Dino Leporini

List of Publications by Year
in descending order

128	2,412	186265	243625
papers	citations	28 h-index	44 g-index

131	131	131	1320
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Universal scaling between structural relaxation and vibrational dynamics inÂglass-forming liquids and polymers. Nature Physics, 2008, 4, 42-45.	16.7	272
2	Obstruction model of the fractional Stokesâ€“Einstein relation in glass-forming liquids. Journal of Non-Crystalline Solids, 1998, 235-237, 137-141.	3.1	103
3	Langevin stabilization of molecular-dynamics simulations of polymers by means of quasisymplectic algorithms. Journal of Chemical Physics, 2007, 126, 104101.	3.0	100
4	Evidence of a fractional Debye-Stokes-Einstein law in supercooled o-terphenyl. Europhysics Letters, 1997, 38, 669-674.	2.0	84
5	ESR evidence for 2 coexisting liquid phases in deeply supercooled bulk water. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 11448-11453.	7.1	71
6	Communication: Correlation of the instantaneous and the intermediate-time elasticity with the structural relaxation in glassforming systems. Journal of Chemical Physics, 2012, 136, 041104.	3.0	70
7	Viscous flow and jump dynamics in molecular supercooled liquids. I. Translations. Physical Review E, 2001, 63, 036701.	2.1	65
8	Viscous flow and jump dynamics in molecular supercooled liquids. II. Rotations. Physical Review E, 2001, 63, 036702.	2.1	64
9	Fast-computational approach to the evaluation of slow-motion EPR spectra in terms of a generalized Langevin equation. Physical Review A, 1983, 28, 2474-2481.	2.5	57
10	Scaling Analysis and Distribution of the Rotational Correlation Times of a Tracer in Rubbery and Glassy Poly(vinyl acetate):Â An Electron Spin Resonance Investigation. Macromolecules, 1999, 32, 1876-1882.	4.8	57
11	Universal scaling between structural relaxation and caged dynamics in glass-forming systems: Free volume and time scales. Journal of Non-Crystalline Solids, 2011, 357, 298-301.	3.1	57
12	Universal divergenceless scaling between structural relaxation and caged dynamics in glass-forming systems. Journal of Chemical Physics, 2009, 131, 224517.	3.0	54
13	Predictive relation for the Î±-relaxation time of a coarse-grained polymer melt under steady shear. Science Advances, 2020, 6, eaaz0777.	10.3	45
14	Jump reorientation of a molecular probe in the glass transition region ofo-terphenyl. Journal of Physics Condensed Matter, 1996, 8, 3795-3809.	1.8	42
15	Molecular dynamics study of the thermal and the density effects on the local and the large-scale motion of polymer melts: Scaling properties and dielectric relaxation. Journal of Chemical Physics, 2004, 120, 437-453.	3.0	38
16	Scaling between structural relaxation and particle caging in a model colloidal gel. Soft Matter, 2011, 7, 4025.	2.7	38
17	Spatial displacement correlations in polymeric systems. Journal of Chemical Physics, 2012, 136, 164901.	3.0	38
18	Electron spin relaxation due to small-angle motion: Theory for the canonical orientations and application to hierarchic cage dynamics in ionomers. Journal of Chemical Physics, 2003, 119, 11829-11846.	3.0	37

#	Article	IF	Citations
19	Scaling between Relaxation, Transport, and Caged Dynamics in Polymers: From Cage Restructuring to Diffusion. Journal of Physical Chemistry B, 2011, 115, 14046-14051.	2.6	36
20	Thermodynamic scaling of vibrational dynamics and relaxation. Journal of Chemical Physics, 2016, 145, 234904.	3.0	35
