JosÃ© JesÃºs BenÃ-tez

List of Publications by Year
in descending order

97 papers	2,531 citations	186265 28 h-index	233421 45 g-index
99 all docs	99 docs citations	99 times ranked	2505 citing authors

#	Article	IF	Citations
1	Infrared and Raman spectroscopic features of plant cuticles: a review. Frontiers in Plant Science, 2014, 5, 305.	3.6	251
2	Biomechanical properties of the tomato (<i>Solanum lycopersicum</i>) fruit cuticle during development are modulated by changes in the relative amounts of its components. New Phytologist, 2014, 202, 790-802.	7.3	127
3	The structure of monolayer films of FeO on Pt(111). Surface Science, 1993, 298, 127-133.	1.9	120
4	The growth and structure of titanium oxide films on Pt(111) investigated by LEED, XPS, ISS, and STM. Surface Science, 1995, 326, 80-92.	1.9	113
5	Cutin from agro-waste as a raw material for the production of bioplastics. Journal of Experimental Botany, 2017, 68, 5401-5410.	4.8	69
6	Molecular characterization of the plant biopolyester cutin by AFM and spectroscopic techniques. Journal of Structural Biology, 2004, 147, 179-184.	2.8	66
7	Bio-based composite fibers from pine essential oil and PLA/PBAT polymer blend. Morphological, physicochemical, thermal and mechanical characterization. Materials Chemistry and Physics, 2019, 234, 345-353.	4.0	55
8	Synthesis of SiO2 and SiOxCyHz thin films by microwave plasma CVD. Thin Solid Films, 2001, 401, 150-158.	1.8	53
9	Structure and Chemical State of Octadecylamine Self-Assembled Monolayers on Mica. Journal of Physical Chemistry C, 2011, 115, 19716-19723.	3.1	52
10	Transparent, UV-blocking, and high barrier cellulose-based bioplastics with naringin as active food packaging materials. International Journal of Biological Macromolecules, 2022, 209, 1985-1994.	7.5	51
11	Allâ€Natural Sustainable Packaging Materials Inspired by Plant Cuticles. Advanced Sustainable Systems, 2017, 1, 1600024.	5.3	50
12	Sustainable Fabrication of Plant Cuticle-Like Packaging Films from Tomato Pomace Agro-Waste, Beeswax, and Alginate. ACS Sustainable Chemistry and Engineering, 2018, 6, 14955-14966.	6.7	50
13	Preparation and Characterization of Self-Assembled Monolayers of Octadecylamine on Mica Using Hydrophobic Solvents. Langmuir, 2002, 18, 6096-6100.	3.5	47
14	Selfâ€assembled polyhydroxy fatty acids vesicles: a mechanism for plant cutin synthesis. BioEssays, 2008, 30, 273-277.	2.5	47
15	Low temperature synthesis of dense SiO2 thin films by ion beam induced chemical vapor deposition. Thin Solid Films, 2001, 396, 9-15.	1.8	43
16	Valorization of Tomato Processing by-Products: Fatty Acid Extraction and Production of Bio-Based Materials. Materials, 2018, 11, 2211.	2.9	42
17	Surface basicity of a new family of catalysts: aluminophosphate oxynitride (ALPON). Journal of the Chemical Society, Faraday Transactions, 1995, 91, 4477-4479.	1.7	39
18	Growth of FeOx on Pt(111) studied by scanning tunneling microscopy. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1994, 12, 2302-2307.	2.1	37

