Costas Tzoganakis

List of Publications by Year
in descending order

101 papers	2,506 citations	236612 25 h-index	233125 45 g-index
101 all docs	101 docs citations	101 times ranked	1403 citing authors

#	Article	IF	Citations
1	Production of controlled-rheology polypropylene resins by peroxide promoted degradation during extrusion. Polymer Engineering and Science, 1988, 28, 170-180.	1.5	162
2	Measurements and modeling of PS/supercritical CO2 solution viscosities. Polymer Engineering and Science, 1999, 39, 99-109.	1.5	152
3	Reactive extrusion of polymers: A review. Advances in Polymer Technology, 1989, 9, 321-330.	0.8	124
4	Chemical modification of polypropylene with peroxide/pentaerythritol triacrylate by reactive extrusion. Journal of Applied Polymer Science, 1996, 61, 1395-1404.	1.3	121
5	Extrusion of PE/PS blends with supercritical carbon dioxide. Polymer Engineering and Science, 1998, 38, 1112-1120.	1.5	111
6	Effect of molecular weight distribution on the rheological and mechanical properties of polypropylene. Polymer Engineering and Science, 1989, 29, 390-396.	1.5	87
7	A comprehensive review of global production and recycling methods of polyolefin (PO) based products and their post-recycling applications. Sustainable Materials and Technologies, 2020, 25, e00188.	1.7	87
8	Effects of supercritical CO2 on the viscosity and morphology of polymer blends. Advances in Polymer Technology, 2000, 19, 300-311.	0.8	71
9	Degradation Behavior of Polypropylene during Reprocessing and Its Biocomposites: Thermal and Oxidative Degradation Kinetics. Polymers, 2020, 12, 1627.	2.0	65
10	Controlled Degradation of Polypropylene: A Comprehensive Experimental and Theoretical Investigation. Polymer-Plastics Technology and Engineering, 1989, 28, 319-350.	1.9	64
11	Effect of Temperature and Pressure on Surface Tension of Polystyrene in Supercritical Carbon Dioxide. Journal of Physical Chemistry B, 2007, 111, 3859-3868.	1.2	64
12	Surface Tension Measurement of Polystyrene Melts in Supercritical Carbon Dioxide. Industrial & Engineering Chemistry Research, 2006, 45, 1650-1658.	1.8	51
13	Modelling of the Peroxide Degradation of Polypropylene. International Polymer Processing, 1988, 3, 141-150.	0.3	45
14	Controllable Delivery of Small-Molecule Compounds to Targeted Cells Utilizing Carbon Nanotubes. Journal of the American Chemical Society, 2011, 133, 6874-6877.	6.6	41
15	Terminal functionalization of polypropylene via the Alder Ene reaction. Polymer, 1998, 39, 327-334.	1.8	40
16	A study of extrudate distortion in controlled-rheology polypropylenes. Polymer Engineering and Science, 1998, 38, 274-281.	1.5	40
17	A rheological evaluation of linear and branched controlledâ€rheology polypropylenes. Canadian Journal of Chemical Engineering, 1994, 72, 749-754.	0.9	39
18	Improvement in techniques for the determination of extensional rheological data from entrance flows: computational and experimental analysis. Journal of Non-Newtonian Fluid Mechanics, 2002, 107, 13-37.	1.0	39

