Gaetan Laroche

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Current trends, challenges, and perspectives of anti-fogging technology: Surface and material design, fabrication strategies, and beyond. Progress in Materials Science, 2019, 99, 106-186.	32.8	162
2	Polyvinylidene fluoride (PVDF) as a biomaterial: From polymeric raw material to monofilament vascular suture. Journal of Biomedical Materials Research Part B, 1995, 29, 1525-1536.	3.1	160
3	Characterization of Multilayer Anti-Fog Coatings. ACS Applied Materials & Interfaces, 2011, 3, 750-758.	8.0	137
4	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
5	Water drop-surface interactions as the basis for the design of anti-fogging surfaces: Theory, practice, and applications trends. Advances in Colloid and Interface Science, 2019, 263, 68-94.	14.7	98
6	Preparation of Ready-to-use, Stockable and Reconstituted Collagen. Macromolecular Bioscience, 2005, 5, 821-828.	4.1	69
7	Comparison of Atmospheric-Pressure Plasma versus Low-Pressure RF Plasma for Surface Functionalization of PTFE for Biomedical Applications. Plasma Processes and Polymers, 2006, 3, 506-515.	3.0	56
8	AFM Imaging of Immobilized Fibronectin:â€‰ Does the Surface Conjugation Scheme Affect the Protein Orientation/Conformation?. Langmuir, 2007, 23, 9745-9751.	3.5	55
9	Engineering Surfaces for Bioconjugation:â€‰ Developing Strategies and Quantifying the Extent of the Reactions. Bioconjugate Chemistry, 2004, 15, 1146-1156.	3.6	51
10	In vitro Biological Performances of Phosphorylcholine-Grafted ePTFE Prostheses through RFGD Plasma Techniques. Macromolecular Bioscience, 2005, 5, 829-839.	4.1	50
11	Covalent Grafting of Fibronectin onto Plasma-Treated PTFE: Influence of the Conjugation Strategy on Fibronectin Biological Activity. Macromolecular Bioscience, 2007, 7, 738-745.	4.1	48
12	Denatured collagen as support for a FGF-2 delivery system: physicochemical characterizations and in vitro release kinetics and bioactivity. Biomaterials, 2004, 25, 3761-3772.	11.4	46
13	Synthesis, characterization, and functionalization of ZnO nanoparticles by N-(trimethoxysilylpropyl) ethylenediamine triacetic acid (TMSEDTA): Investigation of the interactions between Phloroglucinol and ZnO@TMSEDTA. Arabian Journal of Chemistry, 2019, 12, 4340-4347.	4.9	43
14	A poly(l-lactic acid) nanofibre mesh scaffold for endothelial cells on vascular prostheses. Acta Biomaterialia, 2009, 5, 2418-2428.	8.3	42
15	Effects of Chemical Composition and the Addition of H₂ in a N₂ Atmospheric Pressure Dielectric Barrier Discharge on Polymer Surface Functionalization. Langmuir, 2009, 25, 9432-9440.	3.5	42
16	Polyvinylidene Fluoride Monofilament Sutures: Can They Be Used Safely for Longâ€Term Anastomoses in the Thoracic Aorta?. Artificial Organs, 1995, 19, 1190-1199.	1.9	40
17	A new generation of polyurethane vascular prostheses: Rara Avis or Ignis Fatuus?. , 1999, 48, 546-558.		40
18	Micropattern Printing of Adhesion, Spreading, and Migration Peptides on Poly(tetrafluoroethylene) Films To Promote Endothelialization. Bioconjugate Chemistry, 2005, 16, 1088-1097.	3.6	38

