Marie-Christine Durrieu

List of Publications by Year
in descending order

116	3,843	147801	144013
papers	citations	31 h-index	57 g-index

119	119	119	5307
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Femtosecond laser surface texturing of titanium as a method to reduce the adhesion of Staphylococcus aureus and biofilm formation. Applied Surface Science, 2016, 360, 485-493.	6.1	195
2	Wetting behaviour of femtosecond laser textured Tiâ€“6Alâ€“4V surfaces. Applied Surface Science, 2013, 265, 688-696.	6.1	187
3	The effect of RGD density on osteoblast and endothelial cell behavior on RGD-grafted polyethylene terephthalate surfaces. Biomaterials, 2009, 30, 711-720.	11.4	150
4	Cyclo-(DfKRG) peptide grafting onto Tiâ€“6Alâ€“4V: physical characterization and interest towards human osteoprogenitor cells adhesion. Biomaterials, 2004, 25, 4837-4846.	11.4	136
5	Grafting RGD containing peptides onto hydroxyapatite to promote osteoblastic cells adhesion. Journal of Materials Science: Materials in Medicine, 2004, 15, 779-786.	3.6	134
6	Ti4+ to Ti3+ Conversion of TiO2 Uppermost Layer by Low-Temperature Vacuum Annealing: Interest for Titanium Biomedical Applications. Journal of Colloid and Interface Science, 2002, 255, 75-78.	9.4	133
7	The effects of femtosecond laser-textured Ti-6Al-4V on wettability and cell response. Materials Science and Engineering C, 2016, 69, 311-320.	7.3	125
8	Differentiation of pre-osteoblast cells on poly(ethylene terephthalate) grafted with RGD and/or BMPs mimetic peptides. Biomaterials, 2010, 31, 8245-8253.	11.4	111
9	Effect of BMP-2 from matrices of different stiffnesses for the modulation of stem cell fate. Biomaterials, 2013, 34, 2157-2166.	11.4	108
10	Study of Two Grafting Methods for Obtaining a 3-Aminopropyltriethoxysilane Monolayer on Silica Surface. Journal of Colloid and Interface Science, 2002, 251, 278-283.	9.4	103
11	Investigation of the cytotoxicity of CCVD carbon nanotubes towards human umbilical vein endothelial cells. Carbon, 2006, 44, 1093-1099.	10.3	101
12	Human mesenchymal stem cell behavior on femtosecond laser-textured Ti-6Al-4V surfaces. Nanomedicine, 2015, 10, 725-739.	3.3	100
13	RGD and BMP-2 mimetic peptide crosstalk enhances osteogenic commitment of human bone marrow stem cells. Acta Biomaterialia, 2016, 36, 132-142.	8.3	100
14	Influence of Nanohelical Shape and Periodicity on Stem Cell Fate. ACS Nano, 2013, 7, 3351-3361.	14.6	87
15	Development of RGD peptides grafted onto silica surfaces: XPS characterization and human endothelial cell interactions. , 1999, 46, 368-375.		80
16	Altered nanofeature size dictates stem cell differentiation. Journal of Cell Science, 2012, 125, 1217-1224.	2.0	73
17	pH-controlled delivery of gentamicin sulfate from orthopedic devices preventing nosocomial infections. Journal of Controlled Release, 2012, 162, 373-381.	9.9	68
18	Strategies and results of atomic force microscopy in the study of cellular adhesion. Micron, 2006, 37, 1-13.	2.2	66

