Laurent Chazeau

List of Publications by Year
in descending order

98 papers	4,459 citations	109137 35 h-index	106150 65 g-index
99 all docs	99 docs citations	99 times ranked	4114 citing authors

#	Article	IF	Citations
1	Carbon nanotube-filled polymer composites. Numerical simulation of electrical conductivity in three-dimensional entangled fibrous networks. Acta Materialia, 2006, 54, 2923-2931.	3.8	226
2	Viscoelastic properties of plasticized PVC reinforced with cellulose whiskers. Journal of Applied Polymer Science, 1999, 71, 1797-1808.	1.3	215
3	Payne effect in silica-filled styreneâ€“butadiene rubber: Influence of surface treatment. Journal of Polymer Science, Part B: Polymer Physics, 2007, 45, 286-298.	2.4	187
4	Viscoelastic behavior and electrical properties of flexible nanofiber filled polymer nanocomposites. Influence of processing conditions. Composites Science and Technology, 2007, 67, 829-839.	3.8	185
5	Mechanical properties of high density polyurethane foams: I. Effect of the density. Composites Science and Technology, 2006, 66, 2700-2708.	3.8	177
6	Modulus recovery kinetics and other insights into the payne effect for filled elastomers. Polymer Composites, 2000, 21, 202-222.	2.3	169
7	Polymer Based Nanocomposites: Effect of Filler-Filler and Filler-Matrix Interactions. Advanced Engineering Materials, 2001, 3, 571.	1.6	167
8	Parameters governing strain induced crystallization in filled natural rubber. Polymer, 2007, 48, 6893-6901.	1.8	153
9	Toughening of bio-ceramics scaffolds by polymer coating. Journal of the European Ceramic Society, 2007, 27, 2679-2685.	2.8	151
10	A Small-Angle Scattering Study of Cellulose Whiskers in Aqueous Suspensions. Macromolecules, 1999, 32, 1872-1875.	2.2	135
11	Miniemulsion polymerization for synthesis of structured clay/polymer nanocomposites: Short review and recent advances. Polymer, 2010, 51, 6-17.	1.8	132
12	Strain-Induced Crystallization of Natural Rubber and Cross-Link Densities Heterogeneities. Macromolecules, 2014, 47, 5815-5824.	2.2	121
13	Molecular weight between physical entanglements in natural rubber: A critical parameter during strain-induced crystallization. Polymer, 2007, 48, 1042-1046.	1.8	114
14	Mechanical properties of high density polyurethane foams: II Effect of the filler size. Composites Science and Technology, 2006, 66, 2709-2718.	3.8	92
15	POE-based nanocomposite polymer electrolytes reinforced with cellulose whiskers. Electrochimica Acta, 2005, 50, 3897-3903.	2.6	91
16	Mechanical behaviour above T g of a plasticised PVC reinforced with cellulose whiskers; a SANS structural study. Polymer, 1999, 40, 5333-5344.	1.8	84
17	Influence of viscoelasticity on the tribological behaviour of carbon black filled nitrile rubber (NBR) for lip seal application. Wear, 2005, 259, 684-692.	1.5	81
18	Multiwalled carbon nanotube/polymer nanocomposites: Processing and properties. Journal of Polymer Science, Part B: Polymer Physics, 2005, 43, 1186-1197.	2.4	80

