Transport in Polymer Melts. Macromolecules, 2018, 51, 2258-2267.	2.2	38
20	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
21	Understanding the Static Interfacial Polymer Layer by Exploring the Dispersion States of Nanocomposites. ACS Applied Materials & Interfaces, 2019, 11, 17863-17872.	4.0	35
22	Collective Nanoparticle Dynamics Associated with Bridging Network Formation in Model Polymer Nanocomposites. ACS Nano, 2021, 15, 11501-11513.	7.3	34
23	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
24	Interplay between local dynamics and mechanical reinforcement in glassy polymer nanocomposites. Physical Review Materials, 2017, 1, .	0.9	29
25	Insight into the Mechanisms Driving the Self-Assembly of Functional Interfaces: Moving from Lipids to Charged Amphiphilic Oligomers. Journal of the American Chemical Society, 2020, 142, 290-299.	6.6	27
26	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
27	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
28	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
29	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
30	Ion transport and softening in a polymerized ionic liquid. Nanoscale, 2015, 7, 947-955.	2.8	18
31	Structure and dynamics of short-chain polymerized ionic liquids. Journal of Chemical Physics, 2019, 151, 034903.	1.2	18
32	Controlled Nanopatterning of a Polymerized Ionic Liquid in a Strong Electric Field. Advanced Functional Materials, 2015, 25, 805-811.	7.8	13
33	A Molecular-Scale Approach to Rare-Earth Beneficiation: Thinking Small to Avoid Large Losses. IScience, 2020, 23, 101435.	1.9	13
34	Understanding Self-Assembly and the Stabilization of Liquid/Liquid Interfaces: The Importance of Ligand Tail Branching and Oil-Phase Solvation. Journal of Colloid and Interface Science, 2022, 609, 807-814.	5.0	13
35	A Rayleighian approach for modeling kinetics of ionic transport in polymeric media. Journal of Chemical Physics, 2017, 146, 064902.	1.2	12
36	Capacitance of thin films containing polymerized ionic liquids. Science Advances, 2020, 6, eaba7952.	4.7	12

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37	Improving Gas Selectivity in Membranes Using Polymer-Grafted Silica Nanoparticles. ACS Applied Nano Materials, 2021, 4, 5895-5903.	2.4	10
38	Structural correlations tailor conductive properties in polymerized ionic liquids. Physical Chemistry Chemical Physics, 2019, 21, 14775-14785.	1.3	9
39	Direct Structural Evidence for Interfacial Gradients in Asymmetric Polymer Nanocomposite Blends. ACS Applied Materials & Interfaces, 2021, 13, 36262-36274.	4.0	8
40	Noncontact tip-enhanced Raman spectroscopy for nanomaterials and biomedical applications. Nanoscale Advances, 2019, 1, 3392-3399.	2.2	7
41	Improving Rare-Earth Mineral Separation with Insights from Molecular Recognition: Functionalized Hydroxamic Acid Adsorption onto BastnÃsite and Calcite. Langmuir, 2022, 38, 5439-5453.	1.6	6
42	Tuning the Properties of Nanocomposites by Trapping Them in Deep Metastable States. ACS Applied Polymer Materials, 2022, 4, 3174-3182.	2.0	3
43	Role of Fast Dynamics in Conductivity of Polymerized Ionic Liquids. Journal of Physical Chemistry B, 2020, 124, 10539-10545.	1.2	2
44	Modulation of Cation Diffusion by Reversible Supramolecular Assemblies in Ionic Liquid-Based Nanocomposites. ACS Applied Materials & Interfaces, 2020, 12, 31842-31851.	4.0	2