Nicolas J Alvarez

List of Publications by Year
in descending order

67 papers	2,286 citations	201385 27 h-index	214527 47 g-index
67 all docs	67 docs citations	67 times ranked	2280 citing authors

#	ARTICLE	IF	CITATIONS
1	Rheological Characteristics of 2D Titanium Carbide (MXene) Dispersions: A Guide for Processing MXenes. ACS Nano, 2018, 12, 2685-2694.	7.3	288
2	Concentrated Polymer Solutions are Different from Melts: Role of Entanglement Molecular Weight. Macromolecules, 2013, 46, 5026-5035.	2.2	167
3	A Microtensiometer To Probe the Effect of Radius of Curvature on Surfactant Transport to a Spherical Interface. Langmuir, 2010, 26, 13310-13319.	1.6	103
4	Effect of Hydrogen Bonding on Linear and Nonlinear Rheology of Entangled Polymer Melts. Macromolecules, 2015, 48, 5988-5996.	2.2	103
5	Interfacial Dynamics and Rheology of Polymer-Grafted Nanoparticles at Airâ€“Water and Xyleneâ€“Water Interfaces. Langmuir, 2012, 28, 8052-8063.	1.6	101
6	Extensional Rheology of Entangled Polystyrene Solutions Suggests Importance of Nematic Interactions. ACS Macro Letters, 2013, 2, 741-744.	2.3	93
7	Bridging the Gap between Polymer Melts and Solutions in Extensional Rheology. Macromolecules, 2015, 48, 4158-4163.	2.2	89
8	Diffusion-limited adsorption to a spherical geometry: The impact of curvature and competitive time scales. Physical Review E, 2010, 82, 011604.	0.8	83
9	A non-gradient based algorithm for the determination of surface tension from a pendant drop: Application to low Bond number drop shapes. Journal of Colloid and Interface Science, 2009, 333, 557-562.	5.0	64
10	Linear and Nonlinear Universality in the Rheology of Polymer Melts and Solutions. Physical Review Letters, 2015, 115, 078302.	2.9	62
11	Linear Viscoelastic and Dielectric Relaxation Response of Unentangled UPy-Based Supramolecular Networks. Macromolecules, 2016, 49, 3899-3910.	2.2	62
12	Using bulk convection in a microtensiometer to approach kinetic-limited surfactant dynamics at fluidâ€“fluid interfaces. Journal of Colloid and Interface Science, 2012, 372, 183-191.	5.0	59
13	Relating Chain Conformations to Extensional Stress in Entangled Polymer Melts. Physical Review Letters, 2018, 121, 047801.	2.9	55
14	Nylon-6/Ti₃C₂T_{<i>z</i>} MXene Nanocomposites Synthesized by in Situ Ring Opening Polymerization of Îµ-Caprolactam and Their Water Transport Properties. ACS Applied Materials & Interfaces, 2019, 11, 20425-20436.	4.0	52
15	A new look at extensional rheology of low-density polyethylene. Rheologica Acta, 2016, 55, 343-350.	1.1	50
16	Direct observation of active material interactions in flowable electrodes using X-ray tomography. Faraday Discussions, 2017, 199, 511-524.	1.6	50
17	A control scheme for filament stretching rheometers with application to polymer melts. Journal of Non-Newtonian Fluid Mechanics, 2013, 194, 14-22.	1.0	49
18	The importance of experimental design on measurement of dynamic interfacial tension and interfacial rheology in diffusion-limited surfactant systems. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2015, 467, 135-142.	2.3	46