#	Article	IF	Citations
19	Plasticized PVC reinforced with cellulose whiskers. II. Plastic behavior. Journal of Polymer Science, Part B: Polymer Physics, 2000, 38, 383-392.	2.4	79
20	Reinforcement effects of vapour grown carbon nanofibres as fillers in rubbery matrices. Composites Science and Technology, 2005, 65, 335-343.	3.8	77
21	Mechanical properties and cytocompatibility of poly(Îµ-caprolactone)-infiltrated biphasic calcium phosphate scaffolds with bimodal pore distribution. Acta Biomaterialia, 2010, 6, 4369-4379.	4.1	77
22	Plasticized PVC reinforced with cellulose whiskers. I. Linear viscoelastic behavior analyzed through the quasi-point defect theory. Journal of Polymer Science, Part B: Polymer Physics, 1999, 37, 2151-2164.	2.4	75
23	How I met your elastomers: from network topology to mechanical behaviours of conventional silicone materials. RSC Advances, 2015, 5, 53713-53725.	1.7	69
24	Large deformation mechanical behavior of flexible nanofiber filled polymer nanocomposites. Polymer, 2006, 47, 2802-2812.	1.8	63
25	Characteristic time of strain induced crystallization of crosslinked natural rubber. Polymer, 2012, 53, 2540-2543.	1.8	60
26	Reinforcement of rubbery epoxy by carbon nanofibres. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 352, 344-348.	2.6	52
27	Influence of strain rate and temperature on the onset of strain induced crystallization in natural rubber. European Polymer Journal, 2015, 64, 244-252.	2.6	52
28	Influence of Silica and its Different Surface Treatments on the Vulcanization Process of Silica Filled SBR. Rubber Chemistry and Technology, 2007, 80, 183-193.	0.6	51
29	Linear Rheology of Supramolecular Polymers Center-Functionalized with Strong Stickers. Macromolecules, 2015, 48, 7320-7326.	2.2	51
30	Soft Nanostructured Films with an Ultraâ€Łow Volume Fraction of Percolating Hard Phase. Macromolecular Rapid Communications, 2013, 34, 1524-1529.	2.0	45
31	Linear rheology of bis-urea functionalized supramolecular poly(butylacrylate)s: Part I â€“ weak stickers. Polymer, 2015, 69, 233-240.	1.8	45
32	About thermo-oxidative ageing at moderate temperature of conventionally vulcanized natural rubber. Polymer Degradation and Stability, 2019, 161, 74-84.	2.7	45
33	Poly(dimethylaminoethyl methacrylate) grafted natural rubber from seeded emulsion polymerization. Polymer, 2005, 46, 1105-1111.	1.8	41
34	Evolution of EPDM networks aged by gamma irradiation â€“ Consequences on the mechanical properties. Polymer, 2009, 50, 4028-4038.	1.8	40
35	A comparison of the abilities of natural rubber (NR) and synthetic polyisoprene cis-1,4 rubber (IR) to crystallize under strain at high strain rates. Physical Chemistry Chemical Physics, 2016, 18, 3472-3481.	1.3	38
36	Conformations of Xanthan in Solution: Analysis by Steric Exclusion Chromatography. International Journal of Polymer Analysis and Characterization, 1995, 2, 21-29.	0.9	34

#	Article	IF	Citations
37	New insights into the cold crystallization of filled natural rubber. Journal of Polymer Science, Part B: Polymer Physics, 2007, 45, 955-962.	2.4	34
38	Nucleation and nonisothermal crystallization kinetics in cross-linked polyethylene/zinc oxide nanocomposites. RSC Advances, 2014, 4, 31643-31651.	1.7	33
39	Morphology of Polymer/Clay Latex Particles Synthesized by Miniemulsion Polymerization: Modeling and Experimental Results. Macromolecular Reaction Engineering, 2010, 4, 432-444.	0.9	32
40	Influence of fillers on mechanical properties of ATH filled EPDM during ageing by gamma irradiation. Polymer Degradation and Stability, 2010, 95, 1029-1038.	2.7	32
41	Grafting of silica during the processing of silica-filled SBR: Comparison between length and content of the silane. Journal of Polymer Science, Part B: Polymer Physics, 2006, 44, 143-152.	2.4	31
42	In situ SALS and volume variation measurements during deformation of treated silica filled SBR. Journal of Materials Science, 2007, 42, 8130-8138.	1.7	30
43	Modelling of the mechanical behaviour of amorphous glassy polymer based on the Quasi Point Defect theoryâ€" Part I: Uniaxial validation on polycarbonate. International Journal of Non-Linear Mechanics, 2011, 46, 496-506.	1.4	29
44	Single-ion conductor nanocomposite organicâ€"inorganic hybrid membranes for lithium batteries. Journal of Materials Chemistry A, 2014, 2, 12162-12165.	5.2	29
45	Strain induced crystallization and melting of natural rubber during dynamic cycles. Physical Chemistry Chemical Physics, 2015, 17, 15331-15338.	1.3	29
46	Mechanical properties of nanostructured films with an ultralow volume fraction of hard phase. Polymer, 2017, 109, 187-196.	1.8	29
47	Temperature dependence of strain-induced crystallization in natural rubber: On the presence of different crystallite populations. Polymer, 2015, 60, 115-124.	1.8	28
48	Microstructure and Self-Assembly of Supramolecular Polymers Center-Functionalized with Strong Stickers. Macromolecules, 2015, 48, 8232-8239.	2.2	27
49	The relationship between the electrical and mechanical properties of polymerâ€"nanotube nanocomposites and their microstructure. Composites Science and Technology, 2009, 69, 1533-1539.	3.8	26
50	Properties of polymer/clay interphase in nanoparticles synthesized through in-situ polymerization processes. Polymer, 2010, 51, 4462-4471.	1.8	26
51	Complex dependence on the elastically active chains density of the strain induced crystallization of vulcanized natural rubbers, from low to high strain rate. Polymer, 2016, 97, 158-166.	1.8	26
52	Macromolecular Additives to Turn a Thermoplastic Elastomer into a Self-Healing Material. Macromolecules, 2021, 54, 888-895.	2.2	25
53	Study of relations between viscoelasticity and tribological behaviour of filled elastomer for lip seal application. Tribology International, 2007, 40, 405-411.	3.0	22
54	Influence of the physical state of a polymer blend on thermal ageing. Polymer Degradation and Stability, 2019, 163, 161-173.	2.7	22

