Nathanael Guigo

List of Publications by Year
in descending order

81 papers	2,987 citations	136740 32 h-index	174990 52 g-index
82 all docs	82 docs citations	82 times ranked	2438 citing authors

#	Article	IF	Citations
1	Integral, differential and advanced isoconversional methods. Chemometrics and Intelligent Laboratory Systems, 2009, 96, 219-226.	1.8	190
2	Eco-friendly composite resins based on renewable biomass resources: Polyfurfuryl alcohol/lignin thermosets. European Polymer Journal, 2010, 46, 1016-1023.	2.6	138
3	Chemorheological analysis and model-free kinetics of acid catalysed furfuryl alcohol polymerization. Physical Chemistry Chemical Physics, 2007, 9, 5359.	1.3	115
4	Isothermal Crystallization Kinetics of Poly (Ethylene 2,5â€Furandicarboxylate). Macromolecular Materials and Engineering, 2015, 300, 466-474.	1.7	115
5	A Perspective on PEF Synthesis, Properties, and End-Life. Frontiers in Chemistry, 2020, 8, 585.	1.8	110
6	Melt and glass crystallization of PDMS and PDMS silica nanocomposites. Physical Chemistry Chemical Physics, 2014, 16, 7830-7840.	1.3	109
7	Nonâ€isothermal Crystallization Kinetics of Biobased Poly(ethylene 2,5â€furandicarboxylate) Synthesized via the Direct Esterification Process. Macromolecular Chemistry and Physics, 2014, 215, 2065-2074.	1.1	107
8	Valorization of Biorefinery Side-Stream Products: Combination of Humins with Polyfurfuryl Alcohol for Composite Elaboration. ACS Sustainable Chemistry and Engineering, 2014, 2, 2182-2190.	3.2	85
9	Nonisothermal Crystallization of Polytetrafluoroethylene in a Wide Range of Cooling Rates. Journal of Physical Chemistry B, 2013, 117, 3407-3415.	1.2	82
10	Surface modification of cellulose microfibrils by periodate oxidation and subsequent reductive amination with benzylamine: a topochemical study. Cellulose, 2014, 21, 4119-4133.	2.4	80
11	Recommendations for replacing PET on packaging, fiber, and film materials with biobased counterparts. Green Chemistry, 2021, 23, 8795-8820.	4.6	77
12	Influence of organically modified montmorillonite and sepiolite claysÂon the physical properties of bio-based poly(ethylene 2,5-furandicarboxylate). Composites Part B: Engineering, 2017, 110, 96-105.	5.9	75
13	Fast Crystallization and Melting Behavior of a Long-Spaced Aliphatic Furandicarboxylate Biobased Polyester, Poly(dodecylene 2,5-furanoate). Industrial & Engineering Chemistry Research, 2016, 55, 5315-5326.	1.8	73
14	New insights on the thermal degradation pathways of neat poly(furfuryl alcohol) and poly(furfuryl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	2.7	70
15	Glass transition dynamics and cooperativity length of poly(ethylene 2,5-furandicarboxylate) compared to poly(ethylene terephthalate). Physical Chemistry Chemical Physics, 2016, 18, 16647-16658.	1.3	70
16	Humins as promising material for producing sustainable carbohydrate-derived building materials. Construction and Building Materials, 2017, 139, 594-601.	3.2	60
17	Synthesis, properties and thermal behavior of poly(decylene-2,5-furanoate): a biobased polyester from 2,5-furan dicarboxylic acid. RSC Advances, 2015, 5, 74592-74604.	1.7	57
18	Humin based resin for wood modification and property improvement. Green Chemistry, 2020, 22, 2786-2798.	4.6	51

