Erlantz Lizundia

List of Publications by Year
in descending order

102 papers	3,615 citations	101543 36 h-index	155660 55 g-index
104 all docs	104 docs citations	104 times ranked	3880 citing authors

#	Article	IF	Citations
1	PLLA-grafted cellulose nanocrystals: Role of the CNC content and grafting on the PLA bionanocomposite film properties. Carbohydrate Polymers, 2016, 142, 105-113.	10.2	167
2	Advances in Natural Biopolymerâ€Based Electrolytes and Separators for Battery Applications. Advanced Functional Materials, 2021, 31, 2005646.	14.9	146
3	A review on the thermomechanical properties and biodegradation behaviour of polyesters. European Polymer Journal, 2019, 121, 109296.	5.4	143
4	Crystallization, structural relaxation and thermal degradation in Poly(l-lactide)/cellulose nanocrystal renewable nanocomposites. Carbohydrate Polymers, 2015, 123, 256-265.	10.2	139
5	An Organic Cathode Based Dual-Ion Aqueous Zinc Battery Enabled by a Cellulose Membrane. ACS Applied Energy Materials, 2019, 2, 1288-1294.	5.1	118
6	Cellulose nanocrystal based multifunctional nanohybrids. Progress in Materials Science, 2020, 112, 100668.	32.8	113
7	Polymers for advanced lithium-ion batteries: State of the art and future needs on polymers for the different battery components. Progress in Energy and Combustion Science, 2020, 79, 100846.	31.2	103
8	Multifunctional lignin-based nanocomposites and nanohybrids. Green Chemistry, 2021, 23, 6698-6760.	9.0	93
9	Increased functional properties and thermal stability of flexible cellulose nanocrystal/ZnO films. Carbohydrate Polymers, 2016, 136, 250-258.	10.2	92
10	Phase-structure and mechanical properties of isothermally melt-and cold-crystallized poly (L-lactide). Journal of the Mechanical Behavior of Biomedical Materials, 2013, 17, 242-251.	3.1	79
11	A PALS Contribution to the Supramolecular Structure of Poly(<scp>l</scp>-lactide). Macromolecules, 2010, 43, 4698-4707.	4.8	73
12	Nano- and microstructural effects on thermal properties of poly (l-lactide)/multi-wall carbon nanotube composites. Polymer, 2012, 53, 2412-2421.	3.8	72
13	Construction of antibacterial poly(ethylene terephthalate) films via layer by layer assembly of chitosan and hyaluronic acid. Carbohydrate Polymers, 2016, 143, 35-43.	10.2	72
14	Chiroptical, morphological and conducting properties of chiral nematic mesoporous cellulose/polypyrrole composite films. Journal of Materials Chemistry A, 2017, 5, 19184-19194.	10.3	72
15	Thermal, structural and degradation properties of an aromaticâ€"aliphatic polyester built through ring-opening polymerisation. Polymer Chemistry, 2017, 8, 3530-3538.	3.9	70
16	Analysis of the Câ•O Stretching Band of the Î±-Crystal of Poly(<scp>l</scp>-lactide). Macromolecules, 2009, 42, 5717-5727.	4.8	62
17	Metal Nanoparticles Embedded in Cellulose Nanocrystal Based Films: Material Properties and Post-use Analysis. Biomacromolecules, 2018, 19, 2618-2628.	5.4	62
18	Environmental Impacts of Graphite Recycling from Spent Lithium-Ion Batteries Based on Life Cycle Assessment. ACS Sustainable Chemistry and Engineering, 2021, 9, 14488-14501.	6.7	60

