

Eduardo Saiz

List of Publications by Year in descending order

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Version: 2024-02-01

58
papers

12,364
citations

94269

37
h-index

149479

56
g-index

58
all docs

58
docs citations

58
times ranked

14531
citing authors

#	ARTICLE	IF	CITATIONS
1	Bioinspired structural materials. <i>Nature Materials</i> , 2015, 14, 23-36.	13.3	3,284
2	Freezing as a Path to Build Complex Composites. <i>Science</i> , 2006, 311, 515-518.	6.0	1,676
3	Freeze casting of hydroxyapatite scaffolds for bone tissue engineering. <i>Biomaterials</i> , 2006, 27, 5480-5489.	5.7	779
4	Ice-templated porous alumina structures. <i>Acta Materialia</i> , 2007, 55, 1965-1974.	3.8	647
5	Bioactive glass scaffolds for bone tissue engineering: state of the art and future perspectives. <i>Materials Science and Engineering C</i> , 2011, 31, 1245-1256.	3.8	546
6	Activation Energy Paths for Graphene Nucleation and Growth on Cu. <i>ACS Nano</i> , 2012, 6, 3614-3623.	7.3	370
7	Direct ink writing of highly porous and strong glass scaffolds for load-bearing bone defects repair and regeneration. <i>Acta Biomaterialia</i> , 2011, 7, 3547-3554.	4.1	302
8	Sintering and robocasting of β -tricalcium phosphate scaffolds for orthopaedic applications. <i>Acta Biomaterialia</i> , 2006, 2, 457-466.	4.1	291
9	Super-tough MXene-functionalized graphene sheets. <i>Nature Communications</i> , 2020, 11, 2077.	5.8	289
10	Robocasting of structural ceramic parts with hydrogel inks. <i>Journal of the European Ceramic Society</i> , 2016, 36, 2525-2533.	2.8	268
11	Printing in Three Dimensions with Graphene. <i>Advanced Materials</i> , 2015, 27, 1688-1693.	11.1	266
12	Mesoscale assembly of chemically modified graphene into complex cellular networks. <i>Nature Communications</i> , 2014, 5, 4328.	5.8	250
13	A novel biomimetic approach to the design of high-performance ceramic-metal composites. <i>Journal of the Royal Society Interface</i> , 2010, 7, 741-753.	1.5	247
14	Mechanical properties of calcium phosphate scaffolds fabricated by robocasting. <i>Journal of Biomedical Materials Research - Part A</i> , 2008, 85A, 218-227.	2.1	246
15	A New Approach to Mineralization of Biocompatible Hydrogel Scaffolds: An Efficient Process toward 3-Dimensional Bonelike Composites. <i>Journal of the American Chemical Society</i> , 2003, 125, 1236-1243.	6.6	245
16	Architectural Control of Freeze-Cast Ceramics Through Additives and Templating. <i>Journal of the American Ceramic Society</i> , 2009, 92, 1534-1539.	1.9	240
17	Bioinspired Strong and Highly Porous Glass Scaffolds. <i>Advanced Functional Materials</i> , 2011, 21, 1058-1063.	7.8	215
18	Toward Strong and Tough Glass and Ceramic Scaffolds for Bone Repair. <i>Advanced Functional Materials</i> , 2013, 23, 5461-5476.	7.8	183

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19	Multimaterial 3D Printing of Graphene-Based Electrodes for Electrochemical Energy Storage Using Thermoresponsive Inks. ACS Applied Materials & Interfaces, 2017, 9, 37136-37145.	4.0	148
20	3D Printing Bioinspired Ceramic Composites. Scientific Reports, 2017, 7, 13759.	1.6	141
21	Self-Healing Graphene-Based Composites with Sensing Capabilities. Advanced Materials, 2015, 27, 4788-4794.	11.1	136
22	Perspectives on the role of nanotechnology in bone tissue engineering. Dental Materials, 2013, 29, 103-115.	1.6	123
23	Light and Strong SiC Networks. Advanced Functional Materials, 2016, 26, 1636-1645.	7.8	109
24	Using graphene networks to build bioinspired self-monitoring ceramics. Nature Communications, 2017, 8, 14425.	5.8	99
25	On the structural, mechanical, and biodegradation properties of HA/TCP robocast scaffolds. , 2013, 101, 1233-1242.		89
26	Fracture modes under uniaxial compression in hydroxyapatite scaffolds fabricated by robocasting. Journal of Biomedical Materials Research - Part A, 2007, 83A, 646-655.	2.1	79
27	Highly flexible silica/chitosan hybrid scaffolds with oriented pores for tissue regeneration. Journal of Materials Chemistry B, 2015, 3, 7560-7576.	2.9	78
28	Graphene Oxide: An All-in-One Processing Additive for 3D Printing. ACS Applied Materials & Interfaces, 2017, 9, 32977-32989.	4.0	74
29	Strong and tough metal/ceramic micro-laminates. Acta Materialia, 2018, 144, 202-215.	3.8	73
30	Bioinspired Supertough Graphene Fiber through Sequential Interfacial Interactions. ACS Nano, 2018, 12, 8901-8908.	7.3	67
31	Understanding Mechanical Response of Elastomeric Graphene Networks. Scientific Reports, 2015, 5, 13712.	1.6	64
32	Elastomeric high-mineral content hydrogel-hydroxyapatite composites for orthopedic applications. Journal of Biomedical Materials Research - Part A, 2009, 89A, 1098-1107.	2.1	55
33	Ultratough Bioinspired Graphene Fiber via Sequential Toughening of Hydrogen and Ionic Bonding. ACS Nano, 2018, 12, 12638-12645.	7.3	53
34	Kinetics of Metal-Ceramic Composite Formation by Reactive Penetration of Silicates with Molten Aluminum. Journal of the American Ceramic Society, 1998, 81, 2381-2393.	1.9	50
35	Autonomous self-healing structural composites with bio-inspired design. Scientific Reports, 2016, 6, 25059.	1.6	50
36	Three-Dimensional Biomimetic Mineralization of Dense Hydrogel Templates. Journal of the American Chemical Society, 2009, 131, 9937-9939.	6.6	45

