Stephen W Bigger

List of Publications by Year
in descending order

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Version: 2024-02-01

121 papers	3,855 citations	201575 27 h-index	133188 59 g-index
121 all docs	121 docs citations	121 times ranked	4154 citing authors

#	Article	IF	Citations
1	Thermal and Calorimetric Investigations of Some Phosphorus-Modified Chain Growth Polymers 2: Polystyrene. Polymers, 2022, 14, 1520.	2.0	0
2	Thermal and Calorimetric Investigations of Some Phosphorus-Modified Chain Growth Polymers 1: Polymethyl Methacrylate. Polymers, 2022, 14, 1447.	2.0	1
3	Mass Transfer and Optical Properties of Active PET/PP Food-Grade Films Impregnated with Olive Leaf Extract. Polymers, 2022, 14, 84.	2.0	3
4	Effects of surface photocrosslinking on the properties of semi-refined carrageenan film. Food Hydrocolloids, 2021, 111, 106196.	5.6	9
5	Reinforcement of Refined and Semi-Refined Carrageenan Film with Nanocellulose. Polymers, 2020, 12, 1145.	2.0	29
6	Optical, structural, mechanical and thermal characterization of antioxidant ethylene vinyl alcohol copolymer films containing betalain-rich beetroot. Food Packaging and Shelf Life, 2020, 24, 100502.	3.3	22
7	Improving the moisture barrier and mechanical properties of semiâ€refined carrageenan films. Journal of Applied Polymer Science, 2020, 137, 49238.	1.3	11
8	A Review of Property Enhancement Techniques for Carrageenan-based Films and Coatings. Carbohydrate Polymers, 2019, 216, 287-302.	5.1	135
9	Effect of supercritical CO2 and olive leaf extract on the structural, thermal and mechanical properties of an impregnated food packaging film. Journal of Supercritical Fluids, 2019, 145, 181-191.	1.6	16
10	University-led STEM outreach programs: purposes, impacts, stakeholder needs and institutional support at nine Australian universities. Studies in Higher Education, 2018, 43, 586-599.	2.9	25
11	The influence of chemically treated natural fibers in poly(lactic acid) composites containing thymol. Polymer Composites, 2018, 39, 1261-1272.	2.3	15
12	Optimisation of Î²-cyclodextrin inclusion complexes with natural antimicrobial agents: thymol, carvacrol and linalool. Journal of Microencapsulation, 2018, 35, 26-35.	1.2	31
13	Melt Stability of Starch-Filled LDPE during Multi-Pass Extrusion Determined by Melt-Flow and Non-Isothermal Thermogravimetric Investigations. ACS Symposium Series, 2018, , 115-136.	0.5	0
14	Characterization of Semi-refined Carrageenan-Based Film for Primary Food Packaging Purposes. Journal of Polymers and the Environment, 2018, 26, 3754-3761.	2.4	22
15	Towards a quantitative indicator of feather disruption following the cleansing of oiled birds. Marine Pollution Bulletin, 2017, 120, 268-273.	2.3	3
16	Effect of Poly(Lactic Acid)/Kenaf Composites Incorporated with Thymol on the Antimicrobial Activity of Processed Meat. Journal of Food Processing and Preservation, 2017, 41, e13145.	0.9	15
17	Development and characterisation of HPMC films containing PLA nanoparticles loaded with green tea extract for food packaging applications. Carbohydrate Polymers, 2017, 156, 108-117.	5.1	94
18	FlashPhotol: Using a Flash Photolysis Apparatus Simulator To Introduce Students to the Kinetics of Transient Species and Fast Reactions. Journal of Chemical Education, 2016, 93, 1475-1477.	1.1	1