#	Article	IF	Citations
55	Experimental and Numerical Study of a Loaded Cylindrical PA66 Gear. Journal of Mechanical Design, Transactions of the ASME, 2013, 135, .	1.7	21
56	Compared abilities of filled and unfilled natural rubbers to crystallize in a large strain rate domain. Composites Science and Technology, 2015, 108, 9-15.	3.8	21
57	Phase field modelling of strain induced crystal growth in an elastic matrix. Journal of Chemical Physics, 2015, 142, 244905.	1.2	21
58	Layered double hydroxides: Efficient fillers for waterborne nanocomposite films. Applied Clay Science, 2016, 130, 55-61.	2.6	21
59	Quasi-static load sharing model in the case of Nylon 6/6 cylindrical gears. Materials & Design, 2009, 30, 4360-4368.	5.1	20
60	Influence of silica fillers on the ageing by gamma radiation of EDPM nanocomposites. Composites Science and Technology, 2010, 70, 1530-1536.	3.8	20
61	Crystalline microstructure and mechanical properties of crosslinked EPDM aged under gamma irradiation. Journal of Polymer Science, Part B: Polymer Physics, 2010, 48, 97-105.	2.4	19
62	Influence of PE/PP ratio and ENB content on the degradation kinetics of Î³-irradiated EPDM. Polymer Degradation and Stability, 2014, 110, 175-183.	2.7	18
63	Rheological behavior of cellulose/monohydrate of N-methylmorpholine N-oxide solutions. Part 2. Glass transition domain. Polymer, 2002, 43, 881-889.	1.8	17
64	Latex Imaging by Environmental STEM: Application to the Study of the Surfactant Outcome in Hybrid Alkyd/Acrylate Systems. Langmuir, 2009, 25, 10251-10258.	1.6	17
65	About the elongation at break of unfilled natural rubber elastomers. Polymer, 2019, 169, 195-206.	1.8	16
66	Tailored microstructure and mechanical properties of nanocomposite films made from polyacrylic/LDH hybrid latexes synthesized by RAFT-mediated emulsion polymerization. Polymer Chemistry, 2018, 9, 2590-2600.	1.9	13
67	Elastocaloric properties of thermoplastic polyurethane. Applied Physics Letters, 2020, 117, .	1.5	13
68	Influence of the filler type on the rupture behavior of filled elastomers. Journal of Applied Polymer Science, 2010, 118, 435-445.	1.3	11
69	Role of temperature during ageing under gamma irradiation of filled EPDM: consequences on mechanical properties. Journal of Polymer Science, Part B: Polymer Physics, 2010, 48, 1319-1328.	2.4	11
70	Coarse-Grained Molecular Dynamics Modeling of Segmented Block Copolymers: Impact of the Chain Architecture on Crystallization and Morphology. Macromolecules, 2020, 53, 3847-3860.	2.2	11
71	Effects of multifunctional cross-linkers on rheology and adhesion of soft nanostructured materials. Soft Matter, 2017, 13, 7979-7990.	1.2	10
72	Linear and nonlinear viscoelastic properties of segmented silicone-urea copolymers: Influence of the hard segment structure. Polymer, 2020, 186, 122041.	1.8	10