#	Article	IF	Citations
19	Nonlinear shear and uniaxial extensional rheology of polyether-ester-sulfonate copolymer ionomer melts. Journal of Rheology, 2017, 61, 1279-1289.	1.3	46
20	Multiple Cracks Propagate Simultaneously in Polymer Liquids in Tension. Physical Review Letters, 2016, 117, 087801.	2.9	43
21	Short-range contacts govern the performance of industry-relevant battery cathodes. Journal of Power Sources, 2018, 387, 49-56.	4.0	43
22	Dispersion and Stabilization of Alkylated 2D MXene in Nonpolar Solvents and Their Pseudocapacitive Behavior. Cell Reports Physical Science, 2020, 1, 100042.	2.8	43
23	Dynamics of Star Polymers in Fast Extensional Flow and Stress Relaxation. Macromolecules, 2016, 49, 6694-6699.	2.2	36
24	Creep Measurements Confirm Steady Flow after Stress Maximum in Extension of Branched Polymer Melts. Physical Review Letters, 2013, 110, 168301.	2.9	34
25	Brittle fracture in associative polymers: the case of ionomer melts. Soft Matter, 2016, 12, 7606-7612.	1.2	34
26	Effect of Finite Extensibility on Nonlinear Extensional Rheology of Polymer Melts. Macromolecules, 2019, 52, 915-922.	2.2	32
27	Dynamics of Supramolecular Self-Healing Recovery in Extension. Macromolecules, 2019, 52, 2231-2242.	2.2	30
28	The effect of alkane tail length of C E8 surfactants on transport to the silicone oilâ€"water interface. Journal of Colloid and Interface Science, 2011, 355, 231-236.	5.0	27
29	The interplay of aggregation, fibrillization and gelation of an unexpected low molecular weight gelator: glycylalanylglycine in ethanol/water. Soft Matter, 2016, 12, 6096-6110.	1.2	27
30	A criterion to assess the impact of confined volumes on surfactant transport to liquidâ€"fluid interfaces. Soft Matter, 2012, 8, 8917.	1.2	26
31	Correlating Processing Conditions to Short- and Long-Range Order in Coating and Drying Lithium-Ion Batteries. ACS Applied Energy Materials, 2020, 3, 11681-11689.	2.5	23
32	Formulation of a Model Resin System for Benchmarking Processing-Property Relationships in High-Performance Photo 3D Printing Applications. Materials, 2020, 13, 4109.	1.3	21
33	Three-Dimensional Visualization of Conductive Domains in Battery Electrodes with Contrast-Enhancing Nanoparticles. ACS Applied Energy Materials, 2018, 1, 4479-4484.	2.5	20
34	Stress relaxation of bi-disperse polystyrene melts. Rheologica Acta, 2016, 55, 303-314.	1.1	19
35	The effect of resin-rich layers on mechanical properties of 3D printed woven fiber-reinforced composites. Composites Part A: Applied Science and Manufacturing, 2021, 144, 106339.	3.8	19
36	Characterizing long-chain branching in commercial HDPE samples via linear viscoelasticity and extensional rheology. Rheologica Acta, 2020, 59, 797-807.	1.1	15

