Modesto T Lopez-Lopez

List of Publications by Year
in descending order

115 papers	3,081 citations	136740 32 h-index	189595 50 g-index
118 all docs	118 docs citations	118 times ranked	2171 citing authors

#	Article	IF	Citations
1	Rheological Analysis of Magnetorheological Fluids. , 2022, , 237-247.		0
2	Organic/inorganic hydrogels by simultaneous self-assembly and mineralization of aromatic short-peptides. Inorganic Chemistry Frontiers, 2022, 9, 743-752.	3.0	11
3	Lysozyme crystallization in hydrogel media under ultrasound irradiation. Ultrasonics Sonochemistry, 2022, , 106096.	3.8	3
4	Rheological implications of the inclusion of ferrofluids and the presence of uniform magnetic field on heavy and extra-heavy crude oils. Fuel, 2021, 285, 119184.	3.4	9
5	In vivo time-course biocompatibility assessment of biomagnetic nanoparticles-based biomaterials for tissue engineering applications. Materials Science and Engineering C, 2021, 118, 111476.	3.8	23
6	Biomedical applications of magnetic hydrogels. , 2021, , 253-271.		2
7	<i>In situ</i>real-time monitoring of the mechanism of self-assembly of short peptide supramolecular polymers. Materials Chemistry Frontiers, 2021, 5, 5452-5462.	3.2	21
8	Insulin Crystals Grown in Short-Peptide Supramolecular Hydrogels Show Enhanced Thermal Stability and Slower Release Profile. ACS Applied Materials & Interfaces, 2021, 13, 11672-11682.	4.0	20
9	The role of thermal diffusion, particle clusters, hydrodynamic and magnetic forces on the flow behaviour of magneto-polymer composites. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200302.	1.6	1
10	Composite polymer hydrogels with high and reversible elongation under magnetic stimuli. Polymer, 2021, 230, 124093.	1.8	15
11	Melatonin-doped polymeric nanoparticles induce high crystalline apatite formation in root dentin. Dental Materials, 2021, 37, 1698-1713.	1.6	4
12	Injectable Magnetic-Responsive Short-Peptide Supramolecular Hydrogels: Ex Vivo and In Vivo Evaluation. ACS Applied Materials & Interfaces, 2021, 13, 49692-49704.	4.0	24
13	Insights into the co-assemblies formed by different aromatic short-peptide amphiphiles. Polymer Chemistry, 2021, 12, 6832-6845.	1.9	15
14	Polymeric nanoparticles for endodontic therapy. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 103, 103606.	1.5	24
15	Hydroxyapatite-based cements induce different apatite formation in radicular dentin. Dental Materials, 2020, 36, 167-178.	1.6	18
16	Revealing importance of particlesâ€™ surface functionalization on the properties of magnetic alginate hydrogels. Carbohydrate Polymers, 2020, 247, 116747.	5.1	14
17	Rheology of magnetic colloids containing clusters of particle platelets and polymer nanofibres. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190255.	1.6	4
18	Role of particle clusters on the rheology of magneto-polymer fluids and gels. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190254.	1.6	6

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19	Evaluation of Fibrin-Agarose Tissue-Like Hydrogels Biocompatibility for Tissue Engineering Applications. Frontiers in Bioengineering and Biotechnology, 2020, 8, 596.	2.0	41
20	Rheological investigation of magnetic sensitive biopolymer composites: effect of the ligand grafting of magnetic nanoparticles. Rheologica Acta, 2020, 59, 165-176.	1.1	6
21	In vitro characterization of a novel magnetic fibrin-agarose hydrogel for cartilage tissue engineering. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 104, 103619.	1.5	51
22	Catalytic and Electron Conducting Carbon Nanotubeâ€“Reinforced Lysozyme Crystals. Advanced Functional Materials, 2019, 29, 1807351.	7.8	25
23	Rheological properties of magnetic biogels. Archive of Applied Mechanics, 2019, 89, 91-103.	1.2	8
24	Atmospheric water triggers supramolecular gel formation of novel low molecular weight maslinic and oleanolic triterpenic derivatives. Materials Chemistry Frontiers, 2019, 3, 2637-2646.	3.2	10
25	Enhanced Stability against Radiation Damage of Lysozyme Crystals Grown in Fmoc-CF Hydrogels. Crystal Growth and Design, 2019, 19, 4229-4233.	1.4	8
26	Magnetorheology of alginate ferrogels. Smart Materials and Structures, 2019, 28, 035018.	1.8	15
27	To the theory of mechano-magnetic effects in ferrogels. Journal of Magnetism and Magnetic Materials, 2019, 478, 211-215.	1.0	3
28	Silver-loaded nanoparticles affect ex-vivo mechanical behavior and mineralization of dentin. Medicina Oral, Patologia Oral Y Cirugia Bucal, 2019, 24, 0-0.	0.7	3
29	Extending the pool of compatible peptide hydrogels for protein crystallization. Crystals, 2019, 9, 244.	1.0	3
30	Mechanical properties of magnetic gels containing rod-like composite particles. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180218.	1.6	16
31	Anisotropic magnetic hydrogels: design, structure and mechanical properties. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2019, 377, 20180217.	1.6	22
32	Shear modulus of isotropic ferrogels. Journal of Magnetism and Magnetic Materials, 2019, 477, 136-141.	1.0	2
33	Stored potential energy increases and elastic properties alterations are produced after restoring dentin with Zn-containing amalgams. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 91, 109-121.	1.5	5
34	Ionâ€modified nanoparticles induce different apatite formation in cervical dentine. International Endodontic Journal, 2018, 51, 1019-1029.	2.3	8
35	Iron nanoparticles-based supramolecular hydrogels to originate anisotropic hybrid materials with enhanced mechanical strength. Materials Chemistry Frontiers, 2018, 2, 686-699.	3.2	46
36	On the theory of hysteretic magnetostriction of soft ferrogels. Physica A: Statistical Mechanics and Its Applications, 2018, 498, 86-95.	1.2	8