21	Anisotropic jump model of the rotational dynamics in glasses. Journal of Chemical Physics, 2001, 114, 3631-3639.	3.0	33
22	Role of the density in the crossover region ofoâ€terphenyl and poly(vinyl acetate). Physical Review E, 2004, 69, 061509.	2.1	33
23	Nonlinear electron spin resonance techniques for the study of inhomogeneously broadened spectra. Journal of Chemical Physics, 1988, 88, 607-616.	3.0	31
24	Relationship between a nonlinear response and relaxation induced by colored noise. Physical Review A, 1994, 49, 992-1014.	2.5	31
25	A study of the Debye - Stokes - Einstein law in supercooled fluids. Journal of Physics Condensed Matter, 1996, 8, 9605-9608.	1.8	30
26	Linear and non-linear electron spin resonance study of the rotational diffusion of a molecular tracer in supercooled o-terphenyl. Journal of Non-Crystalline Solids, 1998, 235-237, 219-224.	3.1	30
27	Scaling of the Rotational Relaxation of Tracers ino-Terphenyl:Â A Linear and Nonlinear ESR Study. Journal of Physical Chemistry B, 1999, 103, 4097-4103.	2.6	29
28	Scaling between structural relaxation and caged dynamics in Ca_{0.4}K_{0.6}(NO₃)_{1.4}and glycerol: free volume, time-scales and implications for pressureâ€“energy correlations. Philosophical Magazine, 2011, 91, 1786-1795.	1.6	29
29	Equilibrated polyethylene single-molecule crystals: molecular-dynamics simulations and analytic model of the global minimum of the free-energy landscape. Journal of Physics Condensed Matter, 2005, 17, L199-L208.	1.8	27
30	Scaling between relaxation, transport and caged dynamics in a binary mixture on a per-component basis. Journal of Chemical Physics, 2013, 138, 12A532.	3.0	27
31	Efficient characterization of the orientational ordering of ESR-active probes in supermolecular fluids. Applied Magnetic Resonance, 1993, 4, 279-295.	1.2	26
32	Scaling between the rotational diffusion of tracers and the relaxation of polymers and glass formers. Journal of Physics Condensed Matter, 1999, 11, A131-A137.	1.8	26
33	Signatures of the fast dynamics in glassy polystyrene: First evidence by high-field Electron Paramagnetic Resonance of molecular guests. Journal of Chemical Physics, 2005, 123, 174906.	3.0	24
34	The kinetic fragility of liquids as manifestation of the elastic softening. European Physical Journal E, 2015, 38, 87.	1.6	24
35	Pressure and temperature dependence of structural relaxation dynamics in polymers: a thermodynamic interpretation. Journal of Physics Condensed Matter, 2004, 16, 6597-6608.	1.8	23
36	Violation of the fluctuation-dissipation theorem in confined driven colloids. Europhysics Letters, 2006, 76, 1022-1028.	2.0	23

#	Article	IF	Citations
37	Communication: Fast and local predictors of the violation of the Stokes-Einstein law in polymers and supercooled liquids. Journal of Chemical Physics, 2012, 136, 211101.	3.0	20
38	Molecular layers in thin supported films exhibit the same scaling as the bulk between slow relaxation and vibrational dynamics. Soft Matter, 2018, 14, 8814-8820.	2.7	20
39	A manifestation of the Ostwald step rule: Molecular-dynamics simulations and free-energy landscape of the primary nucleation and melting of single-molecule polyethylene in dilute solution. Journal of Chemical Physics, 2005, 123, 144907.	3.0	19
40	Relaxation induced by colored noise: Analytical results for multilevel systems. Physical Review A, 1992, 46, 6222-6241.	2.5	17
41	Non-Gaussian effects in the cage dynamics of polymers. Philosophical Magazine, 2008, 88, 4057-4062.	1.6	17
