Daniele Cangialosi

List of Publications by Year
in descending order

91 papers	3,736 citations	116194 36 h-index	156644 58 g-index
93 all docs	93 docs citations	93 times ranked	2766 citing authors

#	ARTICLE	IF	CITATIONS
1	Physical aging in polymers and polymer nanocomposites: recent results and open questions. Soft Matter, 2013, 9, 8619.	1.2	206
2	Tg depression and invariant segmental dynamics in polystyrene thin films. Soft Matter, 2012, 8, 5119.	1.2	173
3	Direct Evidence of Two Equilibration Mechanisms in Glassy Polymers. Physical Review Letters, 2013, 111, 095701.	2.9	166
4	On the equivalence between the thermodynamic and dynamic measurements of the glass transition in confined polymers. Journal of Non-Crystalline Solids, 2015, 407, 288-295.	1.5	123
5	Effect of nanostructure on the thermal glass transition and physical aging in polymer materials. Progress in Polymer Science, 2016, 54-55, 128-147.	11.8	123
6	Processing Pathways Decide Polymer Properties at the Molecular Level. Macromolecules, 2019, 52, 7146-7156.	2.2	105
7	Direct Measurement of Glass Transition Temperature in Exposed and Buried Adsorbed Polymer Nanolayers. Macromolecules, 2016, 49, 4647-4655.	2.2	100
8	Enthalpy Recovery of Glassy Polymers: Dramatic Deviations from the Extrapolated Liquidlike Behavior. Macromolecules, 2011, 44, 8333-8342.	2.2	95
9	Dynamics and thermodynamics of polymer glasses. Journal of Physics Condensed Matter, 2014, 26, 153101.	0.7	92
10	Irreversible Adsorption Erases the Free Surface Effect on the <i>T</i>_g of Supported Films of Poly(4-<i>tert</i>-butylstyrene). ACS Macro Letters, 2017, 6, 354-358.	2.3	91
11	Physical aging of polystyrene/gold nanocomposites and its relation to the calorimetric Tg depression. Soft Matter, 2011, 7, 3607.	1.2	89
12	Enthalpy Recovery in Nanometer to Micrometer Thick Polystyrene Films. Macromolecules, 2012, 45, 5296-5306.	2.2	86
13	Hierarchical aging pathways and reversible fragile-to-strong transition upon annealing of a metallic glass former. Acta Materialia, 2018, 144, 400-410.	3.8	86
14	Positron Annihilation Lifetime Spectroscopy for Measuring Free Volume during Physical Aging of Polycarbonate. Macromolecules, 2003, 36, 142-147.	2.2	84
15	Interfacial Free Volume and Vitrification: Reduction in <i>T</i>_g in Proximity of an Adsorbing Interface Explained by the Free Volume Holes Diffusion Model. Macromolecules, 2013, 46, 8051-8053.	2.2	82
16	Accelerated physical aging in PMMA/silica nanocomposites. Soft Matter, 2010, 6, 3306.	1.2	72
17	Single-chain nanoparticles: opportunities provided by internal and external confinement. Materials Horizons, 2020, 7, 2292-2313.	6.4	72
18	Physical aging of polycarbonate far below the glass transition temperature: Evidence for the diffusion mechanism. Physical Review B, 2004, 70, .	1.1	66