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19	In Vitro picosecond ultrasonics in a single cell. Applied Physics Letters, 2008, 93, .	3.3	62
20	All-optical broadband ultrasonography of single cells. Scientific Reports, 2015, 5, 8650.	3.3	62
21	Plasma treatment of expanded PTFE offers a way to a biofunctionalization of its surface. Nuclear Instruments & Methods in Physics Research B, 1999, 151, 255-262.	1.4	56
22	RGD peptides grafting onto poly(ethylene terephthalate) with well controlled densities. New Biotechnology, 2007, 24, 477-482.	2.7	55
23	Biocompatible nano-ripples structured surfaces induced by femtosecond laser to rebel bacterial colonization and biofilm formation. Optics and Laser Technology, 2020, 124, 105973.	4.6	55
24	Characterization of dynamic cellular adhesion of osteoblasts using atomic force microscopy. , 2003, 54A, 36-47.		53
25	Covalent bonding of collagen on poly(L-lactic acid) by gamma irradiation. Nuclear Instruments & Methods in Physics Research B, 2003, 207, 165-174.	1.4	49
26	Geometrical Microfeature Cues for Directing Tubulogenesis of Endothelial Cells. PLoS ONE, 2012, 7, e41163.	2.5	49
27	Chiral Colloids: Homogeneous Suspension of Individualized SiO₂ Helical and Twisted Nanoribbons. ACS Nano, 2014, 8, 6863-6872.	14.6	47
28	Femtosecond laser microstructured Alumina toughened Zirconia: A new strategy to improve osteogenic differentiation of hMSCs. Applied Surface Science, 2018, 435, 1237-1245.	6.1	47
29	Synthesis of pH-Sensitive Particles for Local Delivery of an Antibiotic via Dispersion ROMP. Macromolecules, 2011, 44, 7879-7887.	4.8	46
30	Peptide immobilization on polyethylene terephthalate surfaces to study specific endothelial cell adhesion, spreading and migration. Journal of Materials Science: Materials in Medicine, 2012, 23, 2761-2772.	3.6	44
31	Grafting of RGD peptides to cellulose to enhance human osteoprogenitor cells adhesion and proliferation. Composites Science and Technology, 2004, 64, 827-837.	7.8	41
32	Vancomycin Functionalized Nanoparticles for Bactericidal Biomaterial Surfaces. Biomacromolecules, 2016, 17, 1339-1346.	5.4	39
33	Insights into the osteoblast precursor differentiation towards mature osteoblasts induced by continuous BMP-2 signaling. Biology Open, 2013, 2, 872-881.	1.2	34
34	Femtosecond Laser Nano/Micro Textured Ti6Al4V Surfacesâ€"Effect on Wetting and MG-63 Cell Adhesion. Materials, 2019, 12, 2210.	2.9	33
35	Design of new titanium alloys for orthopaedic applications. Medical and Biological Engineering and Computing, 2004, 42, 137-141.	2.8	32
36	Impact of RGD Nanopatterns Grafted onto Titanium on Osteoblastic Cell Adhesion. Biomacromolecules, 2012, 13, 896-904.	5.4	32

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37	Probing single-cell mechanics with picosecond ultrasonics. Ultrasonics, 2015, 56, 160-171.	3.9	32
38	Controlled Nanoscale Topographies for Osteogenic Differentiation of Mesenchymal Stem Cells. ACS Applied Materials & Interfaces, 2019, 11, 8858-8866.	8.0	32
39	Single-pulse KrF laser ablation and nanopatterning in vacuum of Î²-titanium alloys used in biomedical applications. Applied Physics A: Materials Science and Processing, 2004, 79, 811-813.	2.3	31
40	The effect of cyclo-DfKRG peptide immobilization on titanium on the adhesion and differentiation of human osteoprogenitor cells. Biomaterials, 2005, 26, 6932-6940.	11.4	31
41	Study of the cytotoxicity of CCVD carbon nanotubes. Journal of Materials Science, 2006, 41, 2411-2416.	3.7	31
42	Bioactive Chemical Nanopatterns Impact Human Mesenchymal Stem Cell Fate. Nano Letters, 2013, 13, 3923-3929.	9.1	31
43	A FTIR and SEM study of PS radiation grafted fluoropolymers: influence of the nature of the ionizing radiation on the film structure. Nuclear Instruments & Methods in Physics Research B, 1999, 151, 377-385.	1.4	30
44	Ultraviolet laser surface treatment for biomedical applications of ? titanium alloys: morphological and structural characterization. Applied Physics A: Materials Science and Processing, 2003, 77, 899-904.	2.3	29
45	A hybrid mathematical model for self-organizing cell migration in the zebrafish lateral line. Journal of Mathematical Biology, 2015, 71, 171-214.	1.9	29
46	Picosecond acoustics in vegetal cells: Non-invasive in vitro measurements at a sub-cell scale. Ultrasonics, 2010, 50, 202-207.	3.9	27
47	In vitro and in situ intercellular adhesion molecule-1 (ICAM-1) expression by endothelial cells lining a polyester fabric. Biomaterials, 1999, 20, 241-251.	11.4	26
48	Development of ?heparin-like? polymers using swift heavy ion and gamma radiation. I. Preparation and characterization of the materials. Journal of Biomedical Materials Research Part B, 2000, 52, 119-127.	3.1	26
49	Comparative in vitro Cytotoxicity Toward Human Osteoprogenitor Cells of Polycaprolactones Synthesized from Various Metallic Initiators. Macromolecular Bioscience, 2010, 10, 60-67.	4.1	24
50	Impact of RGD micro-patterns on cell adhesion. Colloids and Surfaces B: Biointerfaces, 2010, 75, 107-114.	5.0	24
51	Synthesis of biomaterials by swift heavy ion grafting: Preliminary results of haemocompatibility. Nuclear Instruments & Methods in Physics Research B, 1997, 131, 364-375.	1.4	23
52	Modulation of Lumen Formation by Microgeometrical Bioactive Cues and Migration Mode of Actin Machinery. Small, 2013, 9, 1086-1095.	10.0	23
53	Surface morphology and phase transformations of femtosecond laser-processed sapphire. Applied Surface Science, 2014, 288, 313-323.	6.1	22
54	RGD Surface Functionalization of the Hydrophilic Acrylic Intraocular Lens Material to Control Posterior Capsular Opacification. PLoS ONE, 2014, 9, e114973.	2.5	21

