Fernando Alvarez

List of Publications by Year in Descending Order

56 papers	2,400 citations	24 h-index	48 g-index
57 ext. papers	2,526 ext. citations	3.8 avg, IF	4.42 L-index

#	Paper	IF	Citations
56	Disentangling Self-Atomic Motions in Polyisobutylene by Molecular Dynamics Simulations. *Polymers* , **2021**, 13,	4.5	1
55	Unraveling the coherent dynamic structure factor of liquid water at the mesoscale by molecular dynamics simulations.. *Journal of Chemical Physics*, **2021**, 155, 244509	3.9	0
54	Insight into the Structure and Dynamics of Polymers by Neutron Scattering Combined with Atomistic Molecular Dynamics Simulations. *Polymers*, **2020**, 12,	4.5	8
53	Free Volume in a PVME Polymer–Water Solution. *Macromolecules*, **2020**, 53, 4770-4782	5.5	1
52	Coherent structural relaxation of water from meso- to intermolecular scales measured using neutron spectroscopy with polarization analysis. *Physical Review Research*, **2020**, 2,	3.9	8
51	Investigation of the dynamics of aqueous proline solutions using neutron scattering and molecular dynamics simulations. *Physical Chemistry Chemical Physics*, **2017**, 19, 27739-27754	3.6	6
50	Collective dynamics of glass-forming polymers at intermediate length scales. *EPJ Web of Conferences*, **2015**, 83, 01001	0.3	8
49	Collective Features in Polyisobutylene. A Study of the Static and Dynamic Structure Factor by Molecular Dynamics Simulations. *Macromolecules*, **2014**, 47, 447-459	5.5	14
48	Modeling the collective relaxation time of glass-forming polymers at intermediate length scales: application to polyisobutylene. *Journal of Chemical Physics*, **2013**, 139, 044906	3.9	24
47	Applicability of mode-coupling theory to polyisobutylene: a molecular dynamics simulation study. *Physical Review E*, **2013**, 88, 042302	2.4	12
46	On the interactions between poly(ethylene oxide) and graphite oxide: a comparative study by different computational methods. *Journal of Chemical Physics*, **2013**, 138, 094308	3.9	3
45	Single Chain Dynamic Structure Factor of Poly(ethylene oxide) in Dynamically Asymmetric Blends with Poly(methyl methacrylate). Neutron Scattering and Molecular Dynamics Simulations. *Macromolecules*, **2012**, 45, 536-542	5.5	33
44	Neutron scattering and molecular dynamics simulations: synergetic tools to unravel structure and dynamics in polymers. *Soft Matter*, **2012**, 8, 8257	3.6	32
43	Chain Dynamics of Unentangled Poly(ethylene-alt-propylene) Melts by Means of Neutron Scattering and Fully Atomistic Molecular Dynamics Simulations. *Macromolecules*, **2011**, 44, 3129-3139	5.5	13
42	The free volume of poly(vinyl methylether) as computed in a wide temperature range and at length scales up to the nanoregion. *Journal of Chemical Physics*, **2011**, 134, 044512	3.9	8
41	Study of the structure and dynamics of poly(vinyl pyrrolidone) by molecular dynamics simulations validated by quasielastic neutron scattering and x-ray diffraction experiments. *Journal of Chemical Physics*, **2011**, 134, 054904	3.9	21
40	Chain dynamics of poly(ethylene-alt-propylene) melts by means of coarse-grained simulations based on atomistic molecular dynamics. *Journal of Chemical Physics*, **2010**, 132, 024904	3.9	16

39	Chain Motion in Nonentangled Dynamically Asymmetric Polymer Blends: Comparison between Atomistic Simulations of PEO/PMMA and a Generic Bead□Spring Model. *Macromolecules*, **2010**, 43, 3036-3051	5.5	41
38	The free-volume structure of a polymer melt, poly(vinyl methylether) from molecular dynamics simulations and cavity analysis. *Journal of Chemical Physics*, **2009**, 131, 064903	3.9	12
37	Atomic motions in poly(vinyl methyl ether): A combined study by quasielastic neutron scattering and molecular dynamics simulations in the light of the mode coupling theory. *Journal of Chemical Physics*, **2009**, 131, 204901	3.9	22
36	Quasielastic Neutron Scattering and Molecular Dynamics Simulation Study on the Structure Factor of Poly(ethylene-alt-propylene). *Macromolecules*, **2009**, 42, 8271-8285	5.5	23
35	Study of the dynamics of poly(ethylene oxide) by combining molecular dynamic simulations and neutron scattering experiments. *Journal of Chemical Physics*, **2009**, 130, 094908	3.9	63
34	Atomic motions in the alphabeta-merging region of 1,4-polybutadiene: a molecular dynamics simulation study. *Journal of Chemical Physics*, **2008**, 128, 224905	3.9	23
33	Short-range order and collective dynamics of poly(vinyl acetate): a combined study by neutron scattering and molecular dynamics simulations. *Journal of Chemical Physics*, **2008**, 129, 224903	3.9	23
32	On the momentum transfer dependence of the atomic motions in the □relaxation range. Polymers vs. low□molecular-weight glass-forming systems. *Europhysics Letters*, **2007**, 80, 38001	1.6	7
31	Atomic motions in the □region of glass-forming polymers: molecular versus mode coupling theory approach. *Journal of Physics Condensed Matter*, **2007**, 19, 205127	1.8	14
30	Local Structure of Syndiotactic Poly(methyl methacrylate). A Combined Study by Neutron Diffraction with Polarization Analysis and Atomistic Molecular Dynamics Simulations. *Macromolecules*, **2006**, 39, 3947-3958	5.5	44
29	Self- and Collective Dynamics of Syndiotactic Poly(methyl methacrylate). A Combined Study by Quasielastic Neutron Scattering and Atomistic Molecular Dynamics Simulations. *Macromolecules*, **2006**, 39, 6260-6272	5.5	43
28	Partial Structure Factors in 1,4-Polybutadiene. A Combined Neutron Scattering and Molecular Dynamics Simulations Study. *Macromolecules*, **2005**, 38, 9847-9853	5.5	21
27	The decisive influence of local chain dynamics on the overall dynamic structure factor close to the glass transition. *Europhysics Letters*, **2005**, 71, 262-268	1.6	13
26	Dynamics of poly(ethylene oxide) in a blend with poly(methyl methacrylate): a quasielastic neutron scattering and molecular dynamics simulations study. *Physical Review E*, **2005**, 72, 031808	2.4	88
25	Hydrogen motions in the alpha-relaxation regime of poly(vinyl ethylene): a molecular dynamics simulation and neutron scattering study. *Journal of Chemical Physics*, **2004**, 121, 3282-94	3.9	25
24	Hydrogen motions and the □relaxation in glass-forming polymers: Molecular dynamics simulation and quasi-elastic neutron scattering results **2004**, 63, 25-32		12
23	Self-motion of protons in the □relaxation of poly(vinyl ethylene): a neutron scattering and MD-simulation study. *Physica B: Condensed Matter*, **2004**, 350, E1091-E1093	2.8	1
22	Structure factors in polystyrene: a neutron scattering and MD-simulation study. *Physica B: Condensed Matter*, **2004**, 350, E881-E884	2.8	26