#	Article	IF	Citations
19	Route to calculate the length scale for the glass transition in polymers. Physical Review E, 2007, 76, 011514.	0.8	65
20	Mobility and glass transition temperature of polymer nanospheres. Polymer, 2013, 54, 230-235.	1.8	64
21	Enthalpy Recovery of PMMA/Silica Nanocomposites. Macromolecules, 2010, 43, 7594-7603.	2.2	63
22	Enhanced physical aging of polymer nanocomposites: The key role of the area to volume ratio. Polymer, 2012, 53, 1362-1372.	1.8	63
23	Free volume holes diffusion to describe physical aging in poly(mehtyl methacrylate)/silica nanocomposites. Journal of Chemical Physics, 2011, 135, 014901.	1.2	62
24	Direct Calorimetric Observation of the Rigid Amorphous Fraction in a Semiconducting Polymer. Journal of Physical Chemistry Letters, 2018, 9, 990-995.	2.1	61
25	Glass Transition and Molecular Dynamics in Polystyrene Nanospheres by Fast Scanning Calorimetry. ACS Macro Letters, 2017, 6, 859-863.	2.3	59
26	Relationship between dynamics and thermodynamics in glass-forming polymers. Europhysics Letters, 2005, 70, 614-620.	0.7	57
27	Vitrification decoupling from Î±-relaxation in a metallic glass. Science Advances, 2020, 6, eaay1454.	4.7	54
28	Combining configurational entropy and self-concentration to describe the component dynamics in miscible polymer blends. Journal of Chemical Physics, 2005, 123, 144908.	1.2	52
29	The very long-term physical aging of glassy polymers. Physical Chemistry Chemical Physics, 2018, 20, 12356-12361.	1.3	52
30	Reaching the ideal glass transition by aging polymer films. Physical Chemistry Chemical Physics, 2017, 19, 961-965.	1.3	44
31	A thermodynamic approach to the fragility of glass-forming polymers. Journal of Chemical Physics, 2006, 124, 024906.	1.2	43
32	Glass transition and segmental dynamics in thin supported polystyrene films: The role of molecular weight and annealing. Thermochimica Acta, 2013, 566, 186-192.	1.2	42
33	Thermodynamic Ultrastability of a Polymer Glass Confined at the Micrometer Length Scale. Physical Review Letters, 2018, 121, 137801.	2.9	41
34	Dynamics of polycarbonate far below the glass transition temperature: â€ƒA positron annihilation lifetime study. Physical Review B, 2004, 69, .	1.1	38
35	Hybrid organic inorganic nylon-6/SiO2nanocomposites: Transport properties. Polymer Engineering and Science, 2004, 44, 1240-1246.	1.5	36
36	On the temperature dependence of the nonexponentiality in glass-forming liquids. Journal of Chemical Physics, 2009, 130, 124902.	1.2	36

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37	Physical aging in PMMA/silica nanocomposites: Enthalpy and dielectric relaxation. Journal of Non-Crystalline Solids, 2011, 357, 605-609.	1.5	35
38	Universal relation between viscous flow and fast dynamics in glass-forming materials. Physical Review B, 2010, 81, .	1.1	34
39	Time dependence of the segmental relaxation time of poly(vinyl acetate)-silica nanocomposites. Physical Review E, 2012, 86, 041501.	0.8	34
40	Physical Aging and Glass Transition of the Rigid Amorphous Fraction in Poly(l-lactic acid). Macromolecules, 2020, 53, 8741-8750.	2.2	34
41	Diffusion mechanism for physical aging of polycarbonate far below the glass transition temperature studied by means of dielectric spectroscopy. Journal of Non-Crystalline Solids, 2005, 351, 2605-2610.	1.5	33
42	Accounting for the thickness dependence of the Tg in supported PS films via the volume holes diffusion model. Thermochimica Acta, 2014, 575, 233-237.	1.2	33
43	Complex nonequilibrium dynamics of stacked polystyrene films deep in the glassy state. Journal of Chemical Physics, 2017, 146, 203312.	1.2	33
44	Polymorphism in Nonâ€Fullerene Acceptors Based on Indacenodithienothiophene. Advanced Functional Materials, 2021, 31, 2103784.	7.8	33
45	Predicting the Time Scale of the Component Dynamics of Miscible Polymer Blends:Â The Polyisoprene/Poly(vinylethylene) Case. Macromolecules, 2006, 39, 7149-7156.	2.2	32
46	â€œSelf-concentrationâ€• effects on the dynamics of a polychlorinated biphenyl diluted in 1,4-polybutadiene. Journal of Chemical Physics, 2007, 126, 204904.	1.2	31
47	A Wavelength-Shifting Fluorescent Probe for Investigating Physical Aging. Macromolecules, 2006, 39, 224-231.	2.2	29
48	Direct observation of desorption of a melt of long polymer chains. Nature Communications, 2020, 11, 4354.	5.8	27
49	Mobility and solubility of antioxidants and oxygen in glassy polymers. III. Influence of deformation and orientation on oxygen permeability. Polymer, 2003, 44, 2463-2471.	1.8	25
50	Mobility and solubility of antioxidants and oxygen in glassy polymers II. Influence of physical ageing on antioxidant and oxygen mobility. Polymer Degradation and Stability, 2003, 79, 427-438.	2.7	24
51	Amorphous-amorphous transition in glassy polymers subjected to cold rolling studied by means of positron annihilation lifetime spectroscopy. Journal of Chemical Physics, 2005, 122, 064702.	1.2	23
52	Describing the component dynamics in miscible polymer blends: Towards a fully predictive model. Journal of Chemical Physics, 2006, 124, 154904.	1.2	23
53	Dielectric relaxation of polychlorinated biphenyl/toluene mixtures: Component dynamics. Journal of Chemical Physics, 2008, 128, 224508.	1.2	23
54	Double Mechanism for Structural Recovery of Polystyrene Nanospheres. Macromolecules, 2018, 51, 3299-3307.	2.2	23

