Eric Pollet

List of Publications by Year
in descending order

107 papers	6,957 citations	61857 43 h-index	60497 81 g-index
111 all docs	111 docs citations	111 times ranked	6777 citing authors

#	Article	IF	Citations
1	Nano-biocomposites: Biodegradable polyester/nanoclay systems. Progress in Polymer Science, 2009, 34, 125-155.	11.8	897
2	Starch-based nano-biocomposites. Progress in Polymer Science, 2013, 38, 1590-1628.	11.8	455
3	Vapor barrier properties of polycaprolactone montmorillonite nanocomposites: effect of clay dispersion. Polymer, 2003, 44, 2271-2279.	1.8	307
4	Progress in nano-biocomposites based on polysaccharides and nanoclays. Materials Science and Engineering Reports, 2009, 67, 1-17.	14.8	267
5	Mixed culture polyhydroxyalkanoate (PHA) production from volatile fatty acid (VFA)-rich streams: Effect of substrate composition and feeding regime on PHA productivity, composition and properties. Journal of Biotechnology, 2011, 151, 66-76.	1.9	244
6	Gas barrier properties of poly(?-caprolactone)/clay nanocomposites: Influence of the morphology and polymer/clay interactions. Journal of Polymer Science, Part B: Polymer Physics, 2005, 43, 205-214.	2.4	167
7	Structure and properties of glycerol-plasticized chitosan obtained by mechanical kneading. Carbohydrate Polymers, 2011, 83, 947-952.	5.1	166
8	Evaluation of biological degradation of polyurethanes. Biotechnology Advances, 2020, 39, 107457.	6.0	164
9	Crystallization in Poly(l-lactide)-b-poly(Îµ-caprolactone) Double Crystalline Diblock Copolymers:Â A Study Using X-ray Scattering, Differential Scanning Calorimetry, and Polarized Optical Microscopy. Macromolecules, 2005, 38, 463-472.	2.2	152
10	Towards bio-upcycling of polyethylene terephthalate. Metabolic Engineering, 2021, 66, 167-178.	3.6	151
11	Aromatic Copolyester-based Nano-biocomposites: Elaboration, Structural Characterization and Properties. Journal of Polymers and the Environment, 2006, 14, 393-401.	2.4	148
12	Thermal and thermo-mechanical degradation of poly(3-hydroxybutyrate)-based multiphase systems. Polymer Degradation and Stability, 2008, 93, 413-421.	2.7	138
13	New Approach to Elaborate Exfoliated Starch-Based Nanobiocomposites. Biomacromolecules, 2008, 9, 896-900.	2.6	138
14	Starch nano-biocomposites based on needle-like sepiolite clays. Carbohydrate Polymers, 2010, 80, 145-153.	5.1	133
15	Properties of glycerol-plasticized alginate films obtained by thermo-mechanical mixing. Food Hydrocolloids, 2017, 63, 414-420.	5.6	131
16	Starch-based nano-biocomposites: Plasticizer impact on the montmorillonite exfoliation process. Carbohydrate Polymers, 2010, 79, 941-947.	5.1	127
17	Biodegradable Polymers. Green Energy and Technology, 2012, , 13-39.	0.4	124
18	Innovative thermoplastic chitosan obtained by thermo-mechanical mixing with polyol plasticizers. Carbohydrate Polymers, 2013, 95, 241-251.	5.1	122

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19	Structure and Properties of PHA/Clay Nanoâ€Biocomposites Prepared by Melt Intercalation. Macromolecular Chemistry and Physics, 2008, 209, 1473-1484.	1.1	110
20	Enzymatic recycling of thermoplastic polyurethanes: Synergistic effect of an esterase and an amidase and recovery of building blocks. Waste Management, 2019, 85, 141-150.	3.7	108
21	Melt Structure and its Transformation by Sequential Crystallization of the Two Blocks within Poly(L-lactide)-block-Poly(É›-caprolactone) Double Crystalline Diblock Copolymers. Macromolecular Chemistry and Physics, 2006, 207, 941-953.	1.1	106