#	Article	IF	Citations
19	Reactive extrusion of polypropylene with supercritical carbon dioxide: Free radical grafting of maleic anhydride. Journal of Applied Polymer Science, 2003, 87, 1116-1122.	1.3	39
20	Lignin derived nano-biocarbon and its deposition on polyurethane foam for wastewater dye adsorption. International Journal of Biological Macromolecules, 2021, 185, 629-643.	3.6	37
21	Interfacial instabilities in coextrusion flows of low-density polyethylenes: Experimental studies. Polymer Engineering and Science, 2000, 40, 1056-1064.	1.5	30
22	Devulcanization of Scrap Tire Rubber with Supercritical CO₂: A Study of the Effects of Process Parameters on the Properties of Devulcanized Rubber. International Polymer Processing, 2017, 32, 183-193.	0.3	30
23	Rheological characterization of controlled-rheology polypropylenes using integral constitutive equations. Journal of Applied Polymer Science, 1996, 59, 543-556.	1.3	29
24	Measurements of residence time distribution for the peroxide degradation of polypropylene in a single-screw plasticating extruder. Journal of Applied Polymer Science, 1989, 37, 681-693.	1.3	26
25	Alder Ene functionalization of polypropylene through reactive extrusion. Journal of Applied Polymer Science, 1999, 71, 503-516.	1.3	26
26	Effects of processing variables on polypropylene degradation and long chain branching with UV irradiation. Polymer Degradation and Stability, 2014, 104, 1-10.	2.7	26
27	Analysis of mixing during melt-melt blending in twin screw extruders using reactive polymer tracers. Polymer Engineering and Science, 1999, 39, 1584-1596.	1.5	25
28	Peroxide crosslinking of LLDPE during reactive extrusion. Advances in Polymer Technology, 1989, 9, 217-226.	0.8	24
29	Numerical Simulation of Polymer Coextrusion Flows. International Polymer Processing, 2001, 16, 198-207.	0.3	24
30	The effects of kneading block design and operating conditions on distributive mixing in twin screw extruders. Polymer Engineering and Science, 2000, 40, 1095-1106.	1.5	23
31	Viscoelastic stress calculation in multi-layer coextrusion dies: Die design and extensional viscosity effects on the onset of â€˜waveâ€™ interfacial instabilities. Polymer Engineering and Science, 2002, 42, 1520-1533.	1.5	23
32	A UVâ€initiated reactive extrusion process for production of controlledâ€rheology polypropylene. Polymer Engineering and Science, 2011, 51, 151-157.	1.5	23
33	Rheological characterization and modeling of linear and branched metallocene polypropylenes prepared by reactive processing. Journal of Non-Newtonian Fluid Mechanics, 2009, 156, 1-6.	1.0	22
34	Effect of extrusion, batch-mixing, and co-coagulation on the dispersion of CNCs in natural rubber - CNC nanocomposites. Composites Part A: Applied Science and Manufacturing, 2021, 149, 106580.	3.8	22
35	Effect of Molecular Weight on the Surface Tension of Polystyrene Melt in Supercritical Nitrogen. Industrial & Engineering Chemistry Research, 2007, 46, 3849-3851.	1.8	21
36	Polypropylene Composites for Polymer Electrolyte Membrane Fuel Cell Bipolar Plates. Macromolecular Symposia, 2008, 264, 34-43.	0.4	20

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37	Peroxideâ€controlled degradation of polypropylene using a tetraâ€functional initiator. Polymer Engineering and Science, 2009, 49, 1760-1766.	1.5	20
38	Monte Carlo Simulation of Peroxide Initiated Degradation of Polypropylene. Polymer-Plastics Technology and Engineering, 1995, 3, 43-63.	0.7	19
39	Kinetic Parameter Estimation in Peroxide Initiated Degradation of Polypropylene. Polymer-Plastics Technology and Engineering, 1997, 5, 1-24.	0.7	19
40	Reactive Extrusion of Polypropylene with Pulsed Peroxide Addition:Â Process and Control Aspects. Industrial & Engineering Chemistry Research, 1997, 36, 1067-1075.	1.8	19
41	Surface graft polymerization of lactic acid from the surface of cellulose nanocrystals and applications in chloroprene rubber film composites. Cellulose, 2020, 27, 5267-5284.	2.4	19
42	Free radical hydrosilylation of polypropylene. Journal of Applied Polymer Science, 1997, 65, 439-447.	1.3	18
43	A parametric study of the terminal maleation of polypropylene through an Alder Ene reaction. Journal of Polymer Science Part A, 1998, 36, 2371-2380.	2.5	18
44	Control of a LDPE reactive extrusion process. Control Engineering Practice, 2000, 8, 911-920.	3.2	18
45	On the role of extensional rheology and Deborah number on the neck-in phenomenon during flat film casting. International Journal of Heat and Mass Transfer, 2017, 111, 1296-1313.	2.5	18
46	Batch Mixing for the <i>In Situ</i> Grafting of Epoxidized Rubber onto Cellulose Nanocrystals. ACS Sustainable Chemistry and Engineering, 2022, 10, 8743-8753.	3.2	18
47	Mixing analysis of reactive polymer flow in conveying elements of a co-rotating twin screw extruder. Advances in Polymer Technology, 2000, 19, 22-33.	0.8	17
48	Measurement of interfacial tension in PS/LDPE melts saturated with supercritical CO2. Polymer Engineering and Science, 2004, 44, 18-27.	1.5	17
49	Hydrosilylation of terminal double bonds in polypropylene through reactive processing. Polymer Engineering and Science, 1998, 38, 1976-1984.	1.5	16
50	Relationship between local residence time and distributive mixing in sections of a twin-screw extruder. Polymer Engineering and Science, 2001, 41, 2206-2215.	1.5	16
51	Evaluation of vinylidene group content in degraded polypropylene. Journal of Polymer Science Part A, 1997, 35, 3083-3086.	2.5	15
52	Numerical simulations of polymer flow in flat spiral dies. Polymer Engineering and Science, 2001, 41, 1683-1694.	1.5	14
53	Surface characteristics of hydrosilylated polypropylene. Journal of Applied Polymer Science, 2003, 88, 3117-3131.	1.3	14
54	Nitroxideâ€mediated controlled degradation of polypropylene. Polymer Engineering and Science, 2007, 47, 2118-2123.	1.5	14