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19	Universities Conducting STEM Outreach: a Conceptual Framework. Higher Education Quarterly, 2016, 70, 419-448.	1.8	12
20	Interaction and quantification of thymol in active <scp>PLA</scp>â€based materials containing natural fibers. Journal of Applied Polymer Science, 2016, 133, .	1.3	28
21	Release of thymol from poly(lactic acid)-based antimicrobial films containing kenaf fibres as natural filler. LWT - Food Science and Technology, 2016, 66, 629-637.	2.5	48
22	Review of Mechanical Properties, Migration, and Potential Applications in Active Food Packaging Systems Containing Nanoclays and Nanosilver. Comprehensive Reviews in Food Science and Food Safety, 2015, 14, 411-430.	5.9	115
23	A Framework for Food Traceability Information Extraction Based on a Video Surveillance System. Procedia Computer Science, 2015, 55, 1285-1292.	1.2	5
24	Two novel algorithms for the thermogravimetric assessment of polymer degradation under non-isothermal conditions. Polymer Testing, 2015, 43, 139-146.	2.3	12
25	Novel theoretical and computer-assisted modeling of isothermal and non-isothermal depolymerization kinetics. Polymer Testing, 2015, 44, 1-7.	2.3	8
26	Antioxidant and antimicrobial properties of ethylene vinyl alcohol copolymer films based on the release of oregano essential oil and green tea extract components. Journal of Food Engineering, 2015, 149, 9-16.	2.7	117
27	3D Model-Based Food Traceability Information Extraction Framework. Lecture Notes in Computer Science, 2015, , 112-119.	1.0	2
28	A Review of Poly(Lactic Acid)â€Based Materials for Antimicrobial Packaging. Journal of Food Science, 2014, 79, R1477-90.	1.5	224
29	Effect of kenaf fibre loading and thymol concentration on the mechanical and thermal properties of PLA/kenaf/thymol composites. Industrial Crops and Products, 2014, 61, 74-83.	2.5	120
30	Comparative Study of Bond Strength of Formaldehyde and Soya based Adhesive in Wood Fibre Plywood. , 2014, 6, 2-9.		21
31	FluSpec: A Simulated Experiment in Fluorescence Spectroscopy. Journal of Chemical Education, 2014, 91, 1081-1083.	1.1	4
32	Evaluation of Antifungal Activity of Antimicrobial Agents on Cheddar Cheese. Packaging Technology and Science, 2014, 27, 49-58.	1.3	21
33	Physicoâ€Mechanical Properties of Starchâ€Based Films Containing Naturally Derived Antimicrobial Agents. Packaging Technology and Science, 2014, 27, 149-159.	1.3	31
34	Water sorption and physicomechanical properties of corn starchâ€based films. Journal of Applied Polymer Science, 2013, 128, 530-536.	1.3	13
35	Migration of antimicrobial agents from starch-based films into a food simulant. LWT - Food Science and Technology, 2013, 50, 432-438.	2.5	96
36	FluAnisot: A Simulated Experiment in Fluorescence Anisotropy Measurement. Journal of Chemical Education, 2013, 90, 386-387.	1.1	1

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37	Mathematical Model for Sequential Pickup of Chemical Contaminants by Magnetic Particles. Journal of Environmental Engineering, ASCE, 2013, 139, 796-802.	0.7	1
38	ChemKinetics: Fundamental Chemical Kinetics Principles and Analysis by Computer Simulation. Journal of Chemical Education, 2011, 88, 244-244.	1.1	3
39	Diffusion of linalool and methylchavicol from polyethylene-based antimicrobial packaging films. LWT - Food Science and Technology, 2011, 44, 1888-1893.	2.5	72
40	Antimicrobial Activity of Biodegradable Polysaccharide and Proteinâ€Based Films Containing Active Agents. Journal of Food Science, 2011, 76, R90-R102.	1.5	84
41	Antimicrobial Activity of Natural Agents Coated on Starchâ€Based Films against Staphylococcus aureus. Journal of Food Science, 2011, 76, M531-7.	1.5	27
42	Essential Oils and Their Principal Constituents as Antimicrobial Agents for Synthetic Packaging Films. Journal of Food Science, 2011, 76, R164-77.	1.5	149
43	Degradation of polyamide reverse osmosis membranes in the presence of chloramine. Desalination, 2011, 283, 58-63.	4.0	44
44	Antimicrobial Activity of Natural Agents against Saccharomyces cerevisiae. Packaging Technology and Science, 2011, 24, 299-307.	1.3	19
45	Loss of AM additives from antimicrobial films during storage. Journal of Food Engineering, 2011, 105, 270-276.	2.7	56
46	Non-isothermal depolymerisation kinetics of poly(ethylene oxide). Polymer Degradation and Stability, 2011, 96, 1497-1502.	2.7	5
47	Release of Naturally Derived Antimicrobial Agents from LDPE Films. Journal of Food Science, 2010, 75, E126-33.	1.5	48
48	Mathematical Model for the Sequestering of Chemical Contaminants by Magnetic Particles. Journal of Environmental Engineering, ASCE, 2010, 136, 1255-1259.	0.7	2
49	Effect of Metallocene-Catalyzed Polyethylene on the Physicomechanical Properties of Blends with High-Density Polyethylene or Low-Density Polyethylene. Polymer-Plastics Technology and Engineering, 2009, 48, 272-279.	1.9	8
50	Colour changes in pigmented Nylon-6 systems containing copper iodide. Polymer Degradation and Stability, 2008, 93, 1711-1714.	2.7	4
51	Efficacy of polyethylene-based antimicrobial films containing principal constituents of basil. LWT - Food Science and Technology, 2008, 41, 779-788.	2.5	98
52	An investigation into the removal of oil from rock utilising magnetic particle technology. Marine Pollution Bulletin, 2007, 54, 1958-1961.	2.3	5
53	Magnetic particle technology in environmental remediation and wildlife rehabilitation. The Environmentalist, 2007, 27, 175-182.	0.7	10
54	Achievement of 100% Removal of Oil from Feathers Employing Magnetic Particle Technology. Journal of Environmental Engineering, ASCE, 2006, 132, 555-559.	0.7	13