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19	Combining dietary phenolic antioxidants with polyvinylpyrrolidone: transparent biopolymer films based on<i>p</i>-coumaric acid for controlled release. Journal of Materials Chemistry B, 2019, 7, 1384-1396.	5.8	37
20	Preparation and Characterization of Bio-Based PLA/PBAT and Cinnamon Essential Oil Polymer Fibers and Life-Cycle Assessment from Hydrolytic Degradation. Polymers, 2020, 12, 38.	4.5	37
21	Synthesis and characterization of a plant cutin mimetic polymer. Polymer, 2009, 50, 5633-5637.	3.8	36
22	Ar stabilisation of the cubic/tetragonal phases of ZrO2 in thin films prepared by ion beam induced chemical vapour deposition. Thin Solid Films, 2001, 389, 34-42.	1.8	34
23	Chemical Reactions in 2D: Self-Assembly and Self-Esterification of 9(10),16-Dihydroxypalmitic Acid on Mica Surface. Langmuir, 2009, 25, 6869-6874.	3.5	33
24	Cellulose-polyhydroxylated fatty acid ester-based bioplastics with tuning properties: Acylation via a mixed anhydride system. Carbohydrate Polymers, 2017, 173, 312-320.	10.2	33
25	Plant biopolyester cutin: a tough way to its chemical synthesis. Biochimica Et Biophysica Acta - General Subjects, 2004, 1674, 1-3.	2.4	31
26	Plant cuticle under global change: Biophysical implications. Global Change Biology, 2018, 24, 2749-2751.	9.5	31
27	DRIFTS study of adsorbed formate species in the carbon dioxide and hydrogen reaction over rhodium catalysts. Applied Catalysis, 1991, 71, 219-231.	0.8	30
28	Molecular Packing Changes of Octadecylamine Monolayers on Mica Induced by Pressure and Humidity. Langmuir, 2003, 19, 762-765.	3.5	30
29	Transparent and Robust All-Cellulose Nanocomposite Packaging Materials Prepared in a Mixture of Trifluoroacetic Acid and Trifluoroacetic Anhydride. Nanomaterials, 2019, 9, 368.	4.1	30
30	Low molecular weight Îµ-caprolactone-p-coumaric acid copolymers as potential biomaterials for skin regeneration applications. PLoS ONE, 2019, 14, e0214956.	2.5	27
31	Self-assembly of supramolecular lipid nanoparticles in the formation of plant biopolyester cutin. Molecular BioSystems, 2010, 6, 948.	2.9	26
32	Self-Assembly of Carboxylic Acids and Hydroxyl Derivatives on Mica. A Qualitative AFM Study. Journal of Physical Chemistry C, 2007, 111, 9465-9470.	3.1	25
33	â€œIn situâ€•drifts study of adsorbed species in the hydrogenation of carbon oxides. Catalysis Today, 1991, 9, 53-60.	4.4	24
34	In Situ Temperature-Programmed Diffuse Reflectance Infrared Fourier Transform Spectroscopy (TPDRIFTS) of V2O5/TiO2 Catalysts. Applied Spectroscopy, 1997, 51, 416-422.	2.2	24
35	In situ diffuse reflectance infrared spectroscopy (DRIFTS) study of the reversibility of CdGeON sensors towards oxygen. Sensors and Actuators B: Chemical, 1996, 31, 197-202.	7.8	23
36	Greaseproof, hydrophobic, and biodegradable food packaging bioplastics from C6-fluorinated cellulose esters. Food Hydrocolloids, 2022, 128, 107562.	10.7	22

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37	Simultaneous Analysis of Gas Phase and Intermediates in the Hydrogenation of Carbon Oxides by DRIFTS. Applied Spectroscopy, 1993, 47, 1760-1766.	2.2	20
38	DRIFTS Chamber for in Situ and Simultaneous Study of Infrared and Electrical Response of Sensors. Applied Spectroscopy, 1995, 49, 1094-1096.	2.2	20
39	Preparation and Characterization of Self-Assembled Multilayers of Octadecylamine on Mica from Ethanol Solutions. Langmuir, 2003, 19, 3276-3281.	3.5	20
40	The Role of Hydroxyl Groups in the Self-Assembly of Long Chain Alkylhydroxyl Carboxylic Acids on Mica. Journal of Physical Chemistry C, 2008, 112, 16968-16972.	3.1	20
41	Polyhydroxyester Films Obtained by Non-Catalyzed Melt-Polycondensation of Natural Occurring Fatty Polyhydroxyacids. Frontiers in Materials, 2015, 2, .	2.4	20
42	Polyester films obtained by noncatalyzed meltâ€condensation polymerization of aleuritic (9,10,16â€trihydroxyhexadecanoic) acid in air. Journal of Applied Polymer Science, 2015, 132, .	2.6	20
43	Pectin-cellulose nanocrystal biocomposites: Tuning of physical properties and biodegradability. International Journal of Biological Macromolecules, 2021, 180, 709-717.	7.5	20
44	Characterisation, surface hydrolysis and nitrogen stability in aluminophosphate oxynitride (AlPON) catalysts. Applied Catalysis A: General, 1999, 176, 177-187.	4.3	19
45	Sustainable polycondensation of multifunctional fatty acids from tomato pomace agro-waste catalyzed by tin (II) 2-ethylhexanoate. Materials Today Sustainability, 2019, 3-4, 100004.	4.1	19
46	Geometric and Electronic Structure of Amorphous Aluminophosphates. Ab Initio and Experimental Studies. Journal of Physical Chemistry B, 1997, 101, 9510-9516.	2.6	18
47	CO2 adsorption and surface basicity evaluation of aluminophosphate oxynitride (AlPON) catalysts. Catalysis Letters, 1998, 54, 159-164.	2.6	18
48	Study of aluminophosphate oxynitride (AlPON) materials by X-ray photoelectron (XPS) and diffuse reflectance Fourier transform IR spectroscopy (DRIFTS). Journal of Materials Chemistry, 1998, 8, 687-691.	6.7	18
49	Cutin synthesis: A slippery paradigm. Biointerphases, 2009, 4, P1-P3.	1.6	18
50	Chemicalâ€"physical characterization of isolated plant cuticles subjected to low-dose Î³-irradiation. Chemistry and Physics of Lipids, 2012, 165, 803-808.	3.2	18
51	Pectin-Lipid Self-Assembly: Influence on the Formation of Polyhydroxy Fatty Acids Nanoparticles. PLoS ONE, 2015, 10, e0124639.	2.5	18
52	Biodegradable polyester films from renewable aleuritic acid: surface modifications induced by melt-polycondensation in air. Journal Physics D: Applied Physics, 2016, 49, 175601.	2.8	18
53	HCOOH hydrogenation over lanthanide-oxide-promoted Rh/Al2O3 catalysts. Applied Surface Science, 1993, 68, 565-573.	6.1	17
54	The influence of chain length and ripening time on the self-assembly of alkylamines on mica. Journal of Chemical Physics, 2006, 125, 044708.	3.0	17