42	Slow Motion EPR Spectra in Terms of a Generalized Langevin Equation. Advances in Chemical Physics, 2007, , 321-388.	0.3	16
43	Molecular Probe Dynamics Reveals Suppression of Ice-Like Regions in Strongly Confined Supercooled Water. PLoS ONE, 2012, 7, e44382.	2.5	16
44	Boson Peak Decouples from Elasticity in Glasses with Low Connectivity. Physical Review Letters, 2018, 121, 185502.	7.8	16
45	Probing Porous Polymer Resins by High-Field Electron Spin Resonance Spectroscopy. Macromolecules, 2002, 35, 3977-3983.	4.8	15
46	Static and dynamic density effects due to the finite length of polymer chains: a molecular-dynamics investigation. Journal of Physics Condensed Matter, 2004, 16, 6609-6618.	1.8	15
47	Longitudinally detected electron spin resonance: Recent developments. Applied Magnetic Resonance, 1992, 3, 107-129.	1.2	14
48	Communication: Fast dynamics perspective on the breakdown of the Stokes-Einstein law in fragile glassformers. Journal of Chemical Physics, 2018, 148, 131102.	3.0	14
49	Double-modulation electron-spin-resonance spectroscopy: Experimental observations and theoretical comprehensive interpretation. Physical Review A, 1988, 38, 1931-1942.	2.5	13
50	Thermodynamic scaling of relaxation: insights from anharmonic elasticity. Journal of Physics Condensed Matter, 2017, 29, 135101.	1.8	13
51	Non-linear electron paramagnetic resonance spectroscopy: direct observation of slow dynamics effects at polymer glass transition. Physics Letters, Section A: General, Atomic and Solid State Physics, 1991, 160, 309-314.	2.1	12
52	Confinement effects in ionomers: a high-field pulsed electron spin resonance spectroscopy study. Journal of Non-Crystalline Solids, 2002, 307-310, 510-516.	3.1	12
53	A study of the deep structure of the energy landscape of glassy polystyrene: the exponential distribution of the energy barriers revealed by high-field electron spin resonance spectroscopy. Journal of Physics Condensed Matter, 2004, 16, L479-L488.	1.8	12
54	Comment on â€œGeneralized localization model of relaxation in glass-forming liquidsâ€• Soft Matter, 2013, 9, 7890.	2.7	12

#	Article	IF	Citations
55	Competition of the connectivity with the local and the global order in polymer melts and crystals. Journal of Chemical Physics, 2013, 139, 184501.	3.0	12
56	Weak links between fast mobility and local structure in molecular and atomic liquids. Journal of Chemical Physics, 2015, 142, 124504.	3.0	12
57	Cage effect in supercooled molecular liquids: Local anisotropies and collective solid-like response. Journal of Chemical Physics, 2016, 144, 144505.	3.0	12
58	Local Reversible Melting in Semicrystalline Poly(dimethylsiloxane): A High-Field Electron Paramagnetic Resonance Study. Macromolecules, 2017, 50, 5061-5073.	4.8	12
59	Longitudinal relaxation induced by colored noise. Physical Review E, 1994, 49, 3488-3491.	2.1	11
60	Cage rattling does not correlate with the local geometry in molecular liquids. Journal of Non-Crystalline Solids, 2015, 407, 29-33.	3.1	11
61	Johariâ€“Goldstein Heterogeneous Dynamics in a Model Polymer. Macromolecules, 2021, 54, 2053-2058.	4.8	11
62	Fast Vibrational Modes and Slow Heterogeneous Dynamics in Polymers and Viscous Liquids. International Journal of Molecular Sciences, 2019, 20, 5708.	4.1	10
63	A Fast Algorithm for Magnetic Resonance Lineshapes of Powder Samples. Journal of Magnetic Resonance Series A, 1993, 104, 166-171.	1.6	9
64	Microscopic transport properties in liquid crystalline polymeric matrices: dependence on the thermal history. Journal of Non-Crystalline Solids, 1994, 172-174, 943-949.	3.1	9