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37	Generation of genipin cross-linked fibrin-agarose hydrogel tissue-like models for tissue engineering applications. Biomedical Materials (Bristol), 2018, 13, 025021.	1.7	50
38	Effect of functionalized PHEMA microâ€•and nanoâ€particles on the viscoelastic properties of fibrinâ€“agarose biomaterials. Journal of Biomedical Materials Research - Part A, 2018, 106, 738-745.	2.1	5
39	Rheology of magnetic alginate hydrogels. Journal of Rheology, 2018, 62, 1083-1096.	1.3	35
40	Rheological Properties of Clay Suspensions Treated by Hydrocyclone Process. Journal of Nanofluids, 2018, 7, 258-268.	1.4	4
41	Mechanical loading influences the viscoelastic performance of the resin-carious dentin complex. Biointerphases, 2017, 12, 021001.	0.6	5
42	Effect of particle concentration on the microstructural and macromechanical properties of biocompatible magnetic hydrogels. Soft Matter, 2017, 13, 2928-2941.	1.2	66
43	To the theory of elastic properties of isotropic magnetic gels. Effect of interparticle interaction. Smart Materials and Structures, 2017, 26, 095028.	1.8	2
44	Shear elasticity of isotropic magnetic gels. Physical Review E, 2017, 96, 022605.	0.8	10
45	To the theory of shear elastic properties of magnetic gels. Physica A: Statistical Mechanics and Its Applications, 2017, 486, 908-914.	1.2	8
46	Synthesis, characterization and in vivo evaluation of biocompatible ferrogels. Journal of Magnetism and Magnetic Materials, 2017, 431, 110-114.	1.0	13
47	Kinetics of doublet formation in bicomponent magnetic suspensions: The role of the magnetic permeability anisotropy. Physical Review E, 2017, 96, 062604.	0.8	8
48	Performance Study of a Torsional Wave Sensor and Cervical Tissue Characterization. Sensors, 2017, 17, 2078.	2.1	22
49	N-like rheograms of concentrated suspensions of magnetic particles. Journal of Rheology, 2016, 60, 267-274.	1.3	5
50	<i>Ex vivo</i> characterization of a novel tissue-like cross-linked fibrin-agarose hydrogel for tissue engineering applications. Biomedical Materials (Bristol), 2016, 11, 055004.	1.7	31
51	Mechanoelectrical transduction in the hydrogel-based biomimetic sensors. Sensors and Actuators A: Physical, 2016, 248, 54-61.	2.0	19
52	Zinc-Containing Restorations Create Amorphous Biogenic Apatite at the Carious Dentin Interface: A X-Ray Diffraction (XRD) Crystal Lattice Analysis. Microscopy and Microanalysis, 2016, 22, 1034-1046.	0.2	7
53	Submicron-to-nanoscale structure characterization and organization of crystals in dentin bioapatites. RSC Advances, 2016, 6, 45265-45278.	1.7	7
54	Towards a theory of mechanical properties of ferrogels. Effect of chain-like aggregates. Physica A: Statistical Mechanics and Its Applications, 2016, 455, 98-103.	1.2	14