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55	Structure and support induced structure disruption of soft nanoparticles obtained from hydroxylated fatty acids. Soft Matter, 2011, 7, 4357.	2.7	17
56	Long-Chain Polyhydroxyesters from Natural Occurring Aleuritic Acid as Potential Material for Food Packaging. Soft Materials, 2015, 13, 5-11.	1.7	17
57	EXAFS and DRIFTS study of lanthanide doped rhodium catalysts. Catalysis Letters, 1993, 18, 81-97.	2.6	16
58	Diffuse Reflectance Infrared (DRIFTS) and Mass Spectrometry Study of Thermal Stability of Aluminophosphate Oxynitrides (AlPON). Zeitschrift Fur Physikalische Chemie, 1997, 202, 21-29.	2.8	15
59	Aleuritic (9,10,16-trihydroxypalmitic) acid self-assembly on mica. Physical Chemistry Chemical Physics, 2010, 12, 10423.	2.8	15
60	Electrostatic Induced Molecular Tilting in Self-Assembled Monolayers of <i>n</i>-Octadecylamine on Mica. Journal of Physical Chemistry C, 2012, 116, 7099-7105.	3.1	15
61	In situ diffuse reflectance infrared (DRIFTS) identification of active sites in the CO + H2 reaction over lanthanide-modified Rh/Al2O3 catalysts. Applied Surface Science, 1995, 84, 391-399.	6.1	14
62	Room temperature synthesis of SiO2 thin films by ion beam induced and plasma enhanced CVD. Surface and Coatings Technology, 2001, 142-144, 856-860.	4.8	14
63	Application of atomic force microscopy to the study of glass decay. Materials Characterization, 2005, 55, 272-280.	4.4	14
64	Structural characterization of polyhydroxy fatty acid nanoparticles related to plant lipid biopolyesters. Chemistry and Physics of Lipids, 2010, 163, 329-333.	3.2	14
65	Bio-Based Coatings for Food Metal Packaging Inspired in Biopolyester Plant Cutin. Polymers, 2020, 12, 942.	4.5	14
66	The Response of Tomato Fruit Cuticle Membranes Against Heat and Light. Frontiers in Plant Science, 2021, 12, 807723.	3.6	13
67	Dielectric properties of self-assembled layers of octadecylamine on mica in dry and humid environments. Journal of Chemical Physics, 2005, 123, 104706.	3.0	12
68	Waterproof-breathable films from multi-branched fluorinated cellulose esters. Carbohydrate Polymers, 2021, 271, 118031.	10.2	12
69	Rutherford backscattering spectrometry (RBS) characterization of oxide scale formed on (AISI-304) steel after surface deposition of lanthanum. Acta Materialia, 1996, 44, 675-681.	7.9	10
70	Diffuse reflectance infrared spectra and their relation to the thermal stability of aluminophosphate oxynitrides as a function of nitrogen content. Journal of Non-Crystalline Solids, 1998, 238, 163-170.	3.1	9
71	Insolubilization and thermal stabilization of a longâ€chain polyester by noncatalyzed meltâ€polycondensation synthesis in air. Journal of Applied Polymer Science, 2017, 134, .	2.6	9
72	Sustainable, High-Barrier Polyaleuritate/Nanocellulose Biocomposites. ACS Sustainable Chemistry and Engineering, 2020, 8, 10682-10690.	6.7	9