22	Molten salts (ionic liquids) to improve the activity, selectivity and stability of the palladium catalysed Trostâ€“Tsuji Câ€“C coupling in biphasic media. Journal of Molecular Catalysis A, 1999, 145, 121-126.	4.8	97
23	Effect of clay organomodifiers on degradation of polyhydroxyalkanoates. Polymer Degradation and Stability, 2009, 94, 789-796.	2.7	97
24	Elaboration, morphology and properties of starch/polyester nano-biocomposites based on sepiolite clay. Carbohydrate Polymers, 2015, 118, 250-256.	5.1	80
25	How does water diffuse in starch/montmorillonite nano-biocomposite materials?. Carbohydrate Polymers, 2010, 82, 128-135.	5.1	79
26	Disruption of Î²-oxidation pathway in Pseudomonas putida KT2442 to produce new functionalized PHAs with thioester groups. Applied Microbiology and Biotechnology, 2011, 89, 1583-1598.	1.7	77
27	Tailoring the Structure, Morphology, and Crystallization of Isodimorphic Poly(butylene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 42 History. Macromolecules, 2017, 50, 597-608.	2.2	77
28	Isolation and characterization of different promising fungi for biological waste management of polyurethanes. Microbial Biotechnology, 2019, 12, 544-555.	2.0	75
29	Controlled Polymer Grafting on Single Clay Nanoplatelets. Journal of the American Chemical Society, 2004, 126, 9007-9012.	6.6	70
30	Physical properties of poly(Îµ-caprolactone) layered silicate nanocomposites prepared by controlled grafting polymerization. Journal of Polymer Science, Part B: Polymer Physics, 2004, 42, 1466-1475.	2.4	67
31	Micromechanical modeling and characterization of the effective properties in starch-based nano-biocomposites. Acta Biomaterialia, 2008, 4, 1707-1714.	4.1	66
32	Sepiolite as a promising nanoclay for nano-biocomposites based on starch and biodegradable polyester. Materials Science and Engineering C, 2017, 70, 296-302.	3.8	65
33	Original method for synthesis of chitosan-based antimicrobial agent by quaternary ammonium grafting. Carbohydrate Polymers, 2017, 157, 1922-1932.	5.1	64
34	Preparation and Characterization of Thermoplastic Potato Starch/Halloysite Nano-Biocomposites: Effect of Plasticizer Nature and Nanoclay Content. Polymers, 2018, 10, 808.	2.0	53
35	Surface Characterization of Poly(Îµ-caprolactone)-Based Nanocomposites. Langmuir, 2003, 19, 9425-9433.	1.6	52
36	Synthesis and characterization of biobased poly(butylene succinate- ran -butylene adipate). Analysis of the composition-dependent physicochemical properties. European Polymer Journal, 2017, 87, 84-98.	2.6	52

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37	Morphological, thermal, and mechanical properties of poly(Îµâ€caprolactone)/poly(Îµâ€caprolactone)â€graftedâ€cellulose nanocrystals mats produced by electrospinning. Journal of Applied Polymer Science, 2016, 133, .	1.3	50
38	Nonisothermal crystallization behavior of poly(butylene adipate-co-terephthalate)/clay nano-biocomposites. Journal of Polymer Science, Part B: Polymer Physics, 2007, 45, 1503-1510.	2.4	48
39	Transesterification catalysts to improve clay exfoliation in synthetic biodegradable polyester nanocomposites. European Polymer Journal, 2006, 42, 1330-1341.	2.6	46
40	Elaboration and properties of novel biobased nanocomposites with halloysite nanotubes and thermoplastic polyurethane from dimerized fatty acids. Polymer, 2014, 55, 5226-5234.	1.8	46
41	Effect of TiO2 nanoparticles on the properties of thermoplastic chitosan-based nano-biocomposites obtained by mechanical kneading. Composites Part A: Applied Science and Manufacturing, 2017, 93, 33-40.	3.8	46
42	Elaboration and properties of plasticised chitosan-based exfoliated nano-biocomposites. Polymer, 2013, 54, 3654-3662.	1.8	44