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55	Opto-acoustic microscopy reveals adhesion mechanics of single cells. Review of Scientific Instruments, 2018, 89, 014901.	1.3	19
56	The spatial patterning of RGD and BMPâ€2 mimetic peptides at the subcellular scale modulates human mesenchymal stem cells osteogenesis. Journal of Biomedical Materials Research - Part A, 2018, 106, 959-970.	4.0	19
57	PVDF multifilament yarns grafted with polystyrene induced by Î³-irradition: Influence of the grafting parameters on the mechanical properties. Nuclear Instruments & Methods in Physics Research B, 2003, 208, 429-433.	1.4	18
58	Mathematical modelling of the distribution of newly formed bone in bone tissue engineering. Biomaterials, 2005, 26, 6788-6797.	11.4	18
59	Labelâ€free multiâ€parametric imaging of single cells: dual picosecond optoacoustic microscopy. Journal of Biophotonics, 2019, 12, e201900045.	2.3	18
60	Universality of the network-dynamics of the cell nucleus at high frequencies. Soft Matter, 2014, 10, 8737-8743.	2.7	17
61	Laser surface structuring of ceramics, metals and polymers for biomedical applications. , 2016, , 281-299.		17
62	Interplay of Geometric Cues and RGD/BMP-2 Crosstalk in Directing Stem Cell Fate. ACS Biomaterials Science and Engineering, 2017, 3, 2514-2523.	5.2	17
63	Biocompatibility Studies of the Anaconda Stent-Graft and Observations of Nitinol Corrosion Resistance. Journal of Endovascular Therapy, 2004, 11, 385-403.	1.5	16
64	Pericytes, Stemâ€Cellâ€Like Cells, but not Mesenchymal Stem Cells are Recruited to Support Microvascular Tube Stabilization. Small, 2013, 9, 3070-3075.	10.0	14
65	Single or Mixed Tethered Peptides To Promote hMSC Differentiation toward Osteoblastic Lineage. ACS Applied Bio Materials, 2018, 1, 1800-1809.	4.6	14
66	The effect of surface energy, adsorbed RGD peptides and fibronectin on the attachment and spreading of cells on multiwalled carbon nanotube papers. Carbon, 2011, 49, 2318-2333.	10.3	13
67	Evaluation of mechanical properties of fixed bone cells with sub-micrometer thickness by picosecond ultrasonics. EPJ Applied Physics, 2013, 61, 11201.	0.7	13
68	Remote imaging of single cell 3D morphology with ultrafast coherent phonons and their resonance harmonics. Scientific Reports, 2019, 9, 6409.	3.3	13
69	Surface treatment of biomaterials by gamma and swift heavy ions grafting. Nuclear Instruments & Methods in Physics Research B, 1999, 151, 404-415.	1.4	12
70	Validation of reference genes for real-time PCR of cord blood mononuclear cells, differentiating endothelial progenitor cells, and mature endothelial cells. Experimental Cell Research, 2018, 370, 389-398.	2.6	12
71	Conception, Ã©laboration et caractÃ©risation de matÃ©riaux bioactifs. IRBM News, 2005, 26, 229-237.	0.1	11
72	Human saphenous vein endothelial cell adhesion and expansion on micropatterned polytetrafluoroethylene. Journal of Biomedical Materials Research - Part A, 2013, 101A, 694-703.	4.0	11