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73	Diffuse Reflectance FT-IR Characterization of Active Sites under Reaction Conditions: The Production of Oxygenates in the CO/H2 Reaction. Applied Spectroscopy, 1994, 48, 1208-1212.	2.2	8
74	Packing Defects in Fatty Amine Self-Assembled Monolayers on Mica as Revealed from AFM Techniques. Journal of Physical Chemistry B, 2018, 122, 493-499.	2.6	8
75	Applications and potentialities of Atomic Force Microscopy in fossil and extant plant cuticle characterization. Review of Palaeobotany and Palynology, 2019, 268, 125-132.	1.5	8
76	Study of corrosion-protected AIN samples by X-ray photoelectron spectroscopy and diffuse reflectance IR Fourier transform spectroscopy. Journal of Materials Chemistry, 1995, 5, 1223-1226.	6.7	7
77	Monolayer arrangement of fatty hydroxystearic acids on graphite: Influence of hydroxyl groups. Thin Solid Films, 2013, 539, 194-200.	1.8	7
78	Mechanical Performances of Isolated Cuticles Along Tomato Fruit Growth and Ripening. Frontiers in Plant Science, 2021, 12, 787839.	3.6	7
79	Mass spectrometry and in situ infrared diffuse reflectance analysis of the decomposition of HCOOH adsorbed on Ln2O3-promoted Rh/Al2O3catalysts. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 3307-3312.	1.7	6
80	Study of the stability of AlPON catalysts in an aqueous environment. Journal of the European Ceramic Society, 1997, 17, 1979-1982.	5.7	6
81	Steering the Self-Assembly of Octadecylamine Monolayers on Mica by Controlled Mechanical Energy Transfer from the AFM Tip. Journal of Physical Chemistry C, 2010, 114, 12630-12634.	3.1	6
82	Biomimetic polymers of plant cutin: an approach from molecular modeling. Journal of Molecular Modeling, 2014, 20, 2329.	1.8	6
83	Insoluble and Thermostable Polyhydroxyesters From a Renewable Natural Occurring Polyhydroxylated Fatty Acid. Frontiers in Chemistry, 2019, 7, 643.	3.6	6
84	Oxidative coupling of methane over tetragonal Bi2O3-Ln2O3phases. Journal of Materials Chemistry, 1995, 5, 175-181.	6.7	5
85	Kinetic effects in the self-assembly of pure and mixed tetradecyl and octadecylamine molecules on mica. Surface Science, 2006, 600, 1326-1330.	1.9	5
86	Understanding segregation processes in SAMs formed by mixtures of hydroxylated and non-hydroxylated fatty acids. RSC Advances, 2019, 9, 39252-39263.	3.6	5
87	Influence of Oxygen in the Sensing Properties of Cadmium and Germanium Oxynitride. Langmuir, 1996, 12, 1495-1499.	3.5	4
88	Structural, chemical surface and transport modifications of regenerated cellulose dense membranes due to low-dose Î³-radiation. Materials Chemistry and Physics, 2011, 126, 734-740.	4.0	4
89	Zinc Polyaleuritate Ionomer Coatings as a Sustainable, Alternative Technology for Bisphenol A-Free Metal Packaging. ACS Sustainable Chemistry and Engineering, 2021, 9, 15484-15495.	6.7	4
90	Nanoscale mechanically induced structural and electrical changes in Ge2Sb2Te5 films. Journal of Applied Physics, 2012, 111, .	2.5	2

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91	Structural analysis of mixed Î±- and Î²-amyrin samples. Royal Society Open Science, 2022, 9, 211787.	2.4	2
92	Kinetic salt effects in the reaction of permanganate ions with iodide ions in concentrated electrolyte solutions. Journal of Solution Chemistry, 1990, 19, 19-29.	1.2	1
93	XAS study of V2O5/Al2O3 catalysts doped with rare earth oxides. Physica B: Condensed Matter, 1995, 208-209, 679-680.	2.7	1
94	The Short-Range Structure of Aluminophosphate Oxynitride Catalysts. An ab Initio and Experimental Study. Journal of Physical Chemistry B, 1999, 103, 10850-10857.	2.6	1
95	Elucidating esterification reaction during deposition of cutin monomers from classical molecular dynamics simulations. Journal of Molecular Modeling, 2020, 26, 280.	1.8	0
96	Computational design of cutin derivative bio-materials from fatty acids. , 2022, , 215-243.		0
97	Sustainable Bio-Based Polymers: Towards a Circular Bioeconomy. Polymers, 2022, 14, 22.	4.5	0