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55	Physical Aging Behavior of a Glassy Polyether. Polymers, 2021, 13, 954.	2.0	23
56	Shell Architecture Strongly Influences the Glass Transition, Surface Mobility, and Elasticity of Polymer Core-Shell Nanoparticles. Macromolecules, 2019, 52, 5399-5406.	2.2	22
57	Cooling Rate Dependent Glass Transition in Thin Polymer Films and in Bulk. , 2016, , 403-431.		21
58	The Importance of Quantifying the Composition of the Amorphous Intermixed Phase in Organic Solar Cells. Advanced Materials, 2020, 32, e2005241.	11.1	21
59	Reaching the Ideal Glass in Polymer Spheres: Thermodynamics and Vibrational Density of States. Physical Review Letters, 2021, 126, 118004.	2.9	19
60	Dynamical heterogeneity in binary mixtures of low-molecular-weight glass formers. Physical Review E, 2009, 80, 041505.	0.8	17
61	Volume recovery of polystyrene/silica nanocomposites. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 847-853.	2.4	15
62	Accumulation of charges in polycarbonate due to positron irradiation. Radiation Physics and Chemistry, 2003, 68, 507-510.	1.4	14
63	Enhanced Free Surface Mobility Facilitates the Release of Free-Volume Holes in Thin-Film Polymer Glasses. Macromolecules, 2021, 54, 2022-2028.	2.2	14
64	Direct Visualization and Characterization of Interfacially Adsorbed Polymer atop Nanoparticles and within Nanocomposites. Macromolecules, 2021, 54, 10224-10234.	2.2	14
65	Positron annihilation and relaxation dynamics from dielectric spectroscopy: poly(vinylmethylether). Journal of Physics Condensed Matter, 2012, 24, 155104.	0.7	13
66	Glassy Dynamics of an All-Polymer Nanocomposite Based on Polystyrene Single-Chain Nanoparticles. Macromolecules, 2019, 52, 6868-6877.	2.2	13
67	Effect of molecular weight on vitrification kinetics and molecular mobility of a polymer glass confined at the microscale. Thermochimica Acta, 2019, 677, 60-66.	1.2	13
68	Study of methyl methacrylate polymerization in the presence of rubbers. European Polymer Journal, 2001, 37, 535-539.	2.6	12
69	Properties and morphology of PMMA/ABN blends obtained via MMA in situ polymerisation through Î³-rays. Nuclear Instruments & Methods in Physics Research B, 2001, 185, 262-266.	0.6	10
70	High throughput optimization procedure to characterize vitrification kinetics. Thermochimica Acta, 2022, 707, 179084.	1.2	10
71	Tunable Properties of MAPLE-Deposited Thin Films in the Presence of Suppressed Segmental Dynamics. ACS Macro Letters, 2019, 8, 1115-1121.	2.3	9
72	Modeling the Dynamics of Head-to-Head Polypropylene in Blends with Polyisobutylene. Macromolecules, 2006, 39, 448-450.	2.2	8

