Alvaro Mata

List of Publications by Year
in descending order

76 papers	5,877 citations	109264 35 h-index	79644 73 g-index
80 all docs	80 docs citations	80 times ranked	8379 citing authors

#	Article	IF	Citations
1	Exploiting the fundamentals of biological organization for the advancement of biofabrication. Current Opinion in Biotechnology, 2022, 74, 42-54.	3.3	7
2	Embracing complexity in biomaterials design. Biomaterials and Biosystems, 2022, 6, 100039.	1.0	8
3	Rational design of hydrogels for immunomodulation. International Journal of Energy Production and Management, 2022, 9, .	1.9	29
4	Peptide Amphiphile Hydrogels Based on Homoternary Cucurbit[8]uril Host-Guest Complexes. Bioconjugate Chemistry, 2022, 33, 111-120.	1.8	6
5	Disordered Protein Stabilization by Co-Assembly of Short Peptides Enables Formation of Robust Membranes. ACS Applied Materials & Interfaces, 2022, 14, 464-473.	4.0	8
6	Disinfectorâ€Assisted Low Temperature Reduced Graphene Oxideâ€Protein Surgical Dressing for the Postoperative Photothermal Treatment of Melanoma. Advanced Functional Materials, 2022, 32, .	7.8	4
7	Potential sealing and repair of human <scp>FM</scp> defects after trauma with peptide amphiphiles and Cx43 antisense. Prenatal Diagnosis, 2021, 41, 89-99.	1.1	5
8	3D Patterning within Hydrogels for the Recreation of Functional Biological Environments. Advanced Functional Materials, 2021, 31, 2009574.	7.8	35
9	An interfacial self-assembling bioink for the manufacturing of capillary-like structures with tuneable and anisotropic permeability. Biofabrication, 2021, 13, 035027.	3.7	16
10	Topographically guided hierarchical mineralization. Materials Today Bio, 2021, 11, 100119.	2.6	10
11	<i>De Novo</i> Design of Functional Coassembling Organicâ€“Inorganic Hydrogels for Hierarchical Mineralization and Neovascularization. ACS Nano, 2021, 15, 11202-11217.	7.3	38
12	Engineered In vitro Models for Pathological Calcification: Routes Toward Mechanistic Understanding. Advanced NanoBiomed Research, 2021, 1, 2100042.	1.7	2
13	Carboxylated-xyloglucan and peptide amphiphile co-assembly in wound healing. International Journal of Energy Production and Management, 2021, 8, rbab040.	1.9	11
14	Polymyxin Bâ€Triggered Assembly of Peptide Hydrogels for Localized and Sustained Release of Combined Antimicrobial Therapy. Advanced Healthcare Materials, 2021, 10, e2101465.	3.9	17
15	Bioengineered 3D models of human pancreatic cancer recapitulate in vivo tumour biology. Nature Communications, 2021, 12, 5623.	5.8	53
16	Modeling the Tumor Microenvironment of Ovarian Cancer: The Application of Self-Assembling Biomaterials. Cancers, 2021, 13, 5745.	1.7	6
17	Covalent co-assembly between resilin-like polypeptide and peptide amphiphile into hydrogels with controlled nanostructure and improved mechanical properties. Biomaterials Science, 2020, 8, 846-857.	2.6	35
18	Peptide-protein coassembling matrices as a biomimetic 3D model of ovarian cancer. Science Advances, 2020, 6, .	4.7	54

