

# Carlos A GarcÃ-a-GonzÃ;lez

## List of Publications by Year in descending order

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82  
papers

4,858  
citations

81839

39  
h-index

95218

68  
g-index

83  
all docs

83  
docs citations

83  
times ranked

4435  
citing authors

#	ARTICLE	IF	CITATIONS
1	Polysaccharide-based aerogels "Promising biodegradable carriers for drug delivery systems. Carbohydrate Polymers, 2011, 86, 1425-1438.	5.1	602
2	Synthesis and biomedical applications of aerogels: Possibilities and challenges. Advances in Colloid and Interface Science, 2016, 236, 1-27.	7.0	270
3	Supercritical drying of aerogels using CO <sub>2</sub> : Effect of extraction time on the end material textural properties. Journal of Supercritical Fluids, 2012, 66, 297-306.	1.6	266
4	Polysaccharide-based aerogel microspheres for oral drug delivery. Carbohydrate Polymers, 2015, 117, 797-806.	5.1	234
5	Preparation of novel whey protein-based aerogels as drug carriers for life science applications. Journal of Supercritical Fluids, 2012, 72, 111-119.	1.6	154
6	Preparation of tailor-made starch-based aerogel microspheres by the emulsion-gelation method. Carbohydrate Polymers, 2012, 88, 1378-1386.	5.1	149
7	Preparation of biodegradable nanoporous microspherical aerogel based on alginate. Carbohydrate Polymers, 2011, 84, 1011-1018.	5.1	148
8	Vancomycin-loaded chitosan aerogel particles for chronic wound applications. Carbohydrate Polymers, 2019, 204, 223-231.	5.1	136
9	Aerogels in drug delivery: From design to application. Journal of Controlled Release, 2021, 332, 40-63.	4.8	123
10	Microstructural changes induced in Portland cement-based materials due to natural and supercritical carbonation. Journal of Materials Science, 2008, 43, 3101-3111.	1.7	116
11	An Opinion Paper on Aerogels for Biomedical and Environmental Applications. Molecules, 2019, 24, 1815.	1.7	115
12	Use of supercritical fluid technology for the production of tailor-made aerogel particles for delivery systems. Journal of Supercritical Fluids, 2013, 79, 152-158.	1.6	110
13	Processing of Materials for Regenerative Medicine Using Supercritical Fluid Technology. Bioconjugate Chemistry, 2015, 26, 1159-1171.	1.8	89
14	Prilling and supercritical drying: A successful duo to produce core-shell polysaccharide aerogel beads for wound healing. Carbohydrate Polymers, 2016, 147, 482-489.	5.1	84
15	Supercritical processing of starch aerogels and aerogel-loaded poly( $\mu$ -caprolactone) scaffolds for sustained release of ketoprofen for bone regeneration. Journal of CO <sub>2</sub> Utilization, 2017, 18, 237-249.	3.3	80
16	Polyamide 6/chitosan nanofibers as support for the immobilization of Trametes versicolor laccase for the elimination of endocrine disrupting chemicals. Enzyme and Microbial Technology, 2016, 89, 31-38.	1.6	77
17	Hybrid Methacrylated Gelatin and Hyaluronic Acid Hydrogel Scaffolds. Preparation and Systematic Characterization for Prospective Tissue Engineering Applications. International Journal of Molecular Sciences, 2021, 22, 6758.	1.8	73
18	A new era for sterilization based on supercritical CO <sub>2</sub> technology. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 399-428.	1.6	68