65	Non linear behaviour of double modulation EPR spectra. Solid State Communications, 1986, 60, 575-579.	1.9	8
66	Photoassisted interactions in C60/O2 mixtures: an ESR, calorimetric and mass spectroscopy investigation. Physics Letters, Section A: General, Atomic and Solid State Physics, 1994, 189, 322-326.	2.1	8
67	Electron spin resonance studies of the enhanced rotation and the fractional Debyeâ€"Stokesâ€"Einstein law in polymeric liquid crystals. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1998, 77, 547-556.	0.6	8
68	Cage effects on the librational motion in ionomeric homopolymers and block copolymers. Philosophical Magazine, 2004, 84, 1567-1572.	1.6	8
69	Anomaly of the rotational nonergodicity parameter of glass formers probed by high field electron paramagnetic resonance. Journal of Chemical Physics, 2008, 129, 081102.	3.0	8
70	Bond disorder, frustration and polymorphism in the spontaneous crystallization of a polymer melt. Journal of Non-Crystalline Solids, 2016, 453, 88-93.	3.1	8
71	In silico broadband mechanical spectroscopy of amorphous tantala. Physical Review Research, 2019, 1, .	3.6	8
72	Nonlinear techniques applied to inhomogeneously broadened EPR lines: experimental evidence for T1dependence of double modulation spectra. Journal of Physics C: Solid State Physics, 1987, 20, 3975-3978.	1.5	7

#	Article	IF	Citations
73	The onset of the fast dynamics in glassy polystyrene observed by the detrapping of guest molecules: A high-field Electron Paramagnetic Resonance study. Europhysics Letters, 2005, 72, 590-596.	2.0	7
74	Polymer thermal and acoustic properties using heterodyne detected transient grating technique. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 685-690.	2.1	7
75	Constrained and Heterogeneous Dynamics in the Mobile and the Rigid Amorphous Fractions of Poly(dimethylsiloxane): A Multifrequency High-Field Electron Paramagnetic Resonance Study. Macromolecules, 2014, 47, 6748-6756.	4.8	7
76	Short-time elasticity of polymer melts: Tobolsky conjecture and heterogeneous local stiffness. Journal of Polymer Science, Part B: Polymer Physics, 2015, 53, 1401-1407.	2.1	7
77	Fractional Debye-Stokes-Einstein Law in Polymeric Liquid Crystals. Materials Research Society Symposia Proceedings, 1995, 407, 233.	0.1	6
78	Coincident Correlation between Vibrational Dynamics and Primary Relaxation of Polymers with Strong or Weak Johari-Goldstein Relaxation. Polymers, 2020, 12, 761.	4.5	6
79	Electron resonance investigation of a cholesteric mesophase induced by a chiral probe. Journal of the Chemical Society, Faraday Transactions 2, 1982, 78, 307.	1.1	5
80	Debye-Stokes-Einstein Fractional Law in a Polymeric Liquid Crystal: A Non-Linear ESR Study by Using Spin Probes with Different Symmetries. Molecular Crystals and Liquid Crystals, 1996, 290, 1-10.	0.3	5
81	Transient and equilibrated single-molecule crystals of polyethylene: Molecular-dynamics studies of the lamellar fold length. Physica A: Statistical Mechanics and Its Applications, 2006, 364, 183-189.	2.6	5
82	Dynamical Line-Shifts in High-Field Electron Spin Resonance: Applications to Polymer Physics. Zeitschrift Fur Physikalische Chemie, 2012, 226, 1379-1394.	2.8	5
83	A High-Field EPR Study of the Accelerated Dynamics of the Amorphous Fraction of Semicrystalline Poly(dimethylsiloxane) at the Melting Point. Applied Magnetic Resonance, 2014, 45, 693-706.	1.2	5
84	Effect of nematic ordering on the elasticity and yielding in disordered polymeric solids. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 1760-1769.	2.1	5