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19	Innovative green nanocomposites based on silicate clays/lignin/natural fibres. Composites Science and Technology, 2009, 69, 1979-1984.	3.8	50
20	On the bio-based furanic polyesters: Synthesis and thermal behavior study of poly(octylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 707 T 2015, 68, 115-127.	2.6	49
21	Tailored design of renewable copolymers based on poly(1,4-butylene 2,5-furandicarboxylate) and poly(ethylene glycol) with refined thermal properties. Polymer Chemistry, 2018, 9, 722-731.	1.9	49
22	Review of Wood Modification and Wood Functionalization Technologies. Forests, 2022, 13, 1004.	0.9	47
23	Chain Structure and Molecular Weight Dependent Mechanics of Poly(ethylene 2,5-furandicarboxylate) Compared to Poly(ethylene terephthalate). Macromolecules, 2018, 51, 8539-8549.	2.2	43
24	Partial periodate oxidation and thermal cross-linking for the processing ofÂthermosetÂall-cellulose composites. Composites Science and Technology, 2015, 117, 54-61.	3.8	42
25	Opening Furan for Tailoring Properties of Bioâ€based Poly(Furfuryl Alcohol) Thermoset. ChemSusChem, 2018, 11, 1805-1812.	3.6	41
26	Biaxial Orientation of Poly(ethylene 2,5â€furandicarboxylate): An Explorative Study. Macromolecular Materials and Engineering, 2018, 303, 1700507.	1.7	41
27	Copolymerization as a Strategy to Combine Epoxidized Linseed Oil and Furfuryl Alcohol: The Design of a Fully Bioâ€Based Thermoset. ChemSusChem, 2015, 8, 4149-4161.	3.6	40
28	Morphology and thermal properties of novel clay-based poly(ethylene 2,5-furandicarboxylate) (PEF) nanocomposites. RSC Advances, 2016, 6, 59800-59807.	1.7	40
29	All â€˜greenâ€™ composites comprising flax fibres and humins' resins. Composites Science and Technology, 2019, 171, 70-77.	3.8	39
30	Modelling the non-isothermal crystallization of polymers: Application to poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 302 Td (2,5	1.2	38
31	Nucleation and Selfâ€Nucleation of Bioâ€Based Poly(ethylene 2,5â€furandicarboxylate) Probed by Fast Scanning Calorimetry. Macromolecular Materials and Engineering, 2016, 301, 586-596.	1.7	34
32	Preparation and crystallization behavior of poly(ethylene 2,5-furandicarboxylate)/cellulose composites by twin screw extrusion. Carbohydrate Polymers, 2017, 174, 1026-1033.	5.1	33
33	Investigation on the role of the alkyl side chain of cardanol on benzoxazine polymerization and polymer properties. European Polymer Journal, 2019, 119, 120-129.	2.6	30
34	Complex Kinetic Pathway of Furfuryl Alcohol Polymerization Catalyzed by Green Montmorillonite Clays. Journal of Physical Chemistry B, 2012, 116, 8259-8268.	1.2	29
35	Atypical gelation in gelatin solutions probed by ultra-fast calorimetry. Soft Matter, 2012, 8, 7116.	1.2	28
36	Polymerization kinetic pathways of epoxidized linseed oil with aliphatic bioâ€based dicarboxylic acids. Journal of Polymer Science, 2020, 58, 1717-1727.	2.0	28

