

Clement L Higginbotham

List of Publications by Year in descending order

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87
papers

3,105
citations

136950
32
h-index

175258
52
g-index

87
all docs

87
docs citations

87
times ranked

4316
citing authors

#	ARTICLE	IF	CITATIONS
1	Polymer Molecular Weight Analysis by ¹ H NMR Spectroscopy. Journal of Chemical Education, 2011, 88, 1098-1104.	2.3	226
2	Thermal behavior and mechanical properties of physically crosslinked PVA/Gelatin hydrogels. Journal of the Mechanical Behavior of Biomedical Materials, 2010, 3, 203-209.	3.1	169
3	Cytotoxic effects induced by unmodified and organically modified nanoclays in the human hepatic HepG2 cell line. Journal of Applied Toxicology, 2011, 31, 27-35.	2.8	108
4	Review of Multifarious Applications of Poly (Lactic Acid). Polymer-Plastics Technology and Engineering, 2016, 55, 1057-1075.	1.9	108
5	The synthesis of novel pH-sensitive poly(vinyl alcohol) composite hydrogels using a freeze/thaw process for biomedical applications. International Journal of Pharmaceutics, 2009, 372, 154-161.	5.2	101
6	Chemical surface modification of calcium carbonate particles with stearic acid using different treating methods. Applied Surface Science, 2016, 378, 320-329.	6.1	101
7	Hydrogel/bioactive glass composites for bone regeneration applications: Synthesis and characterisation. Materials Science and Engineering C, 2013, 33, 4203-4212.	7.3	94
8	Mechanical and biodegradation performance of short natural fibre polyhydroxybutyrate composites. Polymer Testing, 2013, 32, 1603-1611.	4.8	93
9	Mechanical properties and thermal behaviour of PEGDMA hydrogels for potential bone regeneration application. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 1219-1227.	3.1	91
10	Preparation of a novel freeze thawed poly(vinyl alcohol) composite hydrogel for drug delivery applications. European Journal of Pharmaceutics and Biopharmaceutics, 2007, 67, 377-386.	4.3	88
11	Morphology, rheology and mechanical properties of polypropylene/ethyleneâ€“octene copolymer/clay nanocomposites: Effects of the compatibilizer. Composites Science and Technology, 2012, 72, 1697-1704.	7.8	78
12	Characterisation and controlled drug release from novel drug-loaded hydrogels. European Journal of Pharmaceutics and Biopharmaceutics, 2008, 69, 1147-1159.	4.3	76
13	Development and characterisation of an agarâ€“polyvinyl alcohol blend hydrogel. Journal of the Mechanical Behavior of Biomedical Materials, 2009, 2, 485-493.	3.1	74
14	Lower critical solution temperature control and swelling behaviour of physically crosslinked thermosensitive copolymers based on N-isopropylacrylamide. European Polymer Journal, 2006, 42, 2540-2548.	5.4	72
15	Synthesis and characterisation of chemically crosslinked N-vinyl pyrrolidinone (NVP) based hydrogels. European Polymer Journal, 2005, 41, 1272-1279.	5.4	71
16	The synthesis of a physically crosslinked NVP based hydrogel. Polymer, 2003, 44, 7851-7860.	3.8	70
17	The synthesis, characterisation, phase behaviour and swelling of temperature sensitive physically crosslinked poly(1-vinyl-2-pyrrolidinone)/poly(N-isopropylacrylamide) hydrogels. European Polymer Journal, 2006, 42, 69-80.	5.4	65
18	Multifunctional polyvinylpyrrolidinone-polyacrylic acid copolymer hydrogels for biomedical applications. International Journal of Pharmaceutics, 2006, 326, 50-59.	5.2	58