85	Discussion on the EPR sensitivity in the slow-motion regime. Physical Review A, 1985, 32, 662-665.	2.5	4
86	Microscopic and Collective Dynamics in Supercooled Polymeric Liquid Crystals: Dependence on the Thermal History. Molecular Crystals and Liquid Crystals, 1995, 266, 73-83.	0.3	4
87	Accurate excluded-volume corrections to the single-chain static properties of a melt of unentangled polymers. Journal of Physics Condensed Matter, 2006, 18, 7543-7552.	1.8	4
88	Connectivity effects in the segmental self- and cross-reorientation of unentangled polymer melts. Journal of Chemical Physics, 2009, 131, 174902.	3.0	4
89	A Study of the Glass Transition in Polymeric Mesophases via Calorimetric and Non-Linear ESR Techniques. Molecular Crystals and Liquid Crystals, 1992, 212, 107-114.	0.3	3
90	The characterization of the orientational correlation decay in polymeric fluids by linear and non-linear ESR. Journal of Physics Condensed Matter, 1994, 6, A323-A327.	1.8	3

#	Article	IF	Citations
91	Relaxation induced by colored noise. II. Homogeneous and heterogeneous correlation loss. Physical Review E, 1995, 51, 903-921.	2.1	3
92	Measurement of the Longitudinal Relaxation Time by Continuous-Wave, Nonlinear Electron Spin Resonance Spectroscopies. Journal of Magnetic Resonance, 1998, 131, 86-91.	2.1	3
93	Free-energy effects in single-molecule polymer crystals. Journal of Non-Crystalline Solids, 2006, 352, 5021-5024.	3.1	3
94	Fourh Workshop on Non-Equilibrium Phenomena in Supercooled Fluids, Glasses and Amorphous Materials. Journal of Physics Condensed Matter, 2007, 19, 200301.	1.8	3
95	Mutual information does not detect growing correlations in the propensity of a model molecular liquid. Soft Matter, 2019, 15, 6784-6790.	2.7	3
96	Copper complex E.P.R. lineshape simulation in the slow motion regime. Molecular Physics, 1985, 55, 509-525.	1.7	2
97	High precision programmable apparatus for temperature control and measurement in ESR experiments. Journal of Physics E: Scientific Instruments, 1986, 19, 609-613.	0.7	2
98	ESR studies of the orientational and reorientational properties of mesomorphic polymers. Liquid Crystals, 1993, 14, 1529-1537.	2.2	2
99	Spin relaxation driven by dynamic disorder. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 222, 50-58.	2.1	2
100	Sensitivity of high-field electron paramagnetic resonance to the reorientation of molecular guests in glassy polymers. Philosophical Magazine, 2007, 87, 795-798.	1.6	2
101	Second harmonic generation studies of intrinsic and extrinsic relaxation dynamics in poly(methy1) Tj ETQq1 1 0.784314 rgBT /Overlo	3.1	2
102	Anisotropy of the monomer random walk in a polymer melt: local-order and connectivity effects. Journal of Physics Condensed Matter, 2016, 28, 185103.	1.8	2
103	Vibrational scaling of the heterogeneous dynamics detected by mutual information. European Physical Journal E, 2019, 42, 146.	1.6	2
104	Mutual Information in Molecular and Macromolecular Systems. International Journal of Molecular Sciences, 2021, 22, 9577.	4.1	2
105	Non-linear ESR spectroscopies in ordered fluids. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 1993, 72, 237-244.	4.7	1
106	A linear and non-linear electron spin resonance study of orientational relaxation in semi-crystalline polymeric liquid crystals. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 783-788.	0.4	1