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73	Surface bound <scp>VEGF</scp> mimicking peptide maintains endothelial cell proliferation in the absence of soluble <scp>VEGF</scp>in vitro. Journal of Biomedical Materials Research - Part A, 2016, 104, 1425-1436.	4.0	11
74	Microstructure and corrosion behavior of laser induced periodic patterned titanium based alloy. Optics and Laser Technology, 2019, 116, 196-213.	4.6	11
75	Impact of Peptide Micropatterning on Endothelial Cell Actin Remodeling for Cell Alignment under Shear Stress. Macromolecular Bioscience, 2012, 12, 1648-1659.	4.1	10
76	Remote optoâ€acoustic probing of singleâ€cell adhesion on metallic surfaces. Journal of Biophotonics, 2014, 7, 453-459.	2.3	10
77	Thermal microscopy of single biological cells. Applied Physics Letters, 2015, 107, .	3.3	9
78	Comparison of Kernel Density Estimators with Assumption on Number of Modes. Communications in Statistics Part B: Simulation and Computation, 2015, 44, 196-216.	1.2	9
79	A particle model analysing the behavioural rules underlying the collective flight of a bee swarm towards the new nest. Journal of Biological Dynamics, 2018, 12, 632-662.	1.7	9
80	Bioactive molecules for biomimetic materials: Identification of RGD peptide sequences by TOF-S-SIMS analysis. Applied Surface Science, 2006, 252, 6738-6741.	6.1	8
81	Directing hMSCs fate through geometrical cues and mimetics peptides. Journal of Biomedical Materials Research - Part A, 2020, 108, 201-211.	4.0	8
82	Evaluating Poly(Acrylamideâ€•co â€Acrylic Acid) Hydrogels Stress Relaxation to Direct the Osteogenic Differentiation of Mesenchymal Stem Cells. Macromolecular Bioscience, 2021, 21, 2100069.	4.1	8
83	Ultrafast laser texturing of Ti-6Al-4V surfaces for biomedical applications. , 2013, , .		7
84	Nanoparticles highly loaded with gentamicin sulfate by a combination of polyhydroxylated macromonomers and ROMP for the synthesis of bioactive biomaterials. Polymer Chemistry, 2016, 7, 7019-7028.	3.9	7
85	Atmospheric pulsed plasma copolymerization of acrylic monomers: Kinetics, chemistry, and applications. Plasma Processes and Polymers, 2020, 17, 1900187.	3.0	7
86	Modeling of the migration of endothelial cells on bioactive micropatterned polymers. Mathematical Biosciences and Engineering, 2013, 10, 997-1015.	1.9	7
87	Interplay of matrix stiffness and stress relaxation in directing osteogenic differentiation of mesenchymal stem cells. Biomaterials Science, 2022, 10, 4978-4996.	5.4	6
88	RGD Peptide Grafting onto Micro-patterned PET: Peptide Distribution Impact on Cell Attachment. Journal of Laser Micro Nanoengineering, 2006, 1, 226-230.	0.1	5
89	Effects of Cyclic RGD Peptide Functionalization on the Quantitative Bone Ingrowth Process in Cellularized Biphasic Calcium Phosphate Ceramics. Key Engineering Materials, 2005, 284-286, 647-650.	0.4	4
90	Comparison of the Density of Proteins and Peptides Grafted on Silane Layers and Polyelectrolyte Multilayers. Biomacromolecules, 2014, 15, 3706-3716.	5.4	4