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19	Mesoporous Cellulose Nanocrystal Membranes as Battery Separators for Environmentally Safer Lithium-Ion Batteries. ACS Applied Energy Materials, 2019, 2, 3749-3761.	5.1	58
20	Poly(<scp>l</scp>â€lactide)/zno nanocomposites as efficient UVâ€shielding coatings for packaging applications. Journal of Applied Polymer Science, 2016, 133, .	2.6	57
21	Synergic Effect of Nanolignin and Metal Oxide Nanoparticles into Poly(<scp>l</scp>-lactide) Bionanocomposites: Material Properties, Antioxidant Activity, and Antibacterial Performance. ACS Applied Bio Materials, 2020, 3, 5263-5274.	4.6	52
22	Chiroptical luminescent nanostructured cellulose films. Materials Chemistry Frontiers, 2017, 1, 979-987.	5.9	51
23	Light and gas barrier properties of PLLA/metallic nanoparticles composite films. European Polymer Journal, 2017, 91, 10-20.	5.4	50
24	Influence of Cation and Anion Type on the Formation of the Electroactive Î²-Phase and Thermal and Dynamic Mechanical Properties of Poly(vinylidene fluoride)/Ionic Liquids Blends. Journal of Physical Chemistry C, 2019, 123, 27917-27926.	3.1	50
25	Biocompatible Poly(<scp>L</scp>â€lactide)/MWCNT Nanocomposites: Morphological Characterization, Electrical Properties, and Stem Cell Interaction. Macromolecular Bioscience, 2012, 12, 870-881.	4.1	48
26	Black Titania with Nanoscale Helicity. Advanced Functional Materials, 2019, 29, 1904639.	14.9	45
27	A Single Li-Ion Conductor Based on Cellulose. ACS Applied Energy Materials, 2019, 2, 5686-5691.	5.1	45
28	Cellulose and its derivatives for lithium ion battery separators: A review on the processing methods and properties. Carbohydrate Polymer Technologies and Applications, 2020, 1, 100001.	2.6	45
29	Magnetic cellulose nanocrystal nanocomposites for the development of green functional materials. Carbohydrate Polymers, 2017, 175, 425-432.	10.2	44
30	Titania-Cellulose Hybrid Monolith for In-Flow Purification of Water under Solar Illumination. ACS Applied Materials & Interfaces, 2018, 10, 29599-29607.	8.0	44
31	Degradation Behavior, Biocompatibility, Electrochemical Performance, and Circularity Potential of Transient Batteries. Advanced Science, 2021, 8, 2004814.	11.2	44
32	Biomimetic photonic materials derived from chitin and chitosan. Journal of Materials Chemistry C, 2021, 9, 796-817.	5.5	44
33	Thermal stability increase in metallic nanoparticles-loaded cellulose nanocrystal nanocomposites. Carbohydrate Polymers, 2017, 171, 193-201.	10.2	43
34	Iridescent cellulose nanocrystal films: the link between structural colour and Braggâ€™s law. European Journal of Physics, 2018, 39, 045803.	0.6	42
35	Cu-coated cellulose nanopaper for green and low-cost electronics. Cellulose, 2016, 23, 1997-2010.	4.9	41
36	Methylene diphenyl diisocyanate (MDI) and toluene diisocyanate (TDI) based polyurethanes: thermal, shape-memory and mechanical behavior. RSC Advances, 2016, 6, 69094-69102.	3.6	38

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37	Water-Soluble Cellulose Derivatives as Suitable Matrices for Multifunctional Materials. Biomacromolecules, 2019, 20, 2786-2795.	5.4	38
38	Towards the development of eco-friendly disposable polymers: ZnO-initiated thermal and hydrolytic degradation in poly(<scp>l</scp>-lactide)/ZnO nanocomposites. RSC Advances, 2016, 6, 15660-15669.	3.6	37
39	Transient Rechargeable Battery with a High Lithium Transport Number Cellulosic Separator. Advanced Functional Materials, 2021, 31, 2101827.	14.9	36
40	Hierarchical Nanocelluloseâ€Based Gel Polymer Electrolytes for Stable Na Electrodeposition in Sodium Ion Batteries. Small, 2022, 18, e2107183.	10.0	35
41	From implantation to degradation â€" are poly (l-lactide)/multiwall carbon nanotube composite materials really cytocompatible?. Nanomedicine: Nanotechnology, Biology, and Medicine, 2014, 10, e1041-e1051.	3.3	34
42	Physical aging and mechanical performance of poly(<scp>l</scp>â€lactide)/ZnO nanocomposites. Journal of Applied Polymer Science, 2016, 133, .	2.6	31
43	Chiral Nematic Cellulose Nanocrystal/Germania and Carbon/Germania Composite Aerogels as Supercapacitor Materials. Chemistry of Materials, 2021, 33, 5197-5209.	6.7	31
44	Luminescent carbon dots obtained from polymeric waste. Journal of Cleaner Production, 2020, 262, 121288.	9.3	29
45	Study of the chain microstructure effects on the resulting thermal properties of poly(l-lactide)/poly(N-isopropylacrylamide) biomedical materials. Materials Science and Engineering C, 2015, 50, 97-106.	7.3	28
46	Self-Assembly Route to TiO₂ and TiC with a Liquid Crystalline Order. Chemistry of Materials, 2019, 31, 2174-2181.	6.7	28
47	Environmental Impact Analysis of Aprotic Liâ€"O₂ Batteries Based on Life Cycle Assessment. ACS Sustainable Chemistry and Engineering, 2021, 9, 7139-7153.	6.7	27
48	Environmental Impacts of Aqueous Zinc Ion Batteries Based on Life Cycle Assessment. Advanced Sustainable Systems, 2022, 6, 2100308.	5.3	27
49	Grafting of Cellulose Nanocrystals. , 2016, , 61-113.		26
50	Comparative life cycle assessment of high performance lithium-sulfur battery cathodes. Journal of Cleaner Production, 2021, 282, 124528.	9.3	26
51	Organic waste valorisation towards circular and sustainable biocomposites. Green Chemistry, 2022, 24, 5429-5459.	9.0	26
52	Impact of ZnO nanoparticle morphology on relaxation and transport properties of PLA nanocomposites. Polymer Testing, 2019, 75, 175-184.	4.8	24
53	PLLA/ZnO nanocomposites: Dynamic surfaces to harness cell differentiation. Colloids and Surfaces B: Biointerfaces, 2016, 144, 152-160.	5.0	22
54	Electroless plating of platinum nanoparticles onto mesoporous cellulose films for catalytically active free-standing materials. Cellulose, 2019, 26, 5513-5527.	4.9	22