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55	Biocompatible magnetic coreâ€"shell nanocomposites for engineered magnetic tissues. Nanoscale, 2016, 8, 8138-8150.	2.8	56
56	Nanoscopic dynamic mechanical analysis of resinâ€"infiltrated dentine, under in vitro chewing and bruxism events. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 54, 33-47.	1.5	9
57	Mechanics of Magnetopolymer Composites: A Review. Journal of Nanofluids, 2016, 5, 479-495.	1.4	69
58	On modeling and nanoanalysis of caries-affected dentin surfaces restored with Zn-containing amalgam and in vitro oral function. Biointerphases, 2015, 10, 041004.	0.6	10
59	Stick-Slip Instabilities in Magnetorheological Fluids. , 2015, , 203-233.		1
60	Dynamics of magnetic assembly of binary colloidal structures. Europhysics Letters, 2015, 111, 37002.	0.7	5
61	Generation and Characterization of Novel Magnetic Field-Responsive Biomaterials. PLoS ONE, 2015, 10, e0133878.	1.1	50
62	How nonmagnetic particles intensify rotational diffusion in magnetorheological fluids. Physical Review E, 2014, 90, 012310.	0.8	6
63	Inverse magnetorheological fluids. Soft Matter, 2014, 10, 6256-6265.	1.2	16
64	Magnetorheological effect in the magnetic field oriented along the vorticity. Journal of Rheology, 2014, 58, 1829-1853.	1.3	9
65	On the theory of magnetoviscous effect in magnetorheological suspensions. Journal of Rheology, 2014, 58, 1673-1692.	1.3	19
66	Effect of the hydration on the biomechanical properties in a fibrinâ€agarose tissueâ€like model. Journal of Biomedical Materials Research - Part A, 2014, 102, 2573-2582.	2.1	63
67	Effect of drop-like aggregates on the viscous stress in magnetic suspensions. Journal of Non-Newtonian Fluid Mechanics, 2014, 208-209, 53-58.	1.0	8
68	Stickâ€"slip instabilities in the shear flow of magnetorheological suspensions. Journal of Rheology, 2013, 57, 1101-1119.	1.3	12
69	Instabilities of a pressure-driven flow of magnetorheological fluids. Journal of Rheology, 2013, 57, 1121-1146.	1.3	7
70	Cryopreservation of an artificial human oral mucosa stroma. A viability and rheological study. Cryobiology, 2013, 67, 355-362.	0.3	13
71	N-Like rheograms of suspensions of magnetic nanofibers. Soft Matter, 2013, 9, 1902-1907.	1.2	5
72	Steady state rheological behaviour of multi-component magnetic suspensions. Soft Matter, 2013, 9, 5726.	1.2	12

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73	Optimizing the Magnetic Response of Suspensions by Tailoring the Spatial Distribution of the Particle Magnetic Material. ACS Applied Materials & Interfaces, 2013, 5, 12143-12147.	4.0	18
74	Inversion of Magnetic Forces Between Microparticles and Its Effect on the Magnetorheology of Extremely Bidisperse Magnetic Fluids. Journal of Nanofluids, 2013, 2, 85-93.	1.4	7
75	Colloids on the Frontier of Ferrofluids. Rheological Properties. Langmuir, 2012, 28, 6232-6245.	1.6	84
76	Yield stress in magnetorheological suspensions near the limit of maximum-packing fraction. Journal of Rheology, 2012, 56, 1209.	1.3	36
77	Wall slip phenomena in concentrated ionic liquid-based magnetorheological fluids. Rheologica Acta, 2012, 51, 793-803.	1.1	18
78	Magnetorheological behavior of magnetite covered clay particles in aqueous suspensions. Journal of Applied Physics, 2012, 112, .	1.1	14
79	Rheological characterization of human fibrin and fibrin-agarose oral mucosa substitutes generated by tissue engineering. Journal of Tissue Engineering and Regenerative Medicine, 2012, 6, 636-644.	1.3	22
80	Dynamic characterization of extremely bidisperse magnetorheological fluids. Journal of Colloid and Interface Science, 2012, 377, 153-159.	5.0	109
81	Stability of magnetorheological fluids in ionic liquids. Smart Materials and Structures, 2011, 20, 045001.	1.8	25
82	MICRODYNAMICS OF MAGNETIC PARTICLES DISPERSED IN COMPLEX MEDIA. International Journal of Modern Physics B, 2011, 25, 905-910.	1.0	0
83	Stability and magnetorheological behaviour of magnetic fluids based on ionic liquids. Journal of Physics Condensed Matter, 2011, 23, 455101.	0.7	37
84	Steady shear flow of magnetic fiber suspensions: Theory and comparison with experiments. Journal of Rheology, 2011, 55, 43-67.	1.3	25
85	RHEOLOGY OF MAGNETIC FIBER SUSPENSIONS. , 2011, , .		0
86	MAGNETIC AND MAGNETORHEOLOGICAL PROPERTIES OF NANOFIBER SUSPENSIONS. , 2011, , .		0
87	Non-linear viscoelastic response of magnetic fiber suspensions in oscillatory shear. Journal of Non-Newtonian Fluid Mechanics, 2011, 166, 373-385.	1.0	14
88	Steric repulsion as a way to achieve the required stability for the preparation of ionic liquid-based ferrofluids. Journal of Colloid and Interface Science, 2011, 357, 252-254.	5.0	48
89	Description and performance of a fully automatic device for the study of the sedimentation of magnetic suspensions. Review of Scientific Instruments, 2011, 82, 073906.	0.6	20
90	Assessment of surfactant adsorption in oil-based magnetic colloids. Adsorption, 2010, 16, 215-221.	1.4	4