#	Article	IF	Citations
37	Exploring the gel phase of cationic glycylalanylglycine in ethanol/water. I. Rheology and microscopy studies. Journal of Colloid and Interface Science, 2020, 564, 499-509.	5.0	13
38	An experimental study of the stability of liquid bridges subject to shear-induced closed-flow. Journal of Colloid and Interface Science, 2010, 346, 464-469.	5.0	12
39	Short Peptides as Tunable, Switchable, and Strong Gelators. Journal of Physical Chemistry B, 2021, 125, 6760-6775.	1.2	12
40	Oscillatory squeeze flow for the study of linear viscoelastic behavior. Journal of Rheology, 2016, 60, 407-418.	1.3	11
41	Exploring the thermal reversibility and tunability of a low molecular weight gelator using vibrational and electronic spectroscopy and rheology. Soft Matter, 2019, 15, 3418-3431.	1.2	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. Journal of Physical Chemistry B, 2016, 120, 10079-10090.	1.2	9
43	The trade-off between processability and performance in commercial ionomers. Rheologica Acta, 2019, 58, 499-511.	1.1	9
44	Exploring the gel phase of cationic glycylalanylglycine in ethanol/water. II. Spectroscopic, kinetic and thermodynamic studies. Journal of Colloid and Interface Science, 2020, 573, 123-134.	5.0	9
45	Surface tensions at elevated pressure depend strongly on bulk phase saturation. Journal of Colloid and Interface Science, 2021, 594, 681-689.	5.0	9
46	The evolution of crystalline structures during gel spinning of ultra-high molecular weight polyethylene fibers. Soft Matter, 2018, 14, 8974-8985.	1.2	8
47	The Impotence of Non-Brownian Particles on the Gel Transition of Colloidal Suspensions. Polymers, 2017, 9, 461.	2.0	7
48	The tripeptide GHG as an unexpected hydrogelator triggered by imidazole deprotonation. Soft Matter, 2020, 16, 4110-4114.	1.2	7
49	A molecular parameter to scale the Gibbs free energies of adsorption and micellization for nonionic surfactants. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 609, 125622.	2.3	7
50	Direct measure of crystalline domain size, distribution, and orientation in polyethylene fibers. Polymer, 2020, 202, 122589.	1.8	7
51	The impact of deformable interfaces and Poiseuille flow on the thermocapillary instability of three immiscible phases confined in a channel. Physics of Fluids, 2013, 25, .	1.6	5
52	Grafting-through ROMP for gels with tailorable moduli and crosslink densities. Polymer Chemistry, 2018, 9, 5173-5178.	1.9	5
53	Annealing post-drawn polycaprolactone (PCL) nanofibers optimizes crystallinity and molecular alignment and enhances mechanical properties and drug release profiles. Materials Advances, 2022, 3, 3303-3315.	2.6	5
54	The peculiar elongational viscosity of concentrated solutions of monodisperse PMMA in oligomeric MMA. Rheologica Acta, 2018, 57, 591-601.	1.1	4

#	Article	IF	Citations
55	Accounting for optical errors in microtensiometry. Journal of Colloid and Interface Science, 2018, 526, 392-399.	5.0	3
56	The efficacy of hydrogel foams in talc Pleurodesis. Journal of Cardiothoracic Surgery, 2020, 15, 58.	0.4	3
57	The effect of pyrolysis on the chemical, thermal and rheological properties of pitch. Soft Matter, 2021, 17, 8925-8936.	1.2	3
58	Concentration Dependence of a Hydrogel Phase Formed by the Deprotonation of the Imidazole Side Chain of Glycylhistidylglycine. Langmuir, 2021, 37, 6935-6946.	1.6	3
59	The chromatographic separation of particles using optical electric fields. Lab on A Chip, 2013, 13, 928.	3.1	2
60	An improved method of delivering a sclerosing agent for the treatment of malignant pleural effusion. BMC Cancer, 2019, 19, 614.	1.1	2
61	Waste to high performance materials: Self-assembly of short carbon fiber polymer composites. Applied Materials Today, 2020, 20, 100786.	2.3	2
62	The impact of thermal history on the structure of glycylalanylglycine ethanol/water gels. Journal of Peptide Science, 2021, 27, e3305.	0.8	2
63	Oâ€™Connor, Alvarez, and Robbins Reply:. Physical Review Letters, 2019, 122, 059804.	2.9	1
64	A mechanism for improved talc pleurodesis via foam delivery. Drug Delivery, 2021, 28, 733-740.	2.5	1
65	The effect of network topology on material properties in vinyl-ester/styrene thermoset polymers using molecular dynamics simulations and timeâ€"temperature superposition. Computational Materials Science, 2022, 207, 111264.	1.4	1
66	Exploring the Tunability of the Aggregation and Gelation Process of Tripeptides. Biophysical Journal, 2018, 114, 589a.	0.2	0
67	Exploring the Tunability of the Aggregation and Gelation Process of the Tripeptide Gag. Biophysical Journal, 2019, 116, 349a.	0.2	0