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19	Additive Manufacturing of Personalized Pharmaceutical Dosage Forms via Stereolithography. <i>Pharmaceutics</i> , 2019, 11, 645.	4.5	58
20	In vitro degradation and drug release from polymer blends based on poly(dl-lactide), poly(l-lactide-glycolide) and poly(l- μ -caprolactone). <i>Journal of Materials Science</i> , 2010, 45, 1284-1292.	3.7	55
21	Investigation of a novel freeze-thaw process for the production of drug delivery hydrogels. <i>Journal of Materials Science: Materials in Medicine</i> , 2005, 16, 1149-1158.	3.6	54
22	Preparation of monolithic matrices for oral drug delivery using a supercritical fluid assisted hot melt extrusion process. <i>International Journal of Pharmaceutics</i> , 2007, 329, 62-71.	5.2	54
23	The effects of high energy electron beam irradiation in air on accelerated aging and on the structure property relationships of low density polyethylene. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2013, 297, 64-74.	1.4	54
24	The effects of high energy electron beam irradiation on the thermal and structural properties of low density polyethylene. <i>Radiation Physics and Chemistry</i> , 2012, 81, 962-966.	2.8	47
25	The significance of variation in extrusion speeds and temperatures on a PEO/PCL blend based matrix for oral drug delivery. <i>International Journal of Pharmaceutics</i> , 2008, 351, 201-208.	5.2	45
26	Effects of gamma ray and electron beam irradiation on the mechanical, thermal, structural and physicochemical properties of poly (ether-block-amide) thermoplastic elastomers. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2013, 17, 252-268.	3.1	40
27	The influence of electron beam irradiation conducted in air on the thermal, chemical, structural and surface properties of medical grade polyurethane. <i>European Polymer Journal</i> , 2013, 49, 1782-1795.	5.4	40
28	Development of novel chitosan-poly(N,N-diethylacrylamide) IPN films for potential wound dressing and biomedical applications. <i>Journal of Polymer Research</i> , 2013, 20, 1.	2.4	39
29	Synthesis of linear aliphatic polycarbonate macroglycols using dimethylcarbonate. <i>Journal of Applied Polymer Science</i> , 2009, 111, 217-227.	2.6	37
30	The synthesis, swelling behaviour and rheological properties of chemically crosslinked thermosensitive copolymers based on N-isopropylacrylamide. <i>Journal of Materials Science</i> , 2007, 42, 4136-4148.	3.7	34
31	Synthesis and characterisation of styrene butadiene styrene-g-acrylic acid for potential use in biomedical applications. <i>Materials Science and Engineering C</i> , 2009, 29, 1655-1661.	7.3	34
32	The use of Agar as a novel filler for monolithic matrices produced using hot melt extrusion. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2006, 64, 75-81.	4.3	32
33	The effect of salts and pH buffered solutions on the phase transition temperature and swelling of thermoresponsive pseudogels based on N-isopropylacrylamide. <i>Journal of Materials Science</i> , 2007, 42, 9845-9854.	3.7	32
34	Halloysite nanotube reinforced polylactic acid composite. <i>Polymer Composites</i> , 2017, 38, 2166-2173.	4.6	32
35	The rheological and thermal characteristics of freeze-thawed hydrogels containing hydrogen peroxide for potential wound healing applications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2009, 2, 264-271.	3.1	31
36	Photopolymerised thermo-responsive poly(N,N-diethylacrylamide)-based copolymer hydrogels for potential drug delivery applications. <i>Journal of Polymer Research</i> , 2012, 19, 1.	2.4	29