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91	Synthesis and magnetorheology of suspensions of submicron-sized cobalt particles with tunable particle size. Journal of Physics Condensed Matter, 2010, 22, 324106.	0.7	15
92	Effect of gap thickness on the viscoelasticity of magnetorheological fluids. Journal of Applied Physics, 2010, 108, 083503.	1.1	18
93	Normal stresses in a shear flow of magnetorheological suspensions: Viscoelastic versus Maxwell stresses. Journal of Rheology, 2010, 54, 1119-1136.	1.3	47
94	Repulsive force between two attractive dipoles, mediated by nanoparticles inside a ferrofluid. Soft Matter, 2010, 6, 4346.	1.2	34
95	Abrupt contraction flow of magnetorheological fluids. Physics of Fluids, 2009, 21, .	1.6	18
96	Influence of particle shape on the magnetic and magnetorheological properties of nanoparticle suspensions. Soft Matter, 2009, 5, 3888.	1.2	66
97	Magnetorheology of fiber suspensions. I. Experimental. Journal of Rheology, 2009, 53, 115-126.	1.3	98
98	Magnetorheology of fiber suspensions. II. Theory. Journal of Rheology, 2009, 53, 127-151.	1.3	73
99	Synthesis and magnetorheology of suspensions of cobalt particles with tunable particle size. Journal of Physics: Conference Series, 2009, 149, 012073.	0.3	4
100	Shear and squeeze rheometry of suspensions of magnetic polymerized chains. Rheologica Acta, 2008, 47, 179-187.	1.1	20
101	Preparation of well-dispersed magnetorheological fluids and effect of dispersion on their magnetorheological properties. Rheologica Acta, 2008, 47, 787-796.	1.1	68
102	Preparation and Characterization of Iron-Based Magnetorheological Fluids Stabilized by Addition of Organoclay Particles. Langmuir, 2008, 24, 7076-7084.	1.6	64
103	Effect of particle aggregation on the magnetic and magnetorheological properties of magnetic suspensions. Journal of Rheology, 2008, 52, 901-912.	1.3	18
104	Oscillatory squeeze flow of suspensions of magnetic polymerized chains. Journal of Physics Condensed Matter, 2008, 20, 204132.	0.7	5
105	New magnetorheological fluids based on magnetic fibers. Journal of Materials Chemistry, 2007, 17, 3839.	6.7	71
106	Sedimentation and redispersion phenomena in iron-based magnetorheological fluids. Journal of Rheology, 2006, 50, 543-560.	1.3	115
107	Magnetorheology for suspensions of solid particles dispersed in ferrofluids. Journal of Physics Condensed Matter, 2006, 18, S2803-S2813.	0.7	87
108	A slender-body micromechanical model for viscoelasticity of magnetic colloids: Comparison with preliminary experimental data. Journal of Colloid and Interface Science, 2005, 282, 193-201.	5.0	33

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109	Stability and magnetic characterization of oleate-covered magnetite ferrofluids in different nonpolar carriers. Journal of Colloid and Interface Science, 2005, 291, 144-151.	5.0	128
110	Preparation of stable magnetorheological fluids based on extremely bimodal ironâ€“magnetite suspensions. Journal of Materials Research, 2005, 20, 874-881.	1.2	106
111	Stability of magnetizable colloidal suspensions by addition of oleic acid and silica nanoparticles. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2005, 264, 75-81.	2.3	59
112	Preparation and Sedimentation Behavior in Magnetic Fields of Magnetite-Covered Clay Particles. Langmuir, 2005, 21, 4410-4419.	1.6	78
113	Shear flow behavior of confined magnetorheological fluids at low magnetic field strengths. Rheologica Acta, 2004, 44, 94-103.	1.1	84
114	Rheological study of the stabilization of magnetizable colloidal suspensions by addition of silica nanoparticles. Journal of Rheology, 2003, 47, 1093-1109.	1.3	108
115	New Perspectives for Magnetic Fluid-Based Devices Using Novel Ionic Liquids as Carriers. , 0, , .		6