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55	Ecodesign coupled with Life Cycle Assessment to reduce the environmental impacts of an industrial enzymatic cleaner. Sustainable Production and Consumption, 2022, 29, 718-729.	11.0	22
56	Three-dimensional orientation of poly(<scp>l</scp>-lactide) crystals under uniaxial drawing. RSC Advances, 2016, 6, 11943-11951.	3.6	21
57	Biocompatible Chitosan-Functionalized Upconverting Nanocomposites. ACS Omega, 2018, 3, 86-95.	3.5	21
58	Stable Na Electrodeposition Enabled by Agarose-Based Water-Soluble Sodium Ion Battery Separators. ACS Applied Materials & Interfaces, 2021, 13, 21250-21260.	8.0	20
59	Tuneable hydrolytic degradation of poly(l-lactide) scaffolds triggered by ZnO nanoparticles. Materials Science and Engineering C, 2017, 75, 714-720.	7.3	19
60	Coreâ€"Shell Fe₃O₄@Au Nanorod-Loaded Gels for Tunable and Anisotropic Magneto- and Photothermia. ACS Applied Materials & Interfaces, 2022, 14, 7130-7140.	8.0	19
61	Freeâ€volume effects on the thermomechanical performance of epoxyâ€"SiO₂ nanocomposites. Journal of Applied Polymer Science, 2017, 134, 45216.	2.6	18
62	Advances, challenges, and environmental impacts in metalâ€"air battery electrolytes. Materials Today Energy, 2022, 28, 101064.	4.7	18
63	Physical Aging in Poly(L-lactide) and its Multi-Wall Carbon Nanotube Nanocomposites. Macromolecular Symposia, 2012, 321-322, 118-123.	0.7	17
64	Polysaccharide polyelectrolyte multilayer coating on poly(ethylene terephthalate). Polymer International, 2016, 65, 915-920.	3.1	17
65	Cellulose Nanocrystal and Water-Soluble Cellulose Derivative Based Electromechanical Bending Actuators. Materials, 2020, 13, 2294.	2.9	16
66	A Sodium-Ion Battery Separator with Reversible Voltage Response Based on Water-Soluble Cellulose Derivatives. ACS Applied Materials & Interfaces, 2020, 12, 29264-29274.	8.0	16
67	The role of CNC surface modification on the structural, thermal and electrical properties of poly(vinylidene fluoride) nanocomposites. Cellulose, 2020, 27, 3821-3834.	4.9	16
68	Free-standing intrinsically conducting polymer membranes based on cellulose and poly(vinylidene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	5.4	16
69	Influence of Î±-methyl substitutions on interpolymer complexes formation between poly(meth)acrylic acids and poly(N-isopropyl(meth)acrylamide)s. Colloid and Polymer Science, 2015, 293, 1447-1455.	2.1	15
70	Effect of template type on the preparation of the emeraldine salt form of polyaniline (PANI-ES) with horseradish peroxidase isoenzyme C (HRPC) and hydrogen peroxide. RSC Advances, 2019, 9, 33080-33095.	3.6	15
71	Electroactive Î³-Phase, Enhanced Thermal and Mechanical Properties and High Ionic Conductivity Response of Poly (Vinylidene Fluoride)/Cellulose Nanocrystal Hybrid Nanocomposites. Materials, 2020, 13, 743.	2.9	15
72	Environmental Impact Assessment of Na₃V₂(PO₄)₃ Cathode Production for Sodiumâ€Ion Batteries. Advanced Energy and Sustainability Research, 2022, 3, .	5.8	14