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19	Cyclodextrins as versatile building blocks for regenerative medicine. <i>Journal of Controlled Release</i> , 2017, 268, 269-281.	4.8	67
20	Impregnation of a biocompatible polymer aided by supercritical CO <sub>2</sub> : Evaluation of drug stability and drug-matrix interactions. <i>Journal of Supercritical Fluids</i> , 2009, 48, 56-63.	1.6	65
21	3D-printed alginate-hydroxyapatite aerogel scaffolds for bone tissue engineering. <i>Materials Science and Engineering C</i> , 2021, 131, 112525.	3.8	64
22	Modification of Composition and Microstructure of Portland Cement Pastes as a Result of Natural and Supercritical Carbonation Procedures. <i>Industrial &amp; Engineering Chemistry Research</i> , 2006, 45, 4985-4992.	1.8	63
23	From the printer to the lungs: Inkjet-printed aerogel particles for pulmonary delivery. <i>Chemical Engineering Journal</i> , 2019, 357, 559-566.	6.6	62
24	Aerogels as porous structures for food applications: Smart ingredients and novel packaging materials. <i>Food Structure</i> , 2021, 28, 100188.	2.3	62
25	Design of biocompatible magnetic pectin aerogel monoliths and microspheres. <i>RSC Advances</i> , 2012, 2, 9816.	1.7	58
26	New insights on the use of supercritical carbon dioxide for the accelerated carbonation of cement pastes. <i>Journal of Supercritical Fluids</i> , 2008, 43, 500-509.	1.6	55
27	Design of Aerogels, Cryogels and Xerogels of Alginate: Effect of Molecular Weight, Gelation Conditions and Drying Method on Particles <sup>™</sup> Micromeritics. <i>Molecules</i> , 2019, 24, 1049.	1.7	54
28	Dried chitosan-gels as organocatalysts for the production of biomass-derived platform chemicals. <i>Applied Catalysis A: General</i> , 2012, 445-446, 180-186.	2.2	52
29	Technologies and Formulation Design of Polysaccharide-Based Hydrogels for Drug Delivery. <i>Molecules</i> , 2020, 25, 3156.	1.7	50
30	scCO <sub>2</sub> -foamed silk fibroin aerogel/poly( $\mu$ -caprolactone) scaffolds containing dexamethasone for bone regeneration. <i>Journal of CO<sub>2</sub> Utilization</i> , 2019, 31, 51-64.	3.3	49
31	Conductive nanostructured materials based on poly-(3,4-ethylenedioxythiophene) (PEDOT) and starch/ $\kappa$ -carrageenan for biomedical applications. <i>Carbohydrate Polymers</i> , 2018, 189, 304-312.	5.1	48
32	A breakthrough technique for the preparation of high-yield precipitated calcium carbonate. <i>Journal of Supercritical Fluids</i> , 2010, 52, 298-305.	1.6	45
33	Preparation of silane-coated TiO <sub>2</sub> nanoparticles in supercritical CO <sub>2</sub> . <i>Journal of Colloid and Interface Science</i> , 2009, 338, 491-499.	5.0	44
34	Jet Cutting Technique for the Production of Chitosan Aerogel Microparticles Loaded with Vancomycin. <i>Polymers</i> , 2020, 12, 273.	2.0	43
35	Encapsulation efficiency of solid lipid hybrid particles prepared using the PGSS <sup>®</sup> technique and loaded with different polarity active agents. <i>Journal of Supercritical Fluids</i> , 2010, 54, 342-347.	1.6	42
36	Hydrothermal synthesis of highly porous carbon monoliths from carbohydrates and phloroglucinol. <i>RSC Advances</i> , 2013, 3, 17088.	1.7	42