43	Synthesis of potentially biobased copolyesters based on adipic acid and butanediols: Kinetic study between 1,4- and 2,3-butanediol and their influence on crystallization and thermal properties. Polymer, 2016, 99, 204-213.	1.8	44
44	Role of Tryptophan Oxidation in Peroxynitrite-Dependent Protein Chemiluminescence. Archives of Biochemistry and Biophysics, 1998, 349, 74-80.	1.4	41
45	Morphology and properties of thermoplastic starch blended with biodegradable polyester and filled with halloysite nanoclay. Carbohydrate Polymers, 2020, 242, 116392.	5.1	41
46	Study on the structure-properties relationship of biodegradable and biobased aliphatic copolyesters based on 1,3-propanediol, 1,4-butanediol, succinic and adipic acids. Polymer, 2017, 122, 105-116.	1.8	38
47	Itaconic and Fumaric Acid Production from Biomass Hydrolysates by Aspergillus Strains. Journal of Microbiology and Biotechnology, 2016, 26, 1557-1565.	0.9	37
48	Elaboration and Characterization of Nano-Biocomposites Based on Plasticized Poly(Hydroxybutyrate-Co-Hydroxyvalerate) with Organo-Modified Montmorillonite. Journal of Polymers and the Environment, 2012, 20, 283-290.	2.4	36
49	Innovative plasticized alginate obtained by thermo-mechanical mixing: Effect of different biobased polyols systems. Carbohydrate Polymers, 2017, 157, 669-676.	5.1	36
50	Fungal Fermentation of Lignocellulosic Biomass for Itaconic and Fumaric Acid Production. Journal of Microbiology and Biotechnology, 2017, 27, 1-8.	0.9	36
51	Biorenewable nanocomposites. MRS Bulletin, 2011, 36, 703-710.	1.7	35
52	Enzymatic Synthesis of a Bio-Based Copolyester from Poly(butylene succinate) and Poly((<i>R</i>)-3-hydroxybutyrate): Study of Reaction Parameters on the Transesterification Rate. Biomacromolecules, 2016, 17, 4054-4063.	2.6	34
53	Plastic Biodegradation: Challenges and Opportunities. , 2018, , 1-29.		33
54	Biotic and Abiotic Synthesis of Renewable Aliphatic Polyesters from Short Building Blocks Obtained from Biotechnology. ChemSusChem, 2018, 11, 3836-3870.	3.6	33

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55	Breakthrough in polyurethane bio-recycling: An efficient laccase-mediated system for the degradation of different types of polyurethanes. Waste Management, 2021, 132, 23-30.	3.7	33
56	MIXed plastics biodegradation and UPcycling using microbial communities: EU Horizon 2020 project MIX-UP started January 2020. Environmental Sciences Europe, 2021, 33, 99.	2.6	33
57	Polymer layered silicate/carbon nanotube nanocomposites: The catalyzed polymerization approach. Polymer Engineering and Science, 2006, 46, 1022-1030.	1.5	32
58	Enzymatic synthesis of poly(Îµ-caprolactone- co -Îµ-thiocaprolactone). European Polymer Journal, 2017, 87, 147-158.	2.6	31
59	Glycerol plasticised chitosan: A study of biodegradation via carbon dioxide evolution and nuclear magnetic resonance. Polymer Degradation and Stability, 2013, 98, 1236-1246.	2.7	30
60	Polyhydroxyalkanoates: Waste glycerol upgrade into electrospun fibrous scaffolds for stem cells culture. International Journal of Biological Macromolecules, 2014, 71, 131-140.	3.6	29
61	Novative Biomaterials Based on Chitosan and Poly(Îµ-Caprolactone): Elaboration of Porous Structures. Journal of Polymers and the Environment, 2011, 19, 819-826.	2.4	28
62	Lipase catalyzed synthesis of polycaprolactone and clay-based nanohybrids. Polymer, 2014, 55, 1648-1655.	1.8	27
63	Synthesis and characterization of block poly(esterâ€etherâ€urethane)s from bacterial poly(3â€hydroxybutyrate) oligomers. Journal of Polymer Science Part A, 2017, 55, 1949-1961.	2.5	26