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37	Modeling of the self-limited growth in catalytic chemical vapor deposition of graphene. <i>New Journal of Physics</i> , 2013, 15, 053012.	1.2	40
38	3-D printing of chitosan-calcium phosphate inks: rheology, interactions and characterization. <i>Journal of Materials Science: Materials in Medicine</i> , 2019, 30, 6.	1.7	40
39	Mechanical and biological evaluation of 3D printed 10CeTZP-Al ₂ O ₃ structures. <i>Journal of the European Ceramic Society</i> , 2017, 37, 3151-3158.	2.8	34
40	SiC porous structures obtained with innovative shaping technologies. <i>Journal of the European Ceramic Society</i> , 2018, 38, 823-835.	2.8	34
41	Sol-gel method to fabricate CaP scaffolds by robocasting for tissue engineering. <i>Journal of Materials Science: Materials in Medicine</i> , 2012, 23, 921-930.	1.7	33
42	Nanotechnology for Dental Implants. <i>International Journal of Oral and Maxillofacial Implants</i> , 2013, 28, e535-e546.	0.6	33
43	A two-scale Weibull approach to the failure of porous ceramic structures made by robocasting: Possibilities and limits. <i>Journal of the European Ceramic Society</i> , 2013, 33, 679-688.	2.8	29
44	Nacre-like ceramic refractories for high temperature applications. <i>Journal of the European Ceramic Society</i> , 2018, 38, 2186-2193.	2.8	29
45	Bioinspired Nacre-Like Alumina with a Metallic Nickel Compliant Phase Fabricated by Spark Plasma Sintering. <i>Small</i> , 2019, 15, 1900573.	5.2	28
46	Role of Molecular Chemistry of Degradable pHEMA Hydrogels in Three-Dimensional Biomimetic Mineralization. <i>Chemistry of Materials</i> , 2012, 24, 1331-1337.	3.2	26
47	Designing Smart Particles for the Assembly of Complex Macroscopic Structures. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 7805-7808.	7.2	26
48	High temperature strength of an ultra high temperature ceramic produced by additive manufacturing. <i>Ceramics International</i> , 2019, 45, 18210-18214.	2.3	26
49	Lamellar Spacing in Cuboid Hydroxyapatite Scaffolds Regulates Bone Formation by Human Bone Marrow Stromal Cells. <i>Tissue Engineering - Part A</i> , 2011, 17, 1615-1623.	1.6	20
50	Strong Biomimetic Hydroxyapatite Scaffolds. <i>Advances in Science and Technology</i> , 2006, 49, 148-152.	0.2	19
51	A novel approach for the fabrication of carbon nanofibre/ceramic porous structures. <i>Journal of the European Ceramic Society</i> , 2013, 33, 2365-2374.	2.8	15
52	Nanotechnology approaches to improve dental implants. <i>International Journal of Oral and Maxillofacial Implants</i> , 2011, 26 Suppl, 25-44; discussion 45-9.	0.6	15
53	Conformable green bodies: Plastic forming of robocasted advanced ceramics. <i>Journal of the European Ceramic Society</i> , 2020, 40, 552-557.	2.8	12
54	Fracture toughness of bone at the microscale. <i>Acta Biomaterialia</i> , 2021, 121, 475-483.	4.1	11

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55	Complex ceramic architectures by directed assembly of "responsive"™ particles. Journal of the European Ceramic Society, 2017, 37, 199-211.	2.8	9
56	Osseous differentiation on freeze casted 10CeTZP-Al2O3 structures. Journal of the European Ceramic Society, 2017, 37, 5009-5016.	2.8	5
57	Artificial Bone and Teeth through Controlled Ice Growth in Colloidal Suspensions. AIP Conference Proceedings, 2007, , .	0.3	2
58	Using Ice to Mimic Nacre: From Structural Applications to Artificial Bone. , 0, , 174-192.		1