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37	Biodegradable PCL/fibroin/hydroxyapatite porous scaffolds prepared by supercritical foaming for bone regeneration. <i>International Journal of Pharmaceutics</i> , 2017, 527, 115-125.	2.6	42
38	Antimicrobial Properties and Osteogenicity of Vancomycin-Loaded Synthetic Scaffolds Obtained by Supercritical Foaming. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 3349-3360.	4.0	42
39	Synthesis of an organic conductive porous material using starch aerogels as template for chronic invasive electrodes. <i>Materials Science and Engineering C</i> , 2014, 37, 177-183.	3.8	40
40	Production of hybrid lipid-based particles loaded with inorganic nanoparticles and active compounds for prolonged topical release. <i>International Journal of Pharmaceutics</i> , 2009, 382, 296-304.	2.6	39
41	Supercritical CO <sub>2</sub> processing of polymers for the production of materials with applications in tissue engineering and drug delivery. <i>Journal of Materials Science</i> , 2008, 43, 1939-1947.	1.7	38
42	Stimuli-responsive polymers for antimicrobial therapy: drug targeting, contact-killing surfaces and competitive release. <i>Expert Opinion on Drug Delivery</i> , 2016, 13, 1109-1119.	2.4	38
43	Growth factors delivery from hybrid PCL-starch scaffolds processed using supercritical fluid technology. <i>Carbohydrate Polymers</i> , 2016, 142, 282-292.	5.1	38
44	Sterile and Dual-Porous Aerogels Scaffolds Obtained through a Multistep Supercritical CO <sub>2</sub> -Based Approach. <i>Molecules</i> , 2019, 24, 871.	1.7	38
45	Supercritical CO <sub>2</sub> antisolvent precipitation of polymer networks of l-PLA, PMMA and PMMA/PCL blends for biomedical applications. <i>European Polymer Journal</i> , 2008, 44, 1081-1094.	2.6	37
46	Solvent-Free Approaches for the Processing of Scaffolds in Regenerative Medicine. <i>Polymers</i> , 2020, 12, 533.	2.0	36
47	Preparation and Characterization of Surface Silanized TiO <sub>2</sub> Nanoparticles under Compressed CO <sub>2</sub> : Reaction Kinetics. <i>Journal of Physical Chemistry C</i> , 2009, 113, 13780-13786.	1.5	35
48	Composite fibrous biomaterials for tissue engineering obtained using a supercritical CO <sub>2</sub> antisolvent process. <i>Acta Biomaterialia</i> , 2009, 5, 1094-1103.	4.1	34
49	Preparation and stability of dexamethasone-loaded polymeric scaffolds for bone regeneration processed by compressed CO <sub>2</sub> foaming. <i>Journal of CO<sub>2</sub> Utilization</i> , 2018, 24, 89-98.	3.3	33
50	Bioaerogels: Promising Nanostructured Materials in Fluid Management, Healing and Regeneration of Wounds. <i>Molecules</i> , 2021, 26, 3834.	1.7	31
51	Porosity and Water Permeability Study of Supercritically Carbonated Cement Pastes Involving Mineral Additions. <i>Industrial &amp; Engineering Chemistry Research</i> , 2007, 46, 2488-2496.	1.8	30
52	Synthetic scaffolds with full pore interconnectivity for bone regeneration prepared by supercritical foaming using advanced biofunctional plasticizers. <i>Biofabrication</i> , 2017, 9, 035002.	3.7	29
53	Measurements and Correlation of Octyltriethoxysilane Solubility in Supercritical CO <sub>2</sub> and Assembly of Functional Silane Monolayers on the Surface of Nanometric Particles. <i>Industrial &amp; Engineering Chemistry Research</i> , 2009, 48, 9952-9960.	1.8	28
54	Towards the synthesis of Schiff base macrocycles under supercritical CO <sub>2</sub> conditions. <i>Chemical Communications</i> , 2010, 46, 4315.	2.2	27