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19	Hostâ€“Guest-Mediated Epitope Presentation on Self-Assembled Peptide Amphiphile Hydrogels. ACS Biomaterials Science and Engineering, 2020, 6, 4870-4880.	2.6	14
20	Integrating self-assembly and biofabrication for the development of structures with enhanced complexity and hierarchical control. Biofabrication, 2020, 12, 032002.	3.7	33
21	Interfacial Self-Assembly to Spatially Organize Graphene Oxide Into Hierarchical and Bioactive Structures. Frontiers in Materials, 2020, 7, .	1.2	4
22	Disordered protein-graphene oxide co-assembly and supramolecular biofabrication of functional fluidic devices. Nature Communications, 2020, 11, 1182.	5.8	42
23	Growthâ€Factor Free Multicomponent Nanocomposite Hydrogels That Stimulate Bone Formation. Advanced Functional Materials, 2020, 30, 1906205.	7.8	65
24	Multicomponent hydrogels for the formation of vascularized bone-like constructs in vitro. Acta Biomaterialia, 2020, 109, 82-94.	4.1	55
25	Supramolecular Self-Assembly To Control Structural and Biological Properties of Multicomponent Hydrogels. Chemistry of Materials, 2019, 31, 7883-7897.	3.2	102
26	Self-Assembling Hydrogels Based on a Complementary Hostâ€“Guest Peptide Amphiphile Pair. Biomacromolecules, 2019, 20, 2276-2285.	2.6	42
27	Targeting mechanotransduction mechanisms and tissue weakening signals in the human amniotic membrane. Scientific Reports, 2019, 9, 6718.	1.6	7
28	Claim to FAME. Nature Chemistry, 2018, 10, 485-487.	6.6	0
29	A fluidic device for the controlled formation and real-time monitoring of soft membranes self-assembled at liquid interfaces. Scientific Reports, 2018, 8, 2900.	1.6	8
30	Hydrodynamically Guided Hierarchical Selfâ€Assembly of Peptideâ€“Protein Bioinks. Advanced Functional Materials, 2018, 28, 1703716.	7.8	78
31	3D Electrophoresisâ€Assisted Lithography (3DEAL): 3D Molecular Printing to Create Functional Patterns and Anisotropic Hydrogels. Advanced Functional Materials, 2018, 28, 1703014.	7.8	13
32	Multicomponent self-assembly as a tool to harness new properties from peptides and proteins in material design. Chemical Society Reviews, 2018, 47, 3721-3736.	18.7	205
33	Protein disorderâ€“order interplay to guide the growth of hierarchical mineralized structures. Nature Communications, 2018, 9, 2145.	5.8	119
34	Hierarchical Biomineralization: from Nature's Designs to Synthetic Materials for Regenerative Medicine and Dentistry. Advanced Healthcare Materials, 2018, 7, e1800178.	3.9	60
35	Multicomponent self-assembly: Supramolecular design of complex hydrogels for biomedical applications. , 2018, , 371-397.		8
36	Cross-linking of a biopolymer-peptide co-assembling system. Acta Biomaterialia, 2017, 58, 80-89.	4.1	19

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37	Bone and cartilage differentiation of a single stem cell population driven by material interface. Journal of Tissue Engineering, 2017, 8, 204173141770561.	2.3	9
38	New Bioengineering Breakthroughs and Enabling Tools in Regenerative Medicine. Current Stem Cell Reports, 2017, 3, 83-97.	0.7	5
39	Trauma induces overexpression of Cx43 in human fetal membrane defects. Prenatal Diagnosis, 2017, 37, 899-906.	1.1	7
40	Nanostructured interfacial self-assembled peptideâ€"polymer membranes for enhanced mineralization and cell adhesion. Nanoscale, 2017, 9, 13670-13682.	2.8	28
41	Elastin-Like Protein, with Statherin Derived Peptide, Controls Fluorapatite Formation and Morphology. Frontiers in Physiology, 2017, 8, 368.	1.3	23
42	Connexin 43 is overexpressed in human fetal membrane defects after fetoscopic surgery. Prenatal Diagnosis, 2016, 36, 942-952.	1.1	14
43	Preferential nucleation and crystal growth on microfabricated topography. Materials Today, 2016, 19, 478-480.	8.3	6
44	Copper catalyst efficiency for the CuAAC synthesis of a poly(N-isopropylacrylamide) conjugated hyaluronan. Clinical Hemorheology and Microcirculation, 2015, 60, 25-37.	0.9	1
45	Injectable Hyaluronan Hydrogels with Peptide-Binding Dendrimers Modulate the Controlled Release of BMP-2 and TGF-Î²1. Macromolecular Bioscience, 2015, 15, 1035-1044.	2.1	25
46	Bimolecular based heparin and self-assembling hydrogel for tissue engineering applications. Acta Biomaterialia, 2015, 16, 35-48.	4.1	65
47	Effective and durable genetic modification of human mesenchymal stem cells via controlled release of rAAV vectors from self-assembling peptide hydrogels with a maintained differentiation potency. Acta Biomaterialia, 2015, 18, 118-127.	4.1	47
48	Development of tailored and self-mineralizing citric acid-crosslinked hydrogels for in situ bone regeneration. Biomaterials, 2015, 68, 42-53.	5.7	41
49	Co-assembly, spatiotemporal control and morphogenesis of a hybrid proteinâ€"peptide system. Nature Chemistry, 2015, 7, 897-904.	6.6	142
50	Multivalent dendrimers presenting spatially controlled clusters of binding epitopes in thermoresponsive hyaluronan hydrogels. Acta Biomaterialia, 2014, 10, 4340-4350.	4.1	22
51	Bioactive membranes for bone regeneration applications: Effect of physical and biomolecular signals on mesenchymal stem cell behavior. Acta Biomaterialia, 2014, 10, 134-141.	4.1	48
52	Mineralization and bone regeneration using a bioactive elastin-like recombinamer membrane. Biomaterials, 2014, 35, 8339-8347.	5.7	63
53	Fabrication of hierarchical microâ€"nanotopographies for cell attachment studies. Nanotechnology, 2013, 24, 255305.	1.3	38
54	Coâ€Assembled and Microfabricated Bioactive Membranes. Advanced Functional Materials, 2013, 23, 430-438.	7.8	47