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55	The Effect of Metallocene-Catalyzed Polyethylene on the Physicomechanical Properties of Film Blends with Conventional Linear Low-Density Polyethylene. Journal of Plastic Film and Sheeting, 2006, 22, 121-132.	1.3	5
56	Characterization of antimicrobial films containing basil extracts. Packaging Technology and Science, 2006, 19, 259-268.	1.3	58
57	Removal of petroleum tar from bird feathers utilizing magnetic particles. Environmental Chemistry Letters, 2006, 4, 111-113.	8.3	5
58	Magnetic cleansing of weathered/tarry oiled feathers â€“ The role of pre-conditioners. Marine Pollution Bulletin, 2006, 52, 1591-1594.	2.3	5
59	Acute temperature dependency in the cleansing of tarry feathers utilizing magnetic particles. Environmental Chemistry Letters, 2005, 3, 25-27.	8.3	7
60	The Effect of Downgauging on the Physicomechanical Properties of Film Blends of Linear Low-density Polyethylene with Low-density Polyethylene. Journal of Elastomers and Plastics, 2005, 37, 229-246.	0.7	4
61	Whole-bird models for the magnetic cleansing of oiled feathers. Marine Pollution Bulletin, 2004, 48, 336-340.	2.3	14
62	Application of chemiluminescence to probe miscibility in metallocene-catalyzed polyethylene blends. Journal of Applied Polymer Science, 2003, 89, 3006-3015.	1.3	2
63	Active Packaging Technologies with an Emphasis on Antimicrobial Packaging and its Applications. Journal of Food Science, 2003, 68, 408-420.	1.5	711
64	Antimicrobial Properties of Basil and Its Possible Application in Food Packaging. Journal of Agricultural and Food Chemistry, 2003, 51, 3197-3207.	2.4	286
65	A Fluorometric Approach to Studying the Effects of Ionic Strength on Reaction Rates: An Undergraduate Steady-State Fluorescence Laboratory Experiment. Journal of Chemical Education, 2003, 80, 1191.	1.1	9
66	Quantitative Analysis of Polyethylene Blends by Fourier Transform Infrared Spectroscopy. Applied Spectroscopy, 2003, 57, 928-932.	1.2	16
67	Method Dependency in the Measurement of BTEX Levels in Contaminated Soil. Journal of Soils and Sediments, 2002, 2, 137-142.	1.5	11
68	A new approach to quantitatively assessing the effects of polymer additives. Polymer, 2002, 43, 4611-4618.	1.8	7
69	REVIEW OF ZEOLITES AS DEODORANTS FOR POLYETHYLENE RESINS USED IN FOOD PACKAGING APPLICATIONS. Polymer-Plastics Technology and Engineering, 2002, 41, 795-818.	1.9	5
70	A Comparison between Field and Laboratory Methods for Measuring Volatile Organic Contaminants in Soil.. Journal of the Japan Petroleum Institute, 2002, 45, 271-278.	0.4	0
71	Studying Synthetic Polymers in the Undergraduate Chemistry Curriculum. A Review of the Educational Literature. Journal of Chemical Education, 2001, 78, 555.	1.1	23
72	Spec UV-Vis: An Ultraviolet-Visible Spectrophotometer Simulation. Journal of Chemical Education, 2001, 78, 1560.	1.1	4