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55	3D-Printed, Dual Crosslinked and Sterile Aerogel Scaffolds for Bone Tissue Engineering. <i>Polymers</i> , 2022, 14, 1211.	2.0	24
56	Insights on toxicity, safe handling and disposal of silica aerogels and amorphous nanoparticles. <i>Environmental Science: Nano</i> , 2021, 8, 1177-1195.	2.2	23
57	Interaction of bentonite with supercritically carbonated concrete. <i>Applied Clay Science</i> , 2009, 42, 488-496.	2.6	20
58	Solvent- and thermal-induced crystallization of poly(L-lactic acid) in supercritical CO <sub>2</sub> medium. <i>Journal of Applied Polymer Science</i> , 2009, 111, 291-300.	1.3	19
59	Lidocaine-Loaded Solid Lipid Microparticles (SLMPs) Produced from Gas-Saturated Solutions for Wound Applications. <i>Pharmaceutics</i> , 2020, 12, 870.	2.0	19
60	A Pathway From Porous Particle Technology Toward Tailoring Aerogels for Pulmonary Drug Administration. <i>Frontiers in Bioengineering and Biotechnology</i> , 2021, 9, 671381.	2.0	18
61	New insights in the morphological characterization and modelling of poly( $\epsilon$ -caprolactone) bone scaffolds obtained by supercritical CO <sub>2</sub> foaming. <i>Journal of Supercritical Fluids</i> , 2020, 166, 105012.	1.6	15
62	Low viscosity-PLGA scaffolds by compressed CO <sub>2</sub> foaming for growth factor delivery. <i>RSC Advances</i> , 2016, 6, 70510-70519.	1.7	14
63	Variability of Physical and Chemical Properties of TLUD Stove Derived Biochars. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 507.	1.3	14
64	Solvent-Free Processing of Drug-Loaded Poly( $\epsilon$ -Caprolactone) Scaffolds with Tunable Macroporosity by Combination of Supercritical Foaming and Thermal Porogen Leaching. <i>Polymers</i> , 2021, 13, 159.	2.0	14
65	Assessment of scCO <sub>2</sub> techniques for surface modification of micro- and nanoparticles: Process design methodology based on solubility. <i>Journal of Supercritical Fluids</i> , 2010, 54, 362-368.	1.6	13
66	Supercritical CO <sub>2</sub> technology for one-pot foaming and sterilization of polymeric scaffolds for bone regeneration. <i>International Journal of Pharmaceutics</i> , 2021, 605, 120801.	2.6	13
67	Chapter 16. Biomedical Applications of Polysaccharide and Protein Based Aerogels. <i>RSC Green Chemistry</i> , 2018, , 295-323.	0.0	13
68	Spectroscopic analysis of triflusal impregnated into PMMA from supercritical CO <sub>2</sub> solution. <i>Vibrational Spectroscopy</i> , 2009, 49, 183-189.	1.2	12
69	Application of principal component analysis to the thermal characterization of silanized nanoparticles obtained at supercritical carbon dioxide conditions. <i>Analytica Chimica Acta</i> , 2009, 635, 227-234.	2.6	12
70	Characterization of new topical ketoprofen formulations prepared by drug entrapment in solid lipid matrices. <i>Journal of Pharmaceutical Sciences</i> , 2011, 100, 4783-4789.	1.6	12
71	Stability Studies of Starch Aerogel Formulations for Biomedical Applications. <i>Biomacromolecules</i> , 2020, 21, 5336-5344.	2.6	12
72	Supercritical CO <sub>2</sub> sterilization: An effective treatment to reprocess FFP3 face masks and to reduce waste during COVID-19 pandemic. <i>Science of the Total Environment</i> , 2022, 826, 154089.	3.9	12

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73	Modeling of the Production of Lipid Microparticles Using PGSS® Technique. <i>Molecules</i> , 2020, 25, 4927.	1.7	11
74	Impregnation of a triphenylpyrylium cation into zeolite cavities using supercritical CO <sub>2</sub> . <i>Journal of Supercritical Fluids</i> , 2009, 50, 305-312.	1.6	10
75	Preparation of trityl cations in faujasite micropores through supercritical CO <sub>2</sub> impregnation. <i>Microporous and Mesoporous Materials</i> , 2010, 132, 357-362.	2.2	10
76	Preparation of Nanostructured Organic-Inorganic Hybrid Materials Using Supercritical Fluid Technology. <i>Composite Interfaces</i> , 2009, 16, 143-155.	1.3	9
77	Patent Survey on Current Applications of Supercritical Fluid Technology in Regenerative Medicine. <i>Recent Patents on Nanomedicine</i> , 2015, 5, 48-58.	0.5	8
78	Combined sterilization and fabrication of drug-loaded scaffolds using supercritical CO <sub>2</sub> technology. <i>International Journal of Pharmaceutics</i> , 2022, 612, 121362.	2.6	8
79	The subdivision behavior of polymeric tablets. <i>International Journal of Pharmaceutics</i> , 2019, 568, 118554.	2.6	7
80	The AEROPILs Generation: Novel Poly(Ionic Liquid)-Based Aerogels for CO <sub>2</sub> Capture. <i>International Journal of Molecular Sciences</i> , 2022, 23, 200.	1.8	6
81	Physicochemical Changes in Loam Soils Amended with Bamboo Biochar and Their Influence in Tomato Production Yield. <i>Agronomy</i> , 2021, 11, 2052.	1.3	5
82	Preparation of Vancomycin-Loaded Aerogels Implementing Inkjet Printing and Superhydrophobic Surfaces. <i>Gels</i> , 2022, 8, 417.	2.1	5