#	Article	IF	Citations
73	Characterisation of thermal relaxations of polyaniline fibers by dynamic mechanical thermal analysis. Materials Science and Engineering C, 2006, 26, 227-231.	3.8	9
74	New ethyl cellulose/acrylic hybrid latexes and coatings via miniemulsion polymerization. Journal of Polymer Science Part A, 2010, 48, 2329-2339.	2.5	9
75	PEOâ€Silsesquioxane Flexible Membranes: Organicâ€Inorganic Solid Electrolytes with Controlled Homogeneity and Nanostructure. ChemistrySelect, 2017, 2, 2088-2093.	0.7	9
76	Dynamic mechanical relaxation of cross-linked styrene-butadiene polymers containing free chains: Possibility of reptation. Polymer, 2014, 55, 5218-5225.	1.8	8
77	Lightâ€Induced Bulk Architecturation of PDMS Membranes. Macromolecular Materials and Engineering, 2016, 301, 1151-1157.	1.7	7
78	Modeling shear-induced crystallization in startup flow: The case of segmented copolymers. Journal of Rheology, 2019, 63, 837-850.	1.3	7
79	Mechanical spectroscopy: some applications to material science. International Journal of Materials and Product Technology, 2006, 26, 312.	0.1	6
80	Ultimate and toughness properties of Î³-irradiated EPDM. European Polymer Journal, 2017, 97, 178-187.	2.6	6
81	Polymer Chain Generation for Coarse-Grained Models Using Radical-Like Polymerization. Communications in Computational Physics, 2018, 24, .	0.7	6
82	Modeling of the mechanical behavior of amorphous glassy polymer based on the quasi-point defect theoryâ€”Part II: 3D formulation and finite element modeling of polycarbonate. International Journal of Non-Linear Mechanics, 2011, 46, 507-518.	1.4	5
83	Quasi-static Load Sharing Model in the Case of Moulded Glass Fibre Reinforced Polyamide 6 Gears. Applied Composite Materials, 2015, 22, 343-362.	1.3	5
84	Polymer/Laponite Nanocomposite Films Produced from Surfactant-Free Latexes using Cationic Macromolecular Reversible Addition-Fragmentation Chain Transfer Copolymers. Macromolecules, 2021, 54, 7480-7491.	2.2	4
85	About the Influence of Materials Parameters on the Ultimate and Fatigue Properties of Elastomers. Advances in Polymer Science, 2020, , 297-329.	0.4	4
86	Improvement of the Mechanical Properties of Calcium Phosphate Bone Substitutes by Polycaprolactone Infiltration. Key Engineering Materials, 2008, 361-363, 403-406.	0.4	3
87	Experimental and numerical study of a loaded cylindrical glass fibre reinforced PA6 gear. , 2014, , 138-147.		3
88	On the Î² relaxations in poly(butadiene) and poly(styrene-butadiene) rubbers. Polymer, 2019, 168, 236-245.	1.8	3
89	Different dynamic behaviors of the dissociation and recombination reactions in a model calculation of polyethylene by first-principles steered molecular dynamics simulation. Chemical Physics, 2015, 459, 96-101.	0.9	2
90	Mathematical Modeling of Rubber Elasticity. Journal of Physics: Conference Series, 2018, 1141, 012081.	0.3	2

#	Article	IF	Citations
91	Monte Carlo Study of Rubber Elasticity on the Basis of Finsler Geometry Modeling. Symmetry, 2019, 11, 1124.	1.1	2
92	CRACKING BEHAVIOR OF CARBON BLACK FILLED ELASTOMERS. International Journal of Nanoscience, 2010, 09, 557-561.	0.4	1
93	Advanced Microscopy Techniques for a Better Understanding of the Polymer/Nanotube Composite Properties. , 2014, , 365-404.		1
94	Coarse-Grained Lattice Modeling and Monte Carlo Simulations of Stress Relaxation in Strain-Induced Crystallization of Rubbers. Polymers, 2020, 12, 1267.	2.0	1
95	Photopatterning of PDMS Films: Challenging the Reaction between Benzophenone and Silicone Functional Groups. Materials, 2021, 14, 2027.	1.3	1
96	Nanocomposites base polymÃ¨re, renforcÃ©s par des particules rigides. Mecanique Et Industries, 2004, 5, 489-496.	0.2	1
97	Composites organiques-inorganiques pour la substitution et la rÃ©paration osseuseÂ: concepts, premiers rÃ©sultats et potentialitÃ©s. MATEC Web of Conferences, 2013, 7, 04013.	0.1	0
98	New insights about strain-induced crystallization of natural rubber thanks to in situ X-rays measurements during uniaxial cyclic deformation at high velocity. , 2011, , 39-44.		0