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73	Glass Transition and Physical Aging of Confined Polymers Investigated by Calorimetric Techniques. Handbook of Thermal Analysis and Calorimetry, 2018, , 301-337.	1.6	8
74	Bio-based semi-crystalline PEF: Temperature dependence of the constrained amorphous interphase and amorphous chain mobility in relation to crystallization. Polymer, 2022, 247, 124771.	1.8	8
75	Miscible Polymer Blends with Large Dynamical Asymmetry:â€‰ A New Class of Solid-State Electrolytes?. Macromolecules, 2008, 41, 1565-1569.	2.2	7
76	Effect of silica particles concentration on the physical aging of PMMAâˆ•silica nanocomposites. AIP Conference Proceedings, 2010, , .	0.3	7
77	Gold nanoparticles endowed with low-temperature colloidal stability by cyclic polyethylene glycol in ethanol. Soft Matter, 2021, 17, 7792-7801.	1.2	7
78	Relaxation of Free Volume in Polycarbonate and Polystyrene Studied by Positron Annihilation Lifetime Spectroscopy. Acta Physica Polonica A, 2005, 107, 690-696.	0.2	7
79	Synthesis of macrocyclic poly(ethylene oxide)s containing a protected thiol group: a strategy for decorating gold surfaces with ring polymers. Polymer Chemistry, 2019, 10, 6495-6504.	1.9	6
80	Decoupling of Glassy Dynamics from Viscosity in Thin Supported Poly(<i>n</i>-butyl methacrylate) Films. ACS Polymers Au, 2022, 2, 333-340.	1.7	6
81	Electron beam induced polymerisation of MMA in the presence of rubber: a novel process to produce tough materials. Radiation Physics and Chemistry, 2002, 63, 63-68.	1.4	5
82	Glass transition and aging of the rigid amorphous fraction in polymorphic poly(butene-1). Polymer, 2021, 226, 123830.	1.8	5
83	Submicron structured polymethyl methacrylate/acrylonitrile-butadiene rubber blends obtained via gamma radiation induced ?in situ? polymerization. Advances in Polymer Technology, 2004, 23, 211-221.	0.8	4
84	Comment on â€œVibrational and configurational parts of the specific heat at glass formationâ€. Physical Review B, 2008, 78, .	1.1	4
85	Effect of Confinement Geometry on Out-of-Equilibrium Glassy Dynamics. Soft and Biological Matter, 2015, , 265-298.	0.3	4
86	Equilibrium and Out-of-Equilibrium Dynamics in Confined Polymers and Other Glass Forming Systems by Dielectric Spectroscopy and Calorimetric Techniques. Advances in Dielectrics, 2014, , 339-361.	1.2	4
87	Correlation Between Segmental Dynamics, Glass Transition, and Lithium Ion Conduction in Poly(Methyl Methacrylate)/Ionic Liquid Mixture. Journal of Macromolecular Science - Physics, 2013, 52, 590-603.	0.4	3
88	Vitrification and Physical Aging in Polymer Glasses by Broadband Dielectric Spectroscopy. ACS Symposium Series, 2021, , 133-156.	0.5	3
89	Positron Annihilation Lifetime Spectroscopy to Study the Structural Relaxation of PC Far Below the Glass Transition Temperature. Materials Science Forum, 2004, 445-446, 271-273.	0.3	2
90	Comment on â€œAnomalous structural recovery in the near glass transition range in a polymer glass: Data revisited in light of temperature variability in vacuum ovenâ€based experimentsâ€. Polymer Engineering and Science, 0, , .	1.5	1

#	Article	IF	Citations
91	Chapter 8. Glass Transition and Crystallization in Colloidal Polymer Nanoparticles. RSC Soft Matter, 2019, , 263-288.	0.2	0