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73	Poly(L-lactide)/branched Î²-cyclodextrin blends: Thermal, morphological and mechanical properties. Carbohydrate Polymers, 2016, 144, 25-32.	10.2	13
74	Strain-Induced Crystallization. , 2018, , 471-508.		12
75	Tailoring Electrical and Mechanical Properties of All-Natural Polymer Composites for Environmentally Friendlier Electronics. ACS Applied Polymer Materials, 2020, 2, 1448-1457.	4.4	12
76	Ceramic nanoparticles and carbon nanotubes reinforced thermoplastic materials for piezocapacitive sensing applications. Composites Science and Technology, 2019, 183, 107804.	7.8	10
77	Polysaccharide-Based Superabsorbents: Synthesis, Properties, and Applications. Polymers and Polymeric Composites, 2019, , 1393-1431.	0.6	10
78	Combining cobalt ferrite and graphite with cellulose nanocrystals for magnetically active and electrically conducting mesoporous nanohybrids. Carbohydrate Polymers, 2020, 236, 116001.	10.2	10
79	Thermal, optical and structural properties of blocks and blends of PLA and P2HEB. Green Materials, 2018, 6, 85-96.	2.1	9
80	A simple approach to understand the physical aging in polymers. European Journal of Physics, 2019, 40, 015502.	0.6	9
81	Biomimetic Mesoporous Cobalt Ferrite/Carbon Nanoflake Helices for Freestanding Lithiumâ€Ion Battery Anodes. ChemistrySelect, 2020, 5, 8207-8217.	1.5	9
82	Water-based 2D printing of magnetically active cellulose derivative nanocomposites. Carbohydrate Polymers, 2020, 233, 115855.	10.2	8
83	Biomimetic Woodâ€Inspired Batteries: Fabrication, Electrochemical Performance, and Sustainability within a Circular Perspective. Advanced Sustainable Systems, 2021, 5, 2100236.	5.3	8
84	Optimum operational lifespan of household appliances considering manufacturing and use stage improvements via life cycle assessment. Sustainable Production and Consumption, 2022, 32, 52-65.	11.0	8
85	Magnetically active nanocomposites based on biodegradable polylactide, polycaprolactone, polybutylene succinate and polybutylene adipate terephthalate. Polymer, 2022, , 124804.	3.8	7
86	Nanocomposites Based on PLLA and Multi Walled Carbon Nanotubes Support the Myogenic Differentiation of Murine Myoblast Cell Line. ISRN Tissue Engineering, 2013, 2013, 1-8.	0.5	6
87	Influence of N-alkyl and Î±-substitutions on the thermal behaviour of H-bonded interpolymer complexes based on polymers with acrylamide or lactame groups and poly(4-vinylphenol). Thermochimica Acta, 2015, 614, 191-198.	2.7	6
88	Active release coating of multilayer assembled branched and ionic Î²-cyclodextrins onto poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 10 T	10.2	6
89	Kinetic, thermal, structural and degradation studies on the effect of meta-substituted aromatic-aliphatic polyesters built through ring-opening polymerisation. Polymer Degradation and Stability, 2019, 169, 108984.	5.8	6
90	A new method to measure the accuracy of intraoral scanners along the complete dental arch: A pilot study. Journal of Advanced Prosthodontics, 2019, 11, 331.	2.6	6

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91	Effect of SWCNT Content and Water Vapor Adsorption on the Electrical Properties of Cellulose Nanocrystal-Based Nanohybrids. Journal of Physical Chemistry C, 2020, 124, 14901-14910.	3.1	6
92	Upcycling discarded cellulosic surgical masks into catalytically active freestanding materials. Cellulose, 2022, 29, 2223-2240.	4.9	6
93	Nanopatterned polystyrene-b-poly(acrylic acid) surfaces to modulate cell-material interaction. Materials Science and Engineering C, 2017, 75, 229-236.	7.3	5
94	Hydrolysis of poly(l â€lactide)/ZnO nanocomposites with antimicrobial activity. Journal of Applied Polymer Science, 2019, 136, 47786.	2.6	5
95	Effect of metalâ€oxide nanoparticle presence and alginate crossâ€linking on cellulose nanocrystalâ€based aerogels. Journal of Applied Polymer Science, 2021, 138, 50639.	2.6	4
96	The Role of Critical Raw Materials for Novel Strategies in Sustainable Secondary Batteries. Physica Status Solidi (A) Applications and Materials Science, 2022, 219, .	1.8	4
97	Education in Circular Economy: Focusing on Life Cycle Thinking at the University of the Basque Country. Lecture Notes in Mechanical Engineering, 2021, , 360-365.	0.4	3
98	Influence of cellulose nanocrystal surface functionalization on the bending response of cellulose nanocrystal/ionic liquid soft actuators. Physical Chemistry Chemical Physics, 2021, 23, 6710-6716.	2.8	3
99	Teflon tape for laboratory teaching of three-dimensional x-ray crystallography. European Journal of Physics, 2018, 39, 055502.	0.6	2
100	Fostering Education for Circular Economy through Life Cycle Thinking. , 0, , .		2
101	WHAT DO FIRST YEAR ENGINEERING STUDENTS REALLY LEARN?. Dyna (Spain), 2021, 96, 565-565.	0.2	1
102	Zelulosa-nanokristaletan oinarritutako material nanokonposatuak. Ekaia (journal), 2019, , 119-142.	0.0	0