21	Self-motion and the relaxation in glass-forming polymers. Molecular dynamic simulation and quasielastic neutron scattering results in polyisoprene. *Journal of Physics Condensed Matter*, **2003**, 15, S1127-S1138	1.8	17
20	Partial Structure Factors of Polyisoprene: Neutron Scattering and Molecular Dynamics Simulation. *Macromolecules*, **2003**, 36, 238-248	5.5	28
19	Studying biological tissue with fluorescence lifetime imaging: microscopy, endoscopy, and complex decay profiles. *Applied Optics*, **2003**, 42, 2995-3004	1.7	80
18	Experimental evidence by neutron scattering of a crossover from Gaussian to non-Gaussian behavior in the alpha relaxation of polyisoprene. *Physical Review E*, **2003**, 67, 051802	2.4	77
17	Non-Gaussian nature of the alpha relaxation of glass-forming polyisoprene. *Physical Review Letters*, **2002**, 89, 245701	7.4	83
16	Self-motion and the alpha relaxation in a simulated glass-forming polymer: crossover from Gaussian to non-Gaussian dynamic behavior. *Physical Review E*, **2002**, 65, 041804	2.4	111
15	Partial structure factors of a simulated polymer melt. *Computational Materials Science*, **2002**, 25, 596-605	3.2	5
14	Methyl group dynamics in glassy polymers by neutron scattering: from classical to quantum motions. *Physica B: Condensed Matter*, **2000**, 276-278, 322-325	2.8	7
13	Methyl group dynamics above the glass transition temperature: a molecular dynamics simulation in polyisoprene. *Chemical Physics*, **2000**, 261, 47-59	2.3	21
12	Origin of the Distribution of Potential Barriers for Methyl Group Dynamics in Glassy Polymers: A Molecular Dynamics Simulation in Polyisoprene. *Macromolecules*, **2000**, 33, 8077-8084	5.5	33
11	On the origin of the distribution of potential barriers for methyl group dynamics in glassy polymers: Neutron scattering & MD-simulations **1999**,		1
10	Dielectric relaxation in PMMA revisited. *Journal of Non-Crystalline Solids*, **1998**, 235-237, 580-583	3.9	74
9	The merging of the dielectric and relaxations in poly-(methyl methacrylate). *Journal of Chemical Physics*, **1998**, 109, 7546-7555	3.9	163
8	Study of the Two-Component Segmental Dynamics of Poly(vinylethylene)/Polyisoprene Miscible Blends. *Macromolecules*, **1997**, 30, 597-604	5.5	63
7	The coalescence range of the and processes in the glass-forming liquid bis-phenol-C-dimethylether (BCDE). *Journal of Chemical Physics*, **1996**, 105, 432-439	3.9	28
6	A new method for obtaining distributions of relaxation times from frequency relaxation spectra. *Journal of Chemical Physics*, **1995**, 103, 798-806	3.9	30
5	Segmental Dynamics in Bulk Poly(isobornyl methacrylate) and Its Random Copolymer with Poly(methyl methacrylate) near Tg. *Macromolecules*, **1995**, 28, 6488-6493	5.5	22
4	Non-Lorentzian Rayleigh spectra of bulk homopolymers far above the glass transition. *Physical Review B*, **1994**, 49, 14996-15003	3.3	15

3	Interconnection between frequency-domain Havriliak-Negami and time-domain Kohlrausch-Williams-Watts relaxation functions. *Physical Review B*, **1993**, 47, 125-130	3.3	191
2	Dynamics of the alpha relaxation of a glass-forming polymeric system: Dielectric, mechanical, nuclear-magnetic-resonance, and neutron-scattering studies. *Physical Review B*, **1991**, 44, 7321-7329	3.3	93
1	Relationship between the time-domain Kohlrausch-Williams-Watts and frequency-domain Havriliak-Negami relaxation functions. *Physical Review B*, **1991**, 44, 7306-7312	3.3	549