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91	Microchannel Molding Combined with Layer-by-Layer Approach for the Formation of Three-Dimensional Tube-like Structures by Endothelial Cells. ACS Applied Bio Materials, 2020, 3, 1520-1532.	4.6	4
92	Bioactive micropatterning of biomaterials for induction of endothelial progenitor cell differentiation: Acceleration of in situ endothelialization. Journal of Biomedical Materials Research - Part A, 2020, 108, 1479-1492.	4.0	4
93	Migration and orientation of endothelial cells on micropatterned polymers: A simple model based on classical mechanics. Discrete and Continuous Dynamical Systems - Series B, 2015, 20, 1059-1076.	0.9	4
94	Elaboration of modelized surfaces with well defined microtopochemistryâ€“localization of adsorbed proteins. Colloids and Surfaces B: Biointerfaces, 2000, 17, 205-218.	5.0	3
95	RGD peptides micro-patterning onÂpoly(ethylene terephthalate) surfaces. Irbm, 2007, 28, 2-12.	5.6	3
96	High resolution Î²-imager: aÂnew tool forÂcharacterizing 2D peptide distribution onÂbiomimetic materials?. Irbm, 2007, 28, 86-92.	5.6	3
97	Picosecond ultrasonics in a single biological cell. , 2008, , .		3
98	Membrane Nanowaves in Single and Collective Cell Migration. PLoS ONE, 2014, 9, e97855.	2.5	3
99	Des matÃ©riaux aux biomatÃ©riauxÂ: une conversion qui passe par des modes d'Ã©laboration et de traitement de surface appropriÃ©s. Annales De Chimie: Science Des Materiaux, 2003, 28, 109-121.	0.4	2
100	Impact of RGD peptide density grafted onto Poly(ethylene terephthalate) on MC3T3 cell attachment. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5123-6.	0.5	2
101	RGD nanodomains grafting onto titanium surface. Annual International Conference of the IEEE Engineering in Medicine and Biology Society, 2007, 2007, 5107-10.	0.5	2
102	Surface Properties of Femtosecond Laser Irradiated Collagen Films. Molecular Crystals and Liquid Crystals, 2008, 486, 250/[1292]-256/[1298].	0.9	2
103	Picosecond acoustics in vegetal cells: non invasive in vitro measurements at a sub-cell scale. Physics Procedia, 2010, 3, 323-331.	1.2	2
104	Dendron-Functionalized Surface: Efficient Strategy for Enhancing the Capture of Microvesicles. IScience, 2019, 21, 110-123.	4.1	2
105	Influence de la densitÃ© de peptides RGD greffÃ©s en surface de polyÃ©thylÃ¨ne tÃ©rÃ©phtalate sur lâ€™attachement des MC3T3. Irbm, 2008, 29, 7-12.	5.6	1
106	Fluorinated Biomaterials for Cardiovascular Surgery. , 2008, , 379-406.		1
107	Synthesis and Crystal Structure of 2,2'-[(Allylimino)diethane-2,1-diyl]bisphthalimide. X-ray Structure Analysis Online, 2009, 25, 55-56.	0.2	1
108	Listening to Cells: A Non-Contact Optoacoustic Nanoprobe. Biophysical Journal, 2013, 104, 193a.	0.5	1

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109	Beneficial Effect of Covalently Grafted Î±-MSH on Endothelial Release of Inflammatory Mediators for Applications in Implantable Devices. PLoS ONE, 2016, 11, e0150706.	2.5	1
110	Picosecond acoustics at 30 GHz in the nucleus of an osteoblast cell. Proceedings of SPIE, 2011, , .	0.8	0
111	Laser-Generated GHz Acoustic Waves Reveal a Universal Nuclear Stiffness Probed during Cell Differentiation. Biophysical Journal, 2013, 104, 478a-479a.	0.5	0
112	Membrane Nanowaves in Single and Collective Cell Migration. Biophysical Journal, 2013, 104, 147a.	0.5	0
113	Membrane Nanowaves in Single and Collective Cell Migration. Biophysical Journal, 2014, 106, 361a.	0.5	0
114	4 Hydrogels for mesenchymal stem cell behavior study. , 2021, , 103-142.		0
115	Biointegrating Materials. , 2009, , 1043-1068.		0
116	Mesenchymal Stem Cell Differentiation Driven by Osteoinductive Bioactive Nanoscale Topographies. Applied Sciences (Switzerland), 2021, 11, 11209.	2.5	0