#	Article	IF	Citations
37	Molecular mobility and relaxation process of isolated lignin studied by multifrequency calorimetric experiments. Physical Chemistry Chemical Physics, 2009, 11, 1227.	1.3	27
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55	Ambient Temperature Self-Blowing Tannin-Humins Biofoams. Polymers, 2020, 12, 2732.	2.0	15
56	Crystallization of Poly(butylene succinate) on Rapid Cooling and Heating: Toward Enhanced Nucleation by Graphene Nanosheets. Journal of Physical Chemistry C, 2017, 121, 11915-11925.	1.5	14
57	Eutectic hardener from food-based chemicals to obtain fully bio-based and durable thermosets. Green Chemistry, 2020, 22, 3104-3110.	4.6	14
58	Non-Furanic Humins-Based Non-Isocyanate Polyurethane (NIPU) Thermoset Wood Adhesives. Polymers, 2021, 13, 372.	2.0	14
59	Towards increased sustainability for aromatic polyesters: Poly(butylene 2,5-furandicarboxylate) and its blends with poly(butylene terephthalate). Polymer, 2021, 212, 123157.	1.8	13
60	Thermomechanical behavior of a novel biobased poly(furfurylalcohol)/silica nanocomposite elaborated by smart functionalization of silica nanoparticles. Polymer Degradation and Stability, 2015, 118, 137-146.	2.7	12
61	Thermal Analysis of Biobased Polymers and Composites. Handbook of Thermal Analysis and Calorimetry, 2018, , 399-429.	1.6	11
62	Comparative Analysis of the Mechanical Behaviour of PEF and PET Uniaxial Stretching Based on the Time/Temperature Superposition Principle. Polymers, 2021, 13, 3295.	2.0	11
63	Suberin/trans-Cinnamaldehyde Oil Nanoparticles with Antimicrobial Activity and Anticancer Properties When Loaded with Paclitaxel. ACS Applied Bio Materials, 2019, 2, 3484-3497.	2.3	10
64	Unravelling the para- and ortho-benzene substituent effect on the glass transition of renewable wholly (hetero-)aromatic polyesters bearing 2,5-furandicarboxylic moieties. European Polymer Journal, 2021, 150, 110413.	2.6	10
65	Monitoring the Degree of Carbonyl-Based Open Structure in a Furanic Macromolecular System. Macromolecules, 2022, 55, 1196-1204.	2.2	10
66	Spent Coffee Grounds as Property Enhancing Filler in a Wholly Bioâ€Based Epoxy Resin. Macromolecular Materials and Engineering, 2021, 306, .	1.7	9
67	Kinetics of doublet formation in bicomponent magnetic suspensions: The role of the magnetic permeability anisotropy. Physical Review E, 2017, 96, 062604.	0.8	8
68	Natural fibre composites with furanic thermoset resins. Comparison between polyfurfuryl alcohol and humins from sugar conversion. Composites Part C: Open Access, 2021, 4, 100109.	1.5	8
69	Conditions to Control Furan Ring Opening during Furfuryl Alcohol Polymerization. Molecules, 2022, 27, 3212.	1.7	8
70	A rigid plant oil-based thermoset with a furfural-derived cyclobutane cross-linker. Green Chemistry, 2021, 23, 8053-8060.	4.6	7
71	Suberin from Cork as a Tough Cross-Linker in Bioepoxy Resins. ACS Applied Polymer Materials, 2021, 3, 6090-6101.	2.0	7
72	Crossâ€Linking of Biobased Monofunctional Furan Epoxy Monomer by Two Steps Process, UV Irradiation and Thermal Treatment. Macromolecular Chemistry and Physics, 2023, 224, .	1.1	7

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73	Impact of Silica Nanoclusters on Furfuryl Alcohol Polymerization and Molecular Mobility. Journal of Physical Chemistry C, 2017, 121, 7485-7494.	1.5	6
74	Cross-linking behavior of eutectic hardeners from natural acid mixtures. Green Chemistry, 2021, 23, 536-545.	4.6	6
75	Biobased furanic derivatives for sustainable development. Green Chemistry, 2021, 23, 9721-9722.	4.6	5
76	A proposal for enhanced microstructural development of Poly(ethylene 2,5-furandicarboxylate), PEF, upon stretching: On strain-induced crystallization and amorphous phase stability improvement. Polymer, 2022, 246, 124775.	1.8	5
77	Furanic Humins from Biorefinery as Biobased Binder for Bitumen. Polymers, 2022, 14, 1019.	2.0	3
78	Humins valorization: From well-defined properties to potential applications. AIP Conference Proceedings, 2018, , .	0.3	2
79	Elaboration and Characterization of a Novel Biobased Poly(Furfurylalcohol)/Silica Nanocomposite. Advanced Materials Research, 2013, 747, 657-659.	0.3	1
80	Isoconversional Kinetics by Fast Scanning Calorimetry. , 2016, , 237-257.		1
81	Crystallization Behaviour of Polytetrafluoroethylene over very Large Cooling Rate Domains. Advanced Materials Research, 2013, 747, 201-204.	0.3	0