64	Mixed systems to assist enzymatic ring opening polymerization of lactide stereoisomers. RSC Advances, 2015, 5, 84627-84635.	1.7	25
65	Green Recycling Process for Polyurethane Foams by a Chemâ€Biotech Approach. ChemSusChem, 2021, 14, 4234-4241.	3.6	25
66	Enzymatic ring-opening (co)polymerization of lactide stereoisomers catalyzed by lipases. Toward the in situ synthesis of organic/inorganic nanohybrids. Journal of Molecular Catalysis B: Enzymatic, 2015, 115, 20-28.	1.8	24
67	Organic-Inorganic Nanohybrids Obtained by Sequential Copolymerization of?-Caprolactone andL,L-Lactide from Activated Clay Surface. Macromolecular Chemistry and Physics, 2004, 205, 2235-2244.	1.1	23
68	Nanoclays for Lipase Immobilization: Biocatalyst Characterization and Activity in Polyester Synthesis. Polymers, 2016, 8, 416.	2.0	22
69	Green Nano-Biocomposites. Green Energy and Technology, 2012, , 1-11.	0.4	21
70	Optimized Bioproduction of Itaconic and Fumaric Acids Based on Solid-State Fermentation of Lignocellulosic Biomass. Molecules, 2020, 25, 1070.	1.7	21
71	Crystallinity study of nano-biocomposites based on plasticized poly(hydroxybutyrate-co-hydroxyvalerate) with organo-modified montmorillonite. Polymer Testing, 2013, 32, 1253-1260.	2.3	20
72	Anionic ring opening polymerization of oxygenated heterocycles with supported Zirconium and rare earths alkoxides as initiators in protic conditions. Towards a catalytic heterogeneous process. Macromolecular Symposia, 2000, 153, 275-286.	0.4	18

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73	Biological properties of novel polysuccinimide derivatives synthesized via quaternary ammonium grafting. European Polymer Journal, 2020, 131, 109705.	2.6	17
74	Lipase-catalyzed synthesis of biobased and biodegradable aliphatic copolyesters from short building blocks. Effect of the monomer length. European Polymer Journal, 2017, 97, 328-337.	2.6	16
75	Isolation of Low Dispersity Fractions of Acetone Organosolv Lignins to Understand their Reactivity: Towards Aromatic Building Blocks for Polymers Synthesis. ChemSusChem, 2021, 14, 387-397.	3.6	16
76	Star-Pseudopolyrotaxane Organized in Nanoplatelets for Poly(Îµ-caprolactone)-Based Nanofibrous Scaffolds with Enhanced Surface Reactivity. Macromolecular Rapid Communications, 2015, 36, 292-297.	2.0	15
77	Elaboration and behavior of poly(3-hydroxybutyrate- co -4-hydroxybutyrate)- nano-biocomposites based on montmorillonite or sepiolite nanoclays. European Polymer Journal, 2016, 81, 64-76.	2.6	15
78	Enzymatic synthesis of biobased poly(1,4-butylene succinate-ran-2,3-butylene succinate) copolyesters and characterization. Influence of 1,4- and 2,3-butanediol contents. European Polymer Journal, 2017, 93, 103-115.	2.6	15
79	Nanocomposites based on renewable thermoplastic polyurethane and chemically modified cellulose nanocrystals with improved mechanical properties. Journal of Applied Polymer Science, 2018, 135, 46736.	1.3	15
80	Advanced Nano-biocomposites Based on Starch. , 2014, , 1-75.		14
81	Lipase-catalyzed synthesis of furan-based aliphatic-aromatic biobased copolyesters: Impact of the solvent. European Polymer Journal, 2021, 159, 110717.	2.6	13
82	EDCâ€Mediated Grafting of Quaternary Ammonium Salts onto Chitosan for Antibacterial and Thermal Properties Improvement. Macromolecular Chemistry and Physics, 2019, 220, 1800530.	1.1	12
83	Effect of Oligo-Hydroxyalkanoates on Poly(3-Hydroxybutyrate-<i>co</i>-4-Hydroxybutyrate)-Based Systems. Macromolecular Materials and Engineering, 2015, 300, 661-666.	1.7	10
