

Nicolas J Alvarez

List of Publications by Year in descending order

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papers

2,286
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201674

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times ranked

2280
citing authors

#	ARTICLE	IF	CITATIONS
1	Rheological Characteristics of 2D Titanium Carbide (MXene) Dispersions: A Guide for Processing MXenes. <i>ACS Nano</i> , 2018, 12, 2685-2694.	14.6	288
2	Concentrated Polymer Solutions are Different from Melts: Role of Entanglement Molecular Weight. <i>Macromolecules</i> , 2013, 46, 5026-5035.	4.8	167
3	A Microtensiometer To Probe the Effect of Radius of Curvature on Surfactant Transport to a Spherical Interface. <i>Langmuir</i> , 2010, 26, 13310-13319.	3.5	103
4	Effect of Hydrogen Bonding on Linear and Nonlinear Rheology of Entangled Polymer Melts. <i>Macromolecules</i> , 2015, 48, 5988-5996.	4.8	103
5	Interfacial Dynamics and Rheology of Polymer-Grafted Nanoparticles at Air-Water and Xylene-Water Interfaces. <i>Langmuir</i> , 2012, 28, 8052-8063.	3.5	101
6	Extensional Rheology of Entangled Polystyrene Solutions Suggests Importance of Nematic Interactions. <i>ACS Macro Letters</i> , 2013, 2, 741-744.	4.8	93
7	Bridging the Gap between Polymer Melts and Solutions in Extensional Rheology. <i>Macromolecules</i> , 2015, 48, 4158-4163.	4.8	89
8	Diffusion-limited adsorption to a spherical geometry: The impact of curvature and competitive time scales. <i>Physical Review E</i> , 2010, 82, 011604.	2.1	83
9	A non-gradient based algorithm for the determination of surface tension from a pendant drop: Application to low Bond number drop shapes. <i>Journal of Colloid and Interface Science</i> , 2009, 333, 557-562.	9.4	64
10	Linear and Nonlinear Universality in the Rheology of Polymer Melts and Solutions. <i>Physical Review Letters</i> , 2015, 115, 078302.	7.8	62
11	Linear Viscoelastic and Dielectric Relaxation Response of Unentangled UPy-Based Supramolecular Networks. <i>Macromolecules</i> , 2016, 49, 3899-3910.	4.8	62
12	Using bulk convection in a microtensiometer to approach kinetic-limited surfactant dynamics at fluid-fluid interfaces. <i>Journal of Colloid and Interface Science</i> , 2012, 372, 183-191.	9.4	59
13	Relating Chain Conformations to Extensional Stress in Entangled Polymer Melts. <i>Physical Review Letters</i> , 2018, 121, 047801.	7.8	55
14	Nylon-6/Ti ₃ C ₂ T _x MXene Nanocomposites Synthesized by in Situ Ring Opening Polymerization of μ -Caprolactam and Their Water Transport Properties. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 20425-20436.	8.0	52
15	A new look at extensional rheology of low-density polyethylene. <i>Rheologica Acta</i> , 2016, 55, 343-350.	2.4	50
16	Direct observation of active material interactions in flowable electrodes using X-ray tomography. <i>Faraday Discussions</i> , 2017, 199, 511-524.	3.2	50
17	A control scheme for filament stretching rheometers with application to polymer melts. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2013, 194, 14-22.	2.4	49
18	The importance of experimental design on measurement of dynamic interfacial tension and interfacial rheology in diffusion-limited surfactant systems. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2015, 467, 135-142.	4.7	46