#	ARTICLE	IF	CITATIONS
19	Chemical and Morphological Characterization of Ultra-Thin Fluorocarbon Plasma-Polymer Deposition on 316 Stainless Steel Substrates: A First Step Toward the Improvement of the Long-Term Safety of Coated-Stents. Plasma Processes and Polymers, 2005, 2, 424-440.	3.0	37
20	Anti-Fog Layer Deposition onto Polymer Materials: A Multi-Step Approach. Plasma Chemistry and Plasma Processing, 2011, 31, 175-187.	2.4	37
21	A fluorophore-tagged RGD peptide to control endothelial cell adhesion to micropatterned surfaces. Biomaterials, 2014, 35, 879-890.	11.4	37
22	Isolation of cellulose-II nanospheres from flax stems and their physical and morphological properties. Carbohydrate Polymers, 2017, 178, 352-359.	10.2	35
23	Albumin and fibrinogen adsorption onto phosphatidylcholine monolayers investigated by Fourier transform infrared spectroscopy. Colloids and Surfaces B: Biointerfaces, 2003, 29, 285-295.	5.0	34
24	A comparative study between human skin substitutes and normal human skin using Raman microspectroscopy. Acta Biomaterialia, 2014, 10, 2703-2711.	8.3	29
25	Design, Degradation Mechanism and Longâ€Term Cytotoxicity of Poly(<scp>l</scp>â€lactide) and Poly(Lactideâ€coâ€ïµâ€Caprolactone) Terpolymer Film and Airâ€Spun Nanofiber Scaffold. Macromolecular Bioscience, 2015, 15, 1392-1410.	4.1	25
26	Chemical inactivators as sterilization agents for bovine collagen materials. , 1997, 37, 212-221.		24
27	Atmospheric pressure cold plasma versus wet-chemical surface treatments for carboxyl functionalization of polylactic acid: A first step toward covalent immobilization of bioactive molecules. Colloids and Surfaces B: Biointerfaces, 2020, 189, 110847.	5.0	24
28	Removing fresh tissue from explanted polyurethane prostheses: which approach facilitates physico-chemical analysis?. Biomaterials, 1995, 16, 369-380.	11.4	23
29	Invivo characterization of a fluoropassivated gelatin-impregnated polyester mesh for hernia repair. , 1996, 32, 293-305.		23
30	Effect of C2H4/N2 Ratio in an Atmospheric Pressure Dielectric Barrier Discharge on the Plasma Deposition of Hydrogenated Amorphous Carbon-Nitride Films (a-C:N:H). Plasma Chemistry and Plasma Processing, 2010, 30, 213-239.	2.4	23
31	Characterization of the structure of human skin substitutes by infrared microspectroscopy. Analytical and Bioanalytical Chemistry, 2013, 405, 8709-8718.	3.7	22
32	Selecting valid in vitro biocompatibility tests that predict the in vivo healing response of synthetic vascular prostheses. Biomaterials, 1996, 17, 1835-1842.	11.4	20
33	Characterization of an airâ€spun poly(<scp>L</scp>â€lactic acid) nanofiber mesh. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2010, 93B, 531-543.	3.4	20
34	Airâ€Spun PLA Nanofibers Modified with Reductively Sheddable Hydrophilic Surfaces for Vascular Tissue Engineering: Synthesis and Surface Modification. Macromolecular Rapid Communications, 2014, 35, 447-453.	3.9	20
35	In vitro andin vivo studies of a polyester arterial prosthesis with a warp-knitted sharkskin structure. , 1997, 35, 459-472.		19
36	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

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37	Low Pressure Radio Frequency Ammonia Plasma Surface Modification on Poly(ethylene terephthalate) Films and Fibers: Effect of the Polymer Forming Process. Plasma Chemistry and Plasma Processing, 2012, 32, 17-33.	2.4	17
38	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
39	Micropatterning with aerosols: Application for biomaterials. Biomaterials, 2006, 27, 5430-5439.	11.4	15
40	Evaluation of an air spinning process to produce tailored biosynthetic nanofibre scaffolds. Materials Science and Engineering C, 2014, 35, 347-353.	7.3	15
41	Rapid Nucleation of Iron Oxide Nanoclusters in Aqueous Solution by Plasma Electrochemistry. Langmuir, 2015, 31, 7633-7643.	3.5	15
42	Fibronectin-modified surfaces for evaluating the influence of cell adhesion on sensitivity of leukemic cells to siRNA nanoparticles. Nanomedicine, 2016, 11, 1123-1138.	3.3	15
43	Characterization of Carbon Anode Protected by Low Boron Level: An Attempt To Understand Carbonâ€“Boron Inhibitor Mechanism. ACS Sustainable Chemistry and Engineering, 2017, 5, 6700-6706.	6.7	14
44	Single or Mixed Tethered Peptides To Promote hMSC Differentiation toward Osteoblastic Lineage. ACS Applied Bio Materials, 2018, 1, 1800-1809.	4.6	14
45	Dynamics of Endothelial Cell Responses to Laminar Shear Stress on Surfaces Functionalized with Fibronectin-Derived Peptides. ACS Biomaterials