84	The study of the pseudo-polyrotaxane architecture as a route for mild surface functionalization by click chemistry of poly(Îµ-caprolactone)-based electrospun fibers. Journal of Materials Chemistry B, 2017, 5, 2181-2189.	2.9	9
85	Titanium-catalyzed transesterification as a route to the synthesis of fully biobased poly(3-hydroxybutyurate- co -butylene dicarboxylate) copolyesters, from their homopolyesters. European Polymer Journal, 2017, 90, 92-104.	2.6	9
86	Synthesis and characterization of fully biobased poly(propylene succinateâ€ranâ€propylene adipate). Analysis of the architectureâ€dependent physicochemical behavior. Journal of Polymer Science Part A, 2017, 55, 2738-2748.	2.5	9
87	Enzymatic Synthesis of Amino Acids Endcapped Polycaprolactone: A Green Route Towards Functional Polyesters. Molecules, 2018, 23, 290.	1.7	9
88	On the heterogeneous composition of bacterial polyhydroxyalkanoate terpolymers. Bioresource Technology, 2013, 147, 434-441.	4.8	8
89	Original Macromolecular Architectures Based on poly(Îµ-caprolactone) and poly(Îµ-thiocaprolactone) Grafted onto Chitosan Backbone. International Journal of Molecular Sciences, 2018, 19, 3799.	1.8	8
90	Melt processing of nanocomposites of cellulose nanocrystals with biobased thermoplastic polyurethane. Journal of Applied Polymer Science, 2021, 138, 50343.	1.3	8

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91	Heterogeneous anionic ring opening polymerization in a fixed-bed reactor: description of the process and modelling. Polymer International, 2004, 53, 550-556.	1.6	7
92	Nanobiocomposites Based on Plasticized Starch. , 2014, , 211-239.		7
93	Characterization of the enzymatic degradation of polyurethanes. Methods in Enzymology, 2021, 648, 317-336.	0.4	7
94	New Aliphatic Polyester Layered-Silicate Nanocomposites. , 2003, , 327-350.		7
95	Ferulic Acid as Building Block for the Lipase-Catalyzed Synthesis of Biobased Aromatic Polyesters. Polymers, 2021, 13, 3693.	2.0	7
96	Study of the water sorption and barrier performances of potato starch nano-biocomposites based on halloysite nanotubes. Carbohydrate Polymers, 2022, 277, 118805.	5.1	7
97	Combination of a Monte Carlo approach with the contact time distribution concept for the steady-state modeling of an isothermal heterogeneous coordinated anionic ring opening polymerization reactor. Chemical Engineering Science, 2003, 58, 1509-1519.	1.9	6
98	Shear induced clay organoâ€modification: application to plasticized starch nanoâ€biocomposites. Polymers for Advanced Technologies, 2010, 21, 578-583.	1.6	6
99	Micromechanically-Based Formulation of the Cooperative Model for the Yield Behavior of Starch-Based Nano-Biocomposites. Journal of Nanoscience and Nanotechnology, 2010, 10, 2949-2955.	0.9	6
100	Synthesis of Bio-Based Photo-Cross-Linkable Polyesters Based on Caffeic Acid through Selective Lipase-Catalyzed Polymerization. Macromolecules, 0, , .	2.2	5
101	Advanced Nano-biocomposites Based on Starch. , 2015, , 1467-1553.		4
102	Novel multiphase systems based on thermoplastic chitosan: Analysis of the structure-properties relationships. AIP Conference Proceedings, 2016, , .	0.3	3
103	Polyhydroxyalkanoate-based Multiphase Materials. RSC Green Chemistry, 2014, , 119-140.	0.0	2
104	Clay Nano-Biocomposites Based on PBAT Aromatic Copolyesters. Green Energy and Technology, 2012, , 219-235.	0.4	1
105	Synthesis, characterization, and antibacterial activities of novel starch derivatives against <i>E. coli</i> and <i>S.Âaureus</i>. Starch/Staerke, 2022, 74, .	1.1	1
106	Meet our Authors. MRS Bulletin, 2011, 36, 693-694.	1.7	0
107	BIOPOL-2011 Special Issue. Polymer Degradation and Stability, 2012, 97, 1851.	2.7	0