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19	Nonlinear shear and uniaxial extensional rheology of polyether-ester-sulfonate copolymer ionomer melts. <i>Journal of Rheology</i> , 2017, 61, 1279-1289.	2.6	46
20	Multiple Cracks Propagate Simultaneously in Polymer Liquids in Tension. <i>Physical Review Letters</i> , 2016, 117, 087801.	7.8	43
21	Short-range contacts govern the performance of industry-relevant battery cathodes. <i>Journal of Power Sources</i> , 2018, 387, 49-56.	7.8	43
22	Dispersion and Stabilization of Alkylated 2D MXene in Nonpolar Solvents and Their Pseudocapacitive Behavior. <i>Cell Reports Physical Science</i> , 2020, 1, 100042.	5.6	43
23	Dynamics of Star Polymers in Fast Extensional Flow and Stress Relaxation. <i>Macromolecules</i> , 2016, 49, 6694-6699.	4.8	36
24	Creep Measurements Confirm Steady Flow after Stress Maximum in Extension of Branched Polymer Melts. <i>Physical Review Letters</i> , 2013, 110, 168301.	7.8	34
25	Brittle fracture in associative polymers: the case of ionomer melts. <i>Soft Matter</i> , 2016, 12, 7606-7612.	2.7	34
26	Effect of Finite Extensibility on Nonlinear Extensional Rheology of Polymer Melts. <i>Macromolecules</i> , 2019, 52, 915-922.	4.8	32
27	Dynamics of Supramolecular Self-Healing Recovery in Extension. <i>Macromolecules</i> , 2019, 52, 2231-2242.	4.8	30
28	The effect of alkane tail length of C E8 surfactants on transport to the silicone oil/water interface. <i>Journal of Colloid and Interface Science</i> , 2011, 355, 231-236.	9.4	27
29	The interplay of aggregation, fibrillization and gelation of an unexpected low molecular weight gelator: glycylalanyl-glycine in ethanol/water. <i>Soft Matter</i> , 2016, 12, 6096-6110.	2.7	27
30	A criterion to assess the impact of confined volumes on surfactant transport to liquid/fluid interfaces. <i>Soft Matter</i> , 2012, 8, 8917.	2.7	26
31	Correlating Processing Conditions to Short- and Long-Range Order in Coating and Drying Lithium-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2020, 3, 11681-11689.	5.1	23
32	Formulation of a Model Resin System for Benchmarking Processing-Property Relationships in High-Performance Photo 3D Printing Applications. <i>Materials</i> , 2020, 13, 4109.	2.9	21
33	Three-Dimensional Visualization of Conductive Domains in Battery Electrodes with Contrast-Enhancing Nanoparticles. <i>ACS Applied Energy Materials</i> , 2018, 1, 4479-4484.	5.1	20
34	Stress relaxation of bi-disperse polystyrene melts. <i>Rheologica Acta</i> , 2016, 55, 303-314.	2.4	19
35	The effect of resin-rich layers on mechanical properties of 3D printed woven fiber-reinforced composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2021, 144, 106339.	7.6	19
36	Characterizing long-chain branching in commercial HDPE samples via linear viscoelasticity and extensional rheology. <i>Rheologica Acta</i> , 2020, 59, 797-807.	2.4	15