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55	Simultaneous Determination of the Surface Tension and Density of Polystyrene in Supercritical Nitrogen. Industrial & Engineering Chemistry Research, 2008, 47, 4369-4373.	1.8	14
56	Effect of Temperature on Environmental Stress Cracking Resistance and Crystal Structure of Polyethylene. Journal of Macromolecular Science - Pure and Applied Chemistry, 2014, 51, 189-202.	1.2	14
57	Simulated Recycling of Polypropylene and Maleated Polypropylene for the Fabrication of Highly-Filled Wood Plastic Composites. ACS Applied Polymer Materials, 2022, 4, 2373-2383.	2.0	13
58	Injection molding of medical plastics: A review. Advances in Polymer Technology, 1994, 13, 315-322.	0.8	12
59	Distributive mixing profiles for co-rotating twin-screw extruders. Advances in Polymer Technology, 2001, 20, 169-190.	0.8	12
60	Characterization by dilute solution and rheological methods of polystyrene and poly(methyl) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 547 T 2007, 103, 1340-1355.	1.3	12
61	Effect of a poly(dimethylsiloxane) modified polyolefin additive on the processing and surface properties of LLDPE. Polymer Engineering and Science, 2007, 47, 1309-1316.	1.5	12
62	Radiation Induced Long Chain Branching in Highâ€Density Polyethylene through a Reactive Extrusion Process. Macromolecular Reaction Engineering, 2014, 8, 100-111.	0.9	11
63	The effect of depth and duration of UV radiation on polypropylene modification via photoinitiation. Journal of Applied Polymer Science, 2014, 131, .	1.3	11
64	Green mechano-chemical processing of lignocellulosic biomass for lignin recovery. Chemosphere, 2022, 293, 133647.	4.2	11
65	Chemical modification of low density polyethylene through reactive extrusion: Part I: Process development and product characterization. Advances in Polymer Technology, 2000, 19, 237-248.	0.8	10
66	Development of a Dilatometer for Measurement of the PVT Properties of a Polymer/CO2 Solution Using a Foaming Extruder and a Gear Pump. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2002, 124, 86-91.	1.3	10
67	Scaling-up a Reactive Extrusion Operation: A One-dimensional Simulation Analysis. International Polymer Processing, 2010, 25, 242-250.	0.3	10
68	Method of analyzing and quantifying the performance of mixing sections. Polymer Engineering and Science, 2012, 52, 1232-1240.	1.5	10
69	Functionalization of ethylene-propylene-diene terpolymer via the alder ene reaction. Polymer Engineering and Science, 1998, 38, 1694-1707.	1.5	9
70	Stability analysis of non-isothermal film blowing process for non-Newtonian fluids using variational principles. Chemical Engineering Science, 2012, 73, 439-453.	1.9	9
71	Grafting of ethyleneâ€“ethyl acrylateâ€“maleic anhydride terpolymer with amino-terminated polydimethylsiloxane during reactive processing. Journal of Applied Polymer Science, 2006, 101, 4230-4237.	1.3	8
72	Reactive extrusion of acrylic acid grafted polypropylene with hexadecylamine. Polymer Engineering and Science, 1994, 34, 1750-1757.	1.5	7