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55	Tissue engineering for articular cartilage repair â€“ the state of the art. , 2013, 25, 248-267.		305
56	Design of Biomolecules for Nanoengineered Biomaterials for Regenerative Medicine. Methods in Molecular Biology, 2012, 811, 39-49.	0.4	29
57	Engineering membrane scaffolds with both physical and biomolecular signaling. Acta Biomaterialia, 2012, 8, 998-1009.	4.1	41
58	Integrating top-down and self-assembly in the fabrication of peptide and protein-based biomedical materials. Chemical Society Reviews, 2011, 40, 4563.	18.7	117
59	Micro and nanotechnologies for bioengineering regenerative medicine scaffolds. International Journal of Biomedical Engineering and Technology, 2011, 5, 266.	0.2	5
60	Post microtextures accelerate cell proliferation and osteogenesis. Acta Biomaterialia, 2010, 6, 160-169.	4.1	50
61	Bone regeneration mediated by biomimetic mineralization of a nanofiber matrix. Biomaterials, 2010, 31, 6004-6012.	5.7	241
62	A self-assembly pathway to aligned monodomain gels. Nature Materials, 2010, 9, 594-601.	13.3	576
63	A three-dimensional scaffold with precise micro-architecture and surface micro-textures. Biomaterials, 2009, 30, 4610-4617.	5.7	118
64	Micropatterning of bioactive self-assembling gels. Soft Matter, 2009, 5, 1228.	1.2	137
65	Hybrid bone implants: Self-assembly of peptide amphiphile nanofibers within porous titanium. Biomaterials, 2008, 29, 161-171.	5.7	216
66	Bioactive Nanofibers Instruct Cells to Proliferate and Differentiate During Enamel Regeneration. Journal of Bone and Mineral Research, 2008, 23, 1995-2006.	3.1	123
67	Self-Assembly of Large and Small Molecules into Hierarchically Ordered Sacs and Membranes. Science, 2008, 319, 1812-1816.	6.0	568
68	Connective tissue progenitor cell growth characteristics on textured substrates. International Journal of Nanomedicine, 2007, 2, 389-406.	3.3	13
69	Fabrication of multi-layer SU-8 microstructures. Journal of Micromechanics and Microengineering, 2006, 16, 276-284.	1.5	233
70	Characterization of Polydimethylsiloxane (PDMS) Properties for Biomedical Micro/Nanosystems. Biomedical Microdevices, 2005, 7, 281-293.	1.4	1,034
71	Expanding Frontiers in Biomaterials. MRS Bulletin, 2005, 30, 864-873.	1.7	41
72	Microfabricated 3D Scaffolds for Tissue Engineering Applications. Materials Research Society Symposia Proceedings, 2004, 845, 109.	0.1	1

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73	Osteoblast attachment to a textured surface in the absence of exogenous adhesion proteins. IEEE Transactions on Nanobioscience, 2003, 2, 287-294.	2.2	45
74	Growth of connective tissue progenitor cells on microtextured polydimethylsiloxane surfaces. Journal of Biomedical Materials Research Part B, 2002, 62, 499-506.	3.0	74
75	Analysis of connective tissue progenitor cell behavior on polydimethylsiloxane smooth and channel micro-textures. Biomedical Microdevices, 2002, 4, 267-275.	1.4	51
76	Mineralizing Coating on 3D Printed Scaffolds for the Promotion of Osseointegration. Frontiers in Bioengineering and Biotechnology, 0, 10, .	2.0	4