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73	Identifying Deficiencies in the Environmental Chemistry Educational Literature. Journal of Chemical Education, 2001, 78, 1693.	1.1	4
74	Extraction of Hydrocarbons from Clay Soils by Sonication and Soxhlet Techniques.. Sekiyu Gakkaishi (Journal of the Japan Petroleum Institute), 2001, 44, 378-383.	0.1	9
75	Evaluation of the oxidative stability of multiextruded polypropylene as assessed by physicomechanical testing and simultaneous differential scanning calorimetry-chemiluminescence. Journal of Applied Polymer Science, 2001, 79, 733-741.	1.3	31
76	The second time derivative analysis of chemiluminescence emission profiles and its application to the accurate determination of oxidative induction times. Journal of Applied Polymer Science, 2001, 79, 1986-1993.	1.3	7
77	Quinine fluorescence quenching at low ionic strength. International Journal of Chemical Kinetics, 2000, 32, 473-477.	1.0	9
78	The effect of carbon black on the oxidative induction time of medium-density polyethylene. Polymer, 2000, 41, 9123-9130.	1.8	29
79	Studying Thermally Induced Chemical and Physical Transformations in Common Synthetic Polymers: A Laboratory Project. Journal of Chemical Education, 2000, 77, 745.	1.1	4
80	Use of a Dynamic Headspace GC-MS Method for the Study of Volatile Organic Compounds in Polyethylene Packaging. An Undergraduate Experiment in Polymer Analysis. Journal of Chemical Education, 2000, 77, 1631.	1.1	13
81	REVIEW OF VOLATILE ORGANIC COMPOUNDS DERIVED FROM POLYETHYLENE. Polymer-Plastics Technology and Engineering, 2000, 39, 845-874.	1.9	19
82	Cleansing Oiled Feathers â€“ Magnetically. Marine Pollution Bulletin, 1999, 38, 219-221.	2.3	20
83	MacMS: A Mass Spectrometer Simulator: Abstract of Issue 9906M. Journal of Chemical Education, 1999, 76, 1464.	1.1	1
84	An investigation of the kinetics of cellulose degradation under non-isothermal conditions. Polymer Degradation and Stability, 1998, 62, 33-40.	2.7	25
85	Characterising the degradation of the polymer slip additive erucamide in the presence of inorganic antiblock agents. Polymer Degradation and Stability, 1998, 62, 285-290.	2.7	33
86	A Student Experiment in Non-Isothermal Chemical Kinetics. Journal of Chemical Education, 1998, 75, 1150.	1.1	7
87	Toward an Optimized Dynamic Headspace Method for the Study of Volatiles in Low-Density Polyethylene. Journal of Agricultural and Food Chemistry, 1998, 46, 1397-1405.	2.4	17
88	Oil Spill Remediation Using Magnetic Particles: An Experiment in Environmental Technology. Journal of Chemical Education, 1997, 74, 1446.	1.1	76
89	Teaching appraisal in higher education: an Australian perspective. Higher Education, 1997, 34, 459-482.	2.8	30
90	Monte Carlo Approach to Generating the Probability-Distribution Function of a Classical Harmonic Oscillator. Journal of Chemical Education, 1996, 73, 724.	1.1	0