107	Characterization of non-exponential relaxation via linear ESR. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1217-1221.	0.4	1
108	Rotational Dynamics of a Molecular Probe in Tri-Cresyl Phosphate: From â€œStickâ€•to â€œSlipâ€•Boundary Conditions. Materials Research Society Symposia Proceedings, 1996, 455, 157.	0.1	1

#	Article	IF	Citations
109	Comment on â€œA 250 GHz ESR study of o-terphenyl: Dynamic cage effects above Tcâ€•[J. Chem. Phys 106, 9996 (1997)]. Journal of Chemical Physics, 1998, 109, 10523-10524.	3.0	1
110	MOLECULAR-DYNAMICS STUDIES OF BIATOMIC SUPERCOOLED LIQUIDS: INTERMITTENCY, STICK-SLIP TRANSITION AND THE BREAKDOWN OF THE STOKES-EINSTEIN LAWS. Fractals, 2003, 11, 139-147.	3.7	1
111	Fluctuations of non-conservative systems. Journal of Statistical Mechanics: Theory and Experiment, 2007, 2007, P03002-P03002.	2.3	1
112	Excluded-volume corrections to the single-chain static properties of a polymer melt: Temperature, density and potential effects. Journal of Non-Crystalline Solids, 2007, 353, 3879-3884.	3.1	1
113	Physics of Polymers at the Italian High-Field EPR Facility: Heterogeneities and Fast Dynamics. Applied Magnetic Resonance, 2008, 33, 365.	1.2	1
114	Comment on â€œHyperquenched Glassy Water and Hyperquenched Glassy Ethanol Probed by Single Molecule Spectroscopyâ€• Journal of Physical Chemistry B, 2010, 114, 688-688.	2.6	1
115	High-Field Electron Paramagnetic Resonance Reveals a Stable Glassy Fraction up to Melting in Semicrystalline Poly(dimethylsiloxane). Applied Magnetic Resonance, 2017, 48, 827-840.	1.2	1
116	Elastic modulus and yield strength of semicrystalline polymers with bond disorder are higher than in atomic crystals. Journal of Physics and Chemistry of Solids, 2018, 118, 40-46.	4.0	1
117	Non-local cooperative atomic motions that govern dissipation in amorphous tantala unveiled by dynamical mechanical spectroscopy. Acta Materialia, 2020, 201, 1-6.	7.9	1
118	Glassforming Liquids, Amorphous and Semicrystalline Polymers: Exploring their Energy Landscape and Dynamical Heterogeneity by Multi-frequency High-Field EPR. Applied Magnetic Resonance, 2020, 51, 1591-1605.	1.2	1
119	Nanoscale Elastoplastic Wrinkling of Ultrathin Molecular Films. International Journal of Molecular Sciences, 2021, 22, 11732.	4.1	1
120	Magnetic monopoles in ferromagnetic materials. Nuclear Physics B, 1985, 262, 49-66.	2.5	0
121	A new non-linear high sensitivity spectroscopy in the slow molecular motion regime. Liquid Crystals, 1988, 3, 989-997.	2.2	0
122	Evidence of large-angle reorientation in supercooledo-terphenyl. Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics, 1994, 16, 1285-1289.	0.4	0
123	Features of the structural arrest in a glass-forming polymer melt. Physica A: Statistical Mechanics and Its Applications, 2002, 314, 521-525.	2.6	0
124	Signatures of the fast dynamics in glassy polystyrene by multi-frequency, high-field electron paramagnetic resonance of molecular guests. Journal of Non-Crystalline Solids, 2006, 352, 5029-5034.	3.1	0
125	The free-energy landscape of single-molecule polymer crystals. Philosophical Magazine, 2007, 87, 411-415.	1.6	0
126	Metallic glass-formers in 2D exhibit the same scaling as in 3D between vibrational dynamics and structural relaxation. Journal of Physics Condensed Matter, 2020, 32, 085701.	1.8	0

#	Article	IF	Citations
127	Open and Anisotropic Soft Regions in a Model Polymer Glass. Polymers, 2021, 13, 1336.	4.5	0
128	Evidence of negative thermal expansion in supercooled tantala. Journal of Non-Crystalline Solids, 2021, 577, 121308.	3.1	0