Ajf Carvalho

List of Publications by Citations

96 papers	3,532 citations	31 h-index	58 g-index
109 ext. papers	3,868 ext. citations	5.5 avg, IF	5.51 L-index

#	Paper	IF	Citations
96	Progress of Polymers from Renewable Resources: Furans, Vegetable Oils, and Polysaccharides. *Chemical Reviews*, **2016**, 116, 1637-69	68.1	495
95	Thermoplastic starchâellulosic fibers composites: preliminary results. *Carbohydrate Polymers*, **2001**, 45, 183-188	10.3	365
94	A first insight on composites of thermoplastic starch and kaolin. *Carbohydrate Polymers*, **2001**, 45, 189-194	10.3	218
93	The effect of plasticizers on thermoplastic starch compositions obtained by melt processing. *Carbohydrate Polymers*, **2006**, 63, 417-424	10.3	217
92	Thermoplastic starch/natural rubber blends. *Carbohydrate Polymers*, **2003**, 53, 95-99	10.3	132
91	Natural fiber-reinforced thermoplastic starch composites obtained by melt processing. *Composites Science and Technology*, **2012**, 72, 858-863	8.6	125
90	Recycling tires? Reversible crosslinking of poly(butadiene). *Advanced Materials*, **2015**, 27, 2242-5	24	105
89	The effect of glycerol/sugar/water and sugar/water mixtures on the plasticization of thermoplastic cassava starch. *Carbohydrate Polymers*, **2007**, 69, 619-624	10.3	105
88	Mechanical and morphological characterization of starch/zein blends plasticized with glycerol. *Journal of Applied Polymer Science*, **2006**, 101, 4133-4139	2.9	73
87	Preparation and characterization of thermoplastic starch/zein blends. *Materials Research*, **2007**, 10, 227-231	1.3	70
86	Compatible ternary blends of chitosan/poly(vinyl alcohol)/poly(lactic acid) produced by oil-in-water emulsion processing. *Biomacromolecules*, **2011**, 12, 907-14	6.9	69
85	Blocked isocyanates as coupling agents for cellulose-based composites. *Carbohydrate Polymers*, **2007**, 68, 537-543	10.3	63
84	Physicochemical properties and sensing ability of metallophthalocyanines/chitosan nanocomposites. *Journal of Physical Chemistry B*, **2006**, 110, 22690-4	3.4	62
83	Thermoplastic starch modification during melt processing: Hydrolysis catalyzed by carboxylic acids. *Carbohydrate Polymers*, **2005**, 62, 387-390	10.3	59
82	Simple green approach to reinforce natural rubber with bacterial cellulose nanofibers. *Biomacromolecules*, **2013**, 14, 2667-74	6.9	57
81	Wood pulp reinforced thermoplastic starch composites. *International Journal of Polymeric Materials and Polymeric Biomaterials*, **2002**, 51, 647-660	3	56
80	Size exclusion chromatography characterization of thermoplastic starch composites 1. Influence of plasticizer and fibre content. *Polymer Degradation and Stability*, **2003**, 79, 133-138	4.7	55