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91	The dependence of quinine fluorescence quenching on ionic strength. International Journal of Chemical Kinetics, 1996, 28, 919-923.	1.0	16
92	Characterization of oligomeric by-products produced during the high-pressure polymerization of ethylene. European Polymer Journal, 1996, 32, 487-492.	2.6	2
93	The dependence of quinine fluorescence quenching on ionic strength. International Journal of Chemical Kinetics, 1996, 28, 919-923.	1.0	1
94	A review of oxygen uptake techniques for measuring polyolefin oxidation. Polymer Testing, 1995, 14, 211-241.	2.3	37
95	'HELPA': a rapid means of student evaluation of lecturing performance in higher education. Assessment and Evaluation in Higher Education, 1995, 20, 191-202.	3.9	2
96	Simple Heat Flow Measurements: A Closer Look at Polystyrene Cup Calorimeters. Journal of Chemical Education, 1994, 71, 793.	1.1	5
97	The application of simultaneous chemiluminescence and thermal analysis for studying the glass transition and oxidative stability of poly(N-vinyl-2-pyrrolidone). Journal of Polymer Science, Part B: Polymer Physics, 1993, 31, 287-297.	2.4	26
98	Fluorescence anisotropy measurements in undergraduate teaching. Journal of Chemical Education, 1993, 70, A234.	1.1	7
99	Thermal and photooxidative studies of polyethylene. Makromolekulare Chemie Macromolecular Symposia, 1993, 70-71, 445-452.	0.6	0
100	Illustration of the principles of fluorimetry. An apparatus and experiments specially designed for the teaching laboratory. Journal of Chemical Education, 1992, 69, 675.	1.1	18
101	Effect of chromium residues on the stability of gas-phase high-density polyethylene produced by supported catalysts. Journal of Polymer Science Part A, 1992, 30, 1873-1889.	2.5	20
102	Effect of light intensity on the photooxidation kinetics of high-density polyethylene. Journal of Polymer Science Part A, 1992, 30, 2277-2280.	2.5	9
103	Effect of selenium on the thermal oxidation and oxidative pyrolysis of high-density polyethylene. Polymer Degradation and Stability, 1992, 38, 23-26.	2.7	5
104	The kinetics of the reduction of methyl viologen and 9,10-anthraquinone-2-sulfonate by the benzopinacol anion. International Journal of Chemical Kinetics, 1992, 24, 689-693.	1.0	1
105	Solutions calorimetry apparatus for undergraduate teaching. Journal of Chemical Education, 1991, 68, 528.	1.1	1
106	Temperature dependence of fluorescence from polymer-bound 2-(2â€²-hydroxyphenyl)-2H-benzotriazole photostabilizers. Journal of Photochemistry and Photobiology A: Chemistry, 1991, 55, 387-393.	2.0	11
107	Comparative study of the structural, morphological and oxidative characteristics of high-density polyethylene and poly(ethylene oxide). European Polymer Journal, 1991, 27, 1111-1120.	2.6	9
108	Characterizing the solid-state thermal oxidation of poly(ethylene oxide) powder. Polymer, 1991, 32, 2014-2019.	1.8	56

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109	Effect of thermal oxidation on the spherulitic morphology of high-density polyethylene. Journal of Polymer Science, Part B: Polymer Physics, 1991, 29, 795-804.	2.4	11
110	Effects of frequency, molecular weight and thermal oxidation on the dynamic mechanical response of poly (ethylene oxide). Polymer International, 1991, 26, 181-186.	1.6	23
111	Staining techniques for detecting localized oxidation in high density polyethylene powders and films. Polymer International, 1991, 26, 187-193.	1.6	14
112	Flash-photolysis study of the 4-(methyl sulphonate)-benzophenone ketyl radical anion in alcoholâ€"water mixtures. Journal of the Chemical Society, Faraday Transactions, 1990, 86, 619-622.	1.7	8
113	The effects of pigments on the photostability of polyethylene. Journal of Materials Science, 1989, 24, 1946-1952.	1.7	15
114	Efficiency of processing stabilizers using a micro-oxygen uptake technique. Polymer, 1989, 30, 2080-2086.	1.8	11
115	The effect of hindered amine light stabilizers on the photooxidative stability of high-density polyethylene. Journal of Polymer Science Part A, 1989, 27, 63-73.	2.5	19
116	Energy transfer in poly(2-vinylnaphthalene) containing 9-anthryl end-groups. Macromolecules, 1989, 22, 800-803.	2.2	3
117	Effects of temperature and the partial pressure of oxygen on the rate of photooxidation of polyethylene. Polymer, 1988, 29, 1277-1281.	1.8	5
118	Electron transfer from the benzophenone ketyl radical anion to 9,10-anthraquinone-2-sulphonate and methylviologen in waterâ€"propan-2-ol mixtures. Journal of Photochemistry and Photobiology A: Chemistry, 1988, 44, 19-28.	2.0	2
119	Photophysics of a sulfonated 2-hydroxyphenylbenzotriazole UV absorber in solution and in polymer substrates. Journal of Polymer Science Part A, 1987, 25, 1619-1631.	2.5	12
120	New approach to the measurement of polymer photooxidation. Journal of Polymer Science Part A, 1987, 25, 3311-3323.	2.5	29
121	Photophysics of 6-(2â€²-hydroxy-4â€²-methoxyphenyl)-s-triazine photostabilizers. Journal of Photochemistry and Photobiology A: Chemistry, 1987, 40, 391-399.	2.0	13