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73	Fluorine-containing arborescent polystyrene-graft-polyisoprene copolymers as polymer processing additives. Polymer, 2010, 51, 3123-3129.	1.8	7
74	A 3D Simulation Analysis of Reactive Flow in Screw Elements of Closely Intermeshing Twin Screw Extruders. International Polymer Processing, 2012, 27, 442-451.	0.3	7
75	Improvement of Hardening Stiffness Test as an Indicator of Environmental Stress Cracking Resistance of Polyethylene. Journal of Macromolecular Science - Pure and Applied Chemistry, 2012, 49, 689-698.	1.2	7
76	Ultrasonic properties and morphology of devulcanized rubber blends. Journal of Applied Polymer Science, 2012, 124, 2062-2070.	1.3	7
77	Preparation and Characterization of Long Chain Branched Polypropylene through UV Irradiation and Coagent Use. Polymer-Plastics Technology and Engineering, 2015, 54, 1425-1438.	1.9	7
78	An Overview of the Potential of UV Modification of Polypropylene. Macromolecular Symposia, 2016, 360, 96-107.	0.4	7
79	Constructing pristine and modified cellulose nanocrystals based cured polychloroprene nanocomposite films for dipped goods application. Composites Part C: Open Access, 2020, 1, 100009.	1.5	7
80	Stability of nitrile and vinyl latex gloves under repeated disinfection cycles. Materials Today Sustainability, 2021, 11-12, 100067.	1.9	7
81	Mixing analysis of reactive polymer flow in a single-screw extruder channel. Polymer Engineering and Science, 2000, 40, 992-1003.	1.5	6
82	Functionalization of PP with Sulfonyl Azide through Reactive Processing. International Polymer Processing, 2007, 22, 311-319.	0.3	6
83	An experimental study of singleâ€screw extrusion of HDPEâ€“wood composites. Advances in Polymer Technology, 2010, 29, 197-218.	0.8	6
84	Continuous modification of polypropylene via photoinitiation. Polymer Engineering and Science, 2015, 55, 2423-2432.	1.5	5
85	Rheological Indicators for Environmental Stress Cracking Resistance of Polyethylene. International Polymer Processing, 2015, 30, 70-81.	0.3	5
86	Thermoplastic Vulcanizates/Recycled Polypropylene Blend for Automotive OEM. Key Engineering Materials, 2017, 757, 29-34.	0.4	5
87	Operational maps between molecular properties and environmental stress cracking resistance. Journal of Applied Polymer Science, 2019, 136, 47006.	1.3	5
88	Thermo-mechano-chemical deconstruction of cellulose for cellulose nanocrystal production by reactive processing. Carbohydrate Polymers, 2022, 291, 119543.	5.1	5
89	Three-dimensional finite element analysis of polymer rotational extrusion. Polymer Engineering and Science, 1996, 36, 1796-1806.	1.5	4
90	Surface properties of hydrosilylated polyolefins annealed in supercritical carbon dioxide. Polymers for Advanced Technologies, 2008, 19, 258-269.	1.6	4

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91	Tailorâ€made controlled rheology polypropylenes from metallocene and Zieglerâ€“Natta resins. Polymer Engineering and Science, 2019, 59, 1114-1121.	1.5	4
92	Modification of Rheological Properties of LDPE for Coating Applications. Industrial & Engineering Chemistry Research, 2000, 39, 4928-4932.	1.8	3
93	Surface characteristics of hydrosilylated polypropylenes: Effect of co-catalyst and reaction temperature. Polymer Engineering and Science, 2004, 44, 56-71.	1.5	3
94	Rheological Modification of LLDPE Through Reactive Processing with Peroxide. International Polymer Processing, 2008, 23, 168-172.	0.3	3
95	Effect of interfacial strengthening in blends of reclaimed rubber and polypropylene. Journal of Applied Polymer Science, 2010, 118, 1051-1059.	1.3	2
96	The qualityâ€constrained scheduling problem in plastics compounding. Canadian Journal of Chemical Engineering, 2013, 91, 1229-1243.	0.9	2
97	Chemical modification of poly(1â€butene) resins through reactive processing. Polymer Engineering and Science, 2020, 60, 1437-1445.	1.5	2
98	Control of coating properties of LDPE through melt strength measurements. Control Engineering Practice, 2001, 9, 357-366.	3.2	1
99	The Effect of Processing Variables on the Quality of Injection Molded Foamed Parts. Journal of Cellular Plastics, 2002, 38, 103-112.	1.2	1
100	Scratch Resistance and Impact Strength of Semi Interpenetrating Networked PMMA and PU with<i> In Situ</i> Produced Silica. Key Engineering Materials, 2017, 757, 3-8.	0.4	1
101	Injection Molding of LDPE/BaSO4 Blends. International Polymer Processing, 1997, 12, 155-164.	0.3	0