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37	Effect of serum concentration on the cytotoxicity of clay particles. <i>Cell Biology International</i> , 2012, 36, 57-61.	3.0	28
38	Cell encapsulation and cryostorage in PVA-gelatin cryogels: incorporation of carboxylated β -poly-L-lysine as cryoprotectant. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2012, 6, 280-290.	2.7	27
39	Fabrication and in vitro biological evaluation of photopolymerisable hydroxyapatite hydrogel composites for bone regeneration. <i>Journal of Biomaterials Applications</i> , 2014, 28, 1274-1283.	2.4	27
40	Evaluation of the materials properties, stability and cell response of a range of PEGDMA hydrogels for tissue engineering applications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019, 99, 1-10.	3.1	27
41	Synthesis and characterisation of thermo-sensitive terpolymer hydrogels for drug delivery applications. <i>Journal of Polymer Research</i> , 2011, 18, 2307-2324.	2.4	25
42	Compressive Strength and Bioactivity Properties of Photopolymerizable Hybrid Composite Hydrogels for Bone Tissue Engineering. <i>International Journal of Polymeric Materials and Polymeric Biomaterials</i> , 2014, 63, 641-650.	3.4	25
43	Synthesis and characterization of physically crosslinked ϵ -vinylcaprolactam, acrylic acid, methacrylic acid, and N,N -dimethylacrylamide hydrogels. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2013, 51, 1555-1564.	2.1	22
44	The incorporation of an organically modified layered silicate in monolithic polymeric matrices produced using hot melt extrusion. <i>Materials Chemistry and Physics</i> , 2007, 103, 419-426.	4.0	19
45	Rheological and thermal characteristics of a two phase hydrogel system for potential wound healing applications. <i>Journal of Materials Science</i> , 2010, 45, 2884-2891.	3.7	19
46	Synthesis and characterization of high density polyethylene/peat ash composites. <i>Composites Part B: Engineering</i> , 2016, 94, 312-321.	12.0	19
47	Microstructure characterization and thermal analysis of hybrid block copolymer β -methoxy-poly(ethylene glycol)-block-poly[β -(benzyloxycarbonyl)-L-lysine] for biomedical applications. <i>Journal of Molecular Structure</i> , 2010, 977, 153-164.	3.6	18
48	Modulating the mechanical properties of photopolymerised polyethylene glycol-polypropylene glycol hydrogels for bone regeneration. <i>Journal of Materials Science</i> , 2012, 47, 6577-6585.	3.7	18
49	Evaluation of Novel Antibiotic-Eluting Thermo-responsive Chitosan-PDEAAm Based Wound Dressings. <i>International Journal of Polymeric Materials and Polymeric Biomaterials</i> , 2014, 63, 873-883.	3.4	16
50	Investigation of miscibility estimation methods between indomethacin and poly(vinylpyrrolidone-co-vinyl acetate). <i>International Journal of Pharmaceutics</i> , 2018, 549, 50-57.	5.2	16
51	Physical and Mechanical Properties of Blends Based on Poly (dl-lactide), Poly (l-lactide-glycolide) and Poly (β -caprolactone). <i>Polymer-Plastics Technology and Engineering</i> , 2010, 49, 678-687.	1.9	15
52	Development of chemically cross-linked hydrophilic-hydrophobic hydrogels for drug delivery applications. <i>European Polymer Journal</i> , 2016, 75, 25-35.	5.4	15
53	Structure-property relationships of polymer blend/clay nanocomposites: Compatibilized and noncompatibilized polystyrene/propylene/clay. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2012, 50, 431-441.	2.1	14
54	The effect of processing conditions for polylactic acid based fibre composites via twin-screw extrusion. <i>Journal of Reinforced Plastics and Composites</i> , 2014, 33, 648-662.	3.1	14

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55	An investigation of the inter-molecular interaction, solid-state properties and dissolution properties of mixed copovidone hot-melt extruded solid dispersions. <i>Journal of Drug Delivery Science and Technology</i> , 2019, 53, 101132.	3.0	14
56	Flavone formation in the wheeler aurone synthesis. <i>Tetrahedron</i> , 1990, 46, 7219-7226.	1.9	13
57	Photopolymerisation and characterisation of negative temperature sensitive hydrogels based on N,N-diethylacrylamide. <i>Journal of Materials Science</i> , 2011, 46, 509-517.	3.7	13
58	Improvement in mechanical properties of grafted polylactic acid composite fibers via hot melt extrusion. <i>Polymer Composites</i> , 2014, 35, 1792-1797.	4.6	13
59	Stability studies of hot-melt extruded ternary solid dispersions of poorly-water soluble indomethacin with poly(vinyl pyrrolidone-co-vinyl acetate) and polyethylene oxide. <i>Journal of Drug Delivery Science and Technology</i> , 2019, 52, 248-254.	3.0	13
60	The Effect of Cooling on the Degree of Crystallinity, Solid-State Properties, and Dissolution Rate of Multi-Component Hot-Melt Extruded Solid Dispersions. <i>Pharmaceutics</i> , 2020, 12, 212.	4.5	13
61	The Development of Hot Melt Extruded Biocompatible Controlled Release Drug Delivery Devices. <i>International Journal of Polymeric Materials and Polymeric Biomaterials</i> , 2014, 63, 476-485.	3.4	12
62	The synthesis and characterisation of grafted random styrene butadiene for biomedical applications. <i>Journal of Materials Science</i> , 2009, 44, 889-896.	3.7	11
63	Effect of Compatibilizer Content on the Mechanical Properties of Bioplastic Composites via Hot Melt Extrusion. <i>Polymer-Plastics Technology and Engineering</i> , 2014, 53, 1223-1235.	1.9	11
64	Analysis of the Mechanical Properties of Solvent Cast Blends of PLA/PCL. <i>Applied Mechanics and Materials</i> , 0, 679, 50-56.	0.2	11
65	Investigation of Ethylene Oxide-co-propylene Oxide for Dissolution Enhancement of Hot-Melt Extruded Solid Dispersions. <i>Journal of Pharmaceutical Sciences</i> , 2018, 107, 1372-1382.	3.3	11
66	Cyto- and genotoxicological assessment and functional characterization of N-vinyl-2-pyrrolidone-acrylic acid-based copolymeric hydrogels with potential for future use in wound healing applications. <i>Biomedical Materials (Bristol)</i> , 2010, 5, 035002.	3.3	10
67	Characterisation of the effects of a titanium micro particle filler on a polyether-block-amide host matrix. <i>Journal of Materials Science</i> , 2010, 45, 3204-3214.	3.7	10
68	Melt Processing of Bioplastic Composites via Twin Screw Extrusion and Injection Molding. <i>Polymer-Plastics Technology and Engineering</i> , 2014, 53, 379-386.	1.9	10
69	Melt Extruded Bioresorbable Polymer Composites for Potential Regenerative Medicine Applications. <i>Polymer-Plastics Technology and Engineering</i> , 2016, 55, 432-446.	1.9	10
70	Development of a novel porous cryo-foam for potential wound healing applications. <i>Journal of Materials Science: Materials in Medicine</i> , 2009, 20, 1193-1199.	3.6	9
71	Synthesis and characterisation of styrene butadiene styrene-g-N-vinyl-2-pyrrolidinone for use in biomedical applications. <i>Materials Science and Engineering C</i> , 2011, 31, 246-251.	7.3	9
72	Temperature-triggered gelation and controlled drug release via NIPAAm/NVP-based hydrogels. <i>Journal of Materials Science</i> , 2011, 46, 3233-3240.	3.7	8

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73	Effects of electron beam irradiation on the property behaviour of poly(ether-block-amide) blended with various stabilisers. Radiation Physics and Chemistry, 2015, 110, 24-37.	2.8	8
74	O-Heterocycles by the cyclization of side-chain bromomethoxylated 2'-acetoxychalcones. Monatshefte für Chemie, 1991, 122, 83-87.	1.8	6
75	Synthesis and characterisation of styrene butadiene styrene-g-N-isopropylacrylamide via UV polymerisation for potential use in biomedical applications. Journal of Materials Science, 2010, 45, 599-606.	3.7	6
76	Effects of temperature, packaging and electron beam irradiation processing conditions on the property behaviour of Poly (ether-block-amide) blends. Materials Science and Engineering C, 2014, 39, 380-394.	7.3	6
77	The effect of the mixing routes of biodegradable polylactic acid and polyhydroxybutyrate nanocomposites and compatibilised nanocomposites. Journal of Thermoplastic Composite Materials, 2016, 29, 538-557.	4.2	6
78	Synthesis and photopolymerisation of maleic polyvinyl alcohol based hydrogels for bone tissue engineering. Journal of Polymer Research, 2014, 21, 1.	2.4	4
79	The Effect of Photoinitiator Concentration on the Physicochemical Properties of Hydrogel Contact Lenses. Applied Mechanics and Materials, 2014, 679, 118-127.	0.2	3
80	The influence of electron beam irradiation on the mechanical and thermal properties of Poly (ether-block-amide) blends. Radiation Physics and Chemistry, 2014, 94, 26-30.	2.8	3
81	Micro-Injection Moulding of Poly(vinylpyrrolidone-vinyl acetate) Binary and Ternary Amorphous Solid Dispersions. Pharmaceutics, 2019, 11, 240.	4.5	3
82	Conformational and thermal analyses of poly(methoxy- ϵ -poly(ethylene Terephthalate) glycol)- ϵ -poly(ethylene glycol)- ϵ -poly(ethylene glycol) blends. Polymer International, 2013, 62, 1169-1178.	3.1	2
83	Synthesis and Characterization of Polyethylene Glycol Dimethacrylate Hydrogels for Biomedical Application. Applied Mechanics and Materials, 2014, 679, 158-170.	0.2	2
84	Preparation and characterization of poly(ethylene glycol)-block-poly[L-(benzyloxycarbonyl)-L-lysine] thin films for biomedical applications. Polymer Bulletin, 2014, 71, 1691-1709.	3.3	1
85	Characterisation and controlled drug release from a novel two-phase hydrogel system. International Journal of Biotechnology, 2010, 11, 203.	1.2	0
86	Simulation of arteriosclerosis in a virtual artery. International Journal of Medical Engineering and Informatics, 2010, 2, 82.	0.3	0
87	Melt Processed Polymer Blends for Potential Regenerative Medicine Applications. Applied Mechanics and Materials, 0, 679, 92-100.	0.2	0