79	Adsorption of chitosan on spin-coated cellulose films. *Carbohydrate Polymers*, **2010**, 80, 65-70	10.3	54
78	Thermoplastic starch modified during melt processing with organic acids: The effect of molar mass on thermal and mechanical properties. *Industrial Crops and Products*, **2011**, 33, 152-157	5.9	50
77	Surface chemical modification of thermoplastic starch: reactions with isocyanates, epoxy functions and stearoyl chloride. *Industrial Crops and Products*, **2005**, 21, 331-336	5.9	50
76	Continuous microfiber drawing by interfacial charge complexation between anionic cellulose nanofibers and cationic chitosan. *Journal of Materials Chemistry A*, **2017**, 5, 13098-13103	13	48
75	Composite materials of thermoplastic starch and fibers from the ethanolâwater fractionation of bagasse. *Industrial Crops and Products*, **2011**, 33, 739-746	5.9	48
74	Blocked diisocyanates as reactive coupling agents: Application to pine fiberâpolypropylene composites. *Carbohydrate Polymers*, **2008**, 74, 106-113	10.3	48
73	Layer-by-Layer Hybrid Films Incorporating WO3, TiO2, and Chitosan. *Chemistry of Materials*, **2005**, 17, 6739-6745	9.6	44
72	Starch: Major Sources, Properties and Applications as Thermoplastic Materials **2008**, 321-342		40
71	Soda-Treated Sisal/Polypropylene Composites. *Journal of Polymers and the Environment*, **2008**, 16, 35-39	4.5	36
70	Morphological, mechanical and rheological properties of nylon 6/acrylonitrile-butadiene- styrene blends compatibilized with MMA/MA copolymers. *Journal of Materials Science*, **2003**, 38, 3515-3520	4.3	35
69	Newspaper fiber-reinforced thermoplastic starch biocomposites obtained by melt processing: Evaluation of the mechanical, thermal and water sorption properties. *Industrial Crops and Products*, **2013**, 44, 300-305	5.9	34
68	Preparation and Characterisation of Thermoplastic Starches from Cassava Starch, Cassava Root and Cassava Bagasse. *Macromolecular Symposia*, **2005**, 229, 266-275	0.8	33
67	Thermal properties of nylon6/ABS polymer blends: Compatibilizer effect. *Journal of Materials Science*, **2004**, 39, 1173-1178	4.3	32
66	Acrylonitrileâbutadieneâstyrene toughened nylon 6: The influences of compatibilizer on morphology and impact properties. *Journal of Applied Polymer Science*, **2003**, 87, 842-847	2.9	31
65	Macromolecular materials based on the application of the Dielsâalder reaction to natural polymers and plant oils. *European Journal of Lipid Science and Technology*, **2018**, 120, 1700091	3	30
64	Compatible blends of thermoplastic starch and hydrolyzed ethylene-vinyl acetate copolymers. *Carbohydrate Polymers*, **2012**, 90, 34-40	10.3	30
63	Estudo comparativo de amidos termoplsticos derivados do milho com diferentes teores de amilose. *Polimeros*, **2005**, 15, 268-273	1.6	28
62	Two alternative approaches to the Dielsâalder polymerization of tung oil. *RSC Advances*, **2014**, 4, 26829	3.7	26

61	A straightforward double coupling of furan moieties onto epoxidized triglycerides: synthesis of monomers based on two renewable resources. *Green Chemistry*, **2013**, 15, 1514	10	25
60	Thermoplastic blends of chitosan: A method for the preparation of high thermally stable blends with polyesters. *Carbohydrate Polymers*, **2018**, 191, 44-52	10.3	23
59	TEMPO-oxidized cellulose nanofibers as interfacial strengthener in continuous-fiber reinforced polymer composites. *Materials and Design*, **2017**, 133, 340-348	8.1	22
58	Effect of compatibilizer in acrylonitrile-butadiene-styrene toughened nylon 6 blends: Ductileâ□Brittle transition temperature. *Journal of Applied Polymer Science*, **2003**, 90, 2643-2647	2.9	22
57	Polymer light emitting devices with Langmuirâ□Blodgett (LB) films: Enhanced performance due to an electron-injecting layer of ionomers. *Chemical Physics Letters*, **2005**, 408, 31-36	2.5	22
56	Furan-modified natural rubber: A substrate for its reversible crosslinking and for clicking it onto nanocellulose. *International Journal of Biological Macromolecules*, **2017**, 95, 762-768	7.9	18
55	A new approach to blending starch with natural rubber. *Polymer International*, **2015**, 64, 605-610	3.3	17
54	Effect of Sulfonation Level on Solubility and Viscosity Behavior of Low to Medium Charged Sulfonated Polystyrenes. *Macromolecules*, **2003**, 36, 5304-5310	5.5	16
53	Blendas compat□veis de amido termopl□stico e polietileno de baixa densidade compatibilizadas com □ido c□rico. *Polimeros*, **2011**, 21, 353-360	1.6	15
52	Nanochitins of Varying Aspect Ratio and Properties of Microfibers Produced by Interfacial Complexation with Seaweed Alginate. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 1137-1145	8.3	15
51	Low-cost, environmentally friendly route for producing CFRP laminates with microfibrillated cellulose interphase. *EXPRESS Polymer Letters*, **2017**, 11, 47-59	3.4	14
50	Thermally reversible nanocellulose hydrogels synthesized via the furan/maleimide Diels-Alder click reaction in water. *International Journal of Biological Macromolecules*, **2019**, 141, 493-498	7.9	14
49	Ternary melt blends of poly(lactic acid)/poly(vinyl alcohol)-chitosan. *Industrial Crops and Products*, **2015**, 72, 159-165	5.9	14
48	The potential of TEMPO-oxidized nanofibrillar cellulose beads for cell delivery applications. *Cellulose*, **2016**, 23, 3399-3405	5.5	14
47	Sleeving nanocelluloses by admicellar polymerization. *Journal of Colloid and Interface Science*, **2013**, 408, 256-8	9.3	12
46	Cellulose nanofibers production using a set of recombinant enzymes. *Carbohydrate Polymers*, **2021**, 256, 117510	10.3	12
45	Compatibiliza□ de blendas de poliamida 6/ABS usando os copol□meros acr□licos reativos MMA-GMA e MMA-MA. Parte 1: Comportamento reol□gico e propriedades mec□nicas das blendas. *Polimeros*, **2003**, 13, 205-211	1.6	11
44	Water Susceptibility and Mechanical Properties of Thermoplastic Starchâ□Pectin Blends Reactively Extruded with Edible Citric Acid. *Materials Research*, **2016**, 19, 138-142	1.5	11