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37	Exploring the gel phase of cationic glycyllalanyl glycine in ethanol/water. I. Rheology and microscopy studies. <i>Journal of Colloid and Interface Science</i> , 2020, 564, 499-509.	9.4	13
38	An experimental study of the stability of liquid bridges subject to shear-induced closed-flow. <i>Journal of Colloid and Interface Science</i> , 2010, 346, 464-469.	9.4	12
39	Short Peptides as Tunable, Switchable, and Strong Gelators. <i>Journal of Physical Chemistry B</i> , 2021, 125, 6760-6775.	2.6	12
40	Oscillatory squeeze flow for the study of linear viscoelastic behavior. <i>Journal of Rheology</i> , 2016, 60, 407-418.	2.6	11
41	Exploring the thermal reversibility and tunability of a low molecular weight gelator using vibrational and electronic spectroscopy and rheology. <i>Soft Matter</i> , 2019, 15, 3418-3431.	2.7	10
42	Investigating the Formation of a Repulsive Hydrogel of a Cationic 16mer Peptide at Low Ionic Strength in Water by Vibrational Spectroscopy and Rheology. <i>Journal of Physical Chemistry B</i> , 2016, 120, 10079-10090.	2.6	9
43	The trade-off between processability and performance in commercial ionomers. <i>Rheologica Acta</i> , 2019, 58, 499-511.	2.4	9
44	Exploring the gel phase of cationic glycyllalanyl glycine in ethanol/water. II. Spectroscopic, kinetic and thermodynamic studies. <i>Journal of Colloid and Interface Science</i> , 2020, 573, 123-134.	9.4	9
45	Surface tensions at elevated pressure depend strongly on bulk phase saturation. <i>Journal of Colloid and Interface Science</i> , 2021, 594, 681-689.	9.4	9
46	The evolution of crystalline structures during gel spinning of ultra-high molecular weight polyethylene fibers. <i>Soft Matter</i> , 2018, 14, 8974-8985.	2.7	8
47	The Impotence of Non-Brownian Particles on the Gel Transition of Colloidal Suspensions. <i>Polymers</i> , 2017, 9, 461.	4.5	7
48	The tripeptide GHG as an unexpected hydrogelator triggered by imidazole deprotonation. <i>Soft Matter</i> , 2020, 16, 4110-4114.	2.7	7
49	A molecular parameter to scale the Gibbs free energies of adsorption and micellization for nonionic surfactants. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 609, 125622.	4.7	7
50	Direct measure of crystalline domain size, distribution, and orientation in polyethylene fibers. <i>Polymer</i> , 2020, 202, 122589.	3.8	7
51	The impact of deformable interfaces and Poiseuille flow on the thermocapillary instability of three immiscible phases confined in a channel. <i>Physics of Fluids</i> , 2013, 25, .	4.0	5
52	Grafting-through ROMP for gels with tailorable moduli and crosslink densities. <i>Polymer Chemistry</i> , 2018, 9, 5173-5178.	3.9	5
53	Annealing post-drawn polycaprolactone (PCL) nanofibers optimizes crystallinity and molecular alignment and enhances mechanical properties and drug release profiles. <i>Materials Advances</i> , 2022, 3, 3303-3315.	5.4	5
54	The peculiar elongational viscosity of concentrated solutions of monodisperse PMMA in oligomeric MMA. <i>Rheologica Acta</i> , 2018, 57, 591-601.	2.4	4

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55	Accounting for optical errors in microtensometry. <i>Journal of Colloid and Interface Science</i> , 2018, 526, 392-399.	9.4	3
56	The efficacy of hydrogel foams in talc Pleurodesis. <i>Journal of Cardiothoracic Surgery</i> , 2020, 15, 58.	1.1	3
57	The effect of pyrolysis on the chemical, thermal and rheological properties of pitch. <i>Soft Matter</i> , 2021, 17, 8925-8936.	2.7	3
58	Concentration Dependence of a Hydrogel Phase Formed by the Deprotonation of the Imidazole Side Chain of Glycylhistidylglycine. <i>Langmuir</i> , 2021, 37, 6935-6946.	3.5	3
59	The chromatographic separation of particles using optical electric fields. <i>Lab on A Chip</i> , 2013, 13, 928.	6.0	2
60	An improved method of delivering a sclerosing agent for the treatment of malignant pleural effusion. <i>BMC Cancer</i> , 2019, 19, 614.	2.6	2
61	Waste to high performance materials: Self-assembly of short carbon fiber polymer composites. <i>Applied Materials Today</i> , 2020, 20, 100786.	4.3	2
62	The impact of thermal history on the structure of glycylalanyl-glycine ethanol/water gels. <i>Journal of Peptide Science</i> , 2021, 27, e3305.	1.4	2
63	O'Connor, Alvarez, and Robbins Reply. <i>Physical Review Letters</i> , 2019, 122, 059804.	7.8	1
64	A mechanism for improved talc pleurodesis via foam delivery. <i>Drug Delivery</i> , 2021, 28, 733-740.	5.7	1
65	The effect of network topology on material properties in vinyl-ester/styrene thermoset polymers using molecular dynamics simulations and time-temperature superposition. <i>Computational Materials Science</i> , 2022, 207, 111264.	3.0	1
66	Exploring the Tunability of the Aggregation and Gelation Process of Tripeptides. <i>Biophysical Journal</i> , 2018, 114, 589a.	0.5	0
67	Exploring the Tunability of the Aggregation and Gelation Process of the Tripeptide Gag. <i>Biophysical Journal</i> , 2019, 116, 349a.	0.5	0