43	A minimalist furanâmaleimide AB-type monomer and its thermally reversible Dielsâ Alder polymerization. *RSC Advances*, **2016**, 6, 45696-45700	3.7	11
42	Self-organization of triblock copolymer patterns obtained by drying and dewetting. *European Physical Journal E*, **2006**, 20, 309-15	1.5	10
41	Synthesis of Poly(styrene-co-methyl methacrylate)-Based Ionomers and Their Langmuir and Langmuirâ Blodgett (LB) Film Formation. *Journal of Physical Chemistry B*, **2004**, 108, 7033-7039	3.4	10
40	Thermoreversible crosslinked thermoplastic starch. *Polymer International*, **2015**, 64, 1366-1372	3.3	9
39	Electrical characterization of poly(amide-imide) for application in organic field effect devices. *Organic Electronics*, **2012**, 13, 2109-2117	3.5	9
38	Polymeric coatings for photostability enhancement of poly(p-phenylene vinylene) derivative films. *Polymer International*, **2010**, 59, 637-641	3.3	9
37	Trapping of charge carriers in colloidal particles of self-assembled films from TiO(2) and poly(vinyl sulfonic acid). *Journal of Physical Chemistry B*, **2006**, 110, 24612-20	3.4	9
36	Morphological, mechanical and thermal properties of nylon 6/ABS blends using glycidyl methacrylate-methyl methacrylate copolymers. *Journal of Materials Science*, **2005**, 40, 4239-4246	4.3	9
35	Polystyrene/cellulose nanofibril composites: Fiber dispersion driven by nanoemulsion flocculation. *Journal of Molecular Liquids*, **2018**, 272, 387-394	6	9
34	Characterization of indium-tin-oxide films treated by different procedures: effect of treatment time in aqua regia solution. *Materials Science and Engineering C*, **2004**, 24, 595-599	8.3	8
33	Microfibrillated Cellulose from Sugarcane Bagasse as a Biorefinery Product for Ethanol Production. *Journal of Renewable Materials*, **2018**, 6, 195-202	2.4	7
32	Starch-g-Copolymers: Synthesis, Properties and Applications **2013**, 59-109		7
31	High Lithium Ion Electroinsertion Rate into Self-Assembled Films Formed from TiO2. *Journal of Physical Chemistry C*, **2013**, 117, 16774-16782	3.8	7
30	Wood pulp fiber modification by layer-by-layer (LBL) self-assembly of chitosan/carboxymethyl cellulose complex: Confocal microscopy characterization. *Journal of Molecular Liquids*, **2019**, 273, 368-373	6	7
29	TEMPO-Oxidized Cellulose Nanofibers In Vitro Cyto-genotoxicity Studies. *BioNanoScience*, **2020**, 10, 766-772	3.4	6
28	Starch: Major Sources, Properties and Applications as Thermoplastic Materials **2013**, 129-152		6
27	LDPE/EVA Composites for Antimicrobial Properties. *Molecular Crystals and Liquid Crystals*, **2012**, 556, 168-175	0.5	6
26	Compatibilizaõ de blendas de poliamida 6/ABS usando os copolímeros acrílicos reativos MMA-GMA e MMA-MA. Parte 2: Comportamento termomecânico e morfológico das blendas. *Polimeros*, **2004**, 14, 22-30	1.6	6

25	Low-cost, environmentally friendly route to produce glass fiber-reinforced polymer composites with microfibrillated cellulose interphase. *Journal of Applied Polymer Science*, **2016**, 133,	2.9	6
24	Nanocomposites of acid free CNC and HDPE: Dispersion from solvent driven by fast crystallization/gelation. *Journal of Molecular Liquids*, **2018**, 266, 233-241	6	6
23	TPS Nanocomposite reinforced with MFC by melting process. *Materials Research*, **2014**, 17, 807-810	1.5	5
22	Starch as Source of Polymeric Materials **2011**, 81-98		5
21	Incorporation of azobenzene chromophore into poly(amide-imide). *Journal of Applied Polymer Science*, **2007**, 103, 841-847	2.9	5
20	Morphology of nylon 6/acrylonitrileâ□butadieneâ□styrene blends compatibilized by a methyl methacrylate/maleic anhydride copolymer. *Journal of Applied Polymer Science*, **2003**, 90, 3512-3518	2.9	5
19	The contribution of bisfurfurylamine to the development and properties of polyureas. *Polymer International*, **2020**, 69, 688-692	3.3	4
18	Electrical properties of polymer/metal interface in polymer light-emitting devices: electron injection barrier suppression. *Journal of Materials Science*, **2006**, 41, 2767-2770	4.3	4
17	Low permeable hydrophobic nanofibrilated cellulose films modified by dipping and heating processing technique. *Cellulose*, **2021**, 28, 1617-1632	5.5	4
16	Biomedical Applications for Thermoplastic Starch **2016**, 1-23		3
15	Thermally stimulated depolarization current studies of sulfonated polystyrene ionomers. *Applied Physics A: Materials Science and Processing*, **2009**, 97, 947-953	2.6	3
14	Nanocelluloses from Eucalyptus Wood Pulp. *Journal of Renewable Materials*, **2014**, 2, 118-122	2.4	2
13	Dynamic formation of SEBS copolymer submicrometric structures. *Polymer*, **2010**, 51, 4145-4151	3.9	2
12	Effect of ion concentration of ionomer in electron injection layer of polymer light-emitting devices. *Journal of Non-Crystalline Solids*, **2006**, 352, 1686-1690	3.9	2
11	Photoinduced birefringence in blends of a polyurethane bearing azobenzene moieties and a poly(amideâ□imide). *Polymer International*, **2006**, 55, 1069-1074	3.3	2
10	Caracterizaâ□ de gâ□s termorreversâ□veis de SEBS. *Polimeros*, **2000**, 10, 01-07	1.6	2
9	Water-Based Processing of Fiberboard of Acrylic Resin Composites Reinforced With Cellulose Wood Pulp and Cellulose Nanofibrils. *Journal of Renewable Materials*, **2019**, 7, 403-413	2.4	1
8	Characterization of thermally crosslinkable polyester films by thermomechanical analysis: a versatile and very sensitive technique for the evaluation of low crosslinking degree in polymers. *Polymer International*, **2018**, 67, 1011-1015	3.3	0

7	The influence of chitosan, cellulose and alginate chemical nature on mineral matrix formation. *International Journal of Polymeric Materials and Polymeric Biomaterials*,1-11	3	0
6	Non-freezing water sorbed on microcrystalline cellulose studied by high-resolution thermogravimetric analysis. *Cellulose*, **2021**, 28, 10117	5.5	0
5	Effect of a Polymeric Protective Coating on Optical and Electrical Properties of Poly(p-phenylene vinylene) Derivatives. *Journal of Nanomaterials*, **2013**, 2013, 1-5	3.2	
4	Thermoformed Polypropylene Composite Reinforced with Cotton Fabric. *Macromolecular Symposia*, **2019**, 383, 1800068	0.8	
3	Poly-(lactic acid) and fibrin bioactive cellularized scaffold for use in bone regenerative medicine: Proof of concept. *Journal of Bioactive and Compatible Polymers*, **2021**, 36, 171-184	2	
2	TEMPO-oxidized cellulose poly-ionic drawn fiber, a cell support system proof of concept. *Journal of Materials Science*, **2021**, 56, 16661-16670	4.3	
1	Conjugation of folic acid with TEMPO-oxidized cellulose hydrogel for doxorubicin administration. *Carbohydrate Polymer Technologies and Applications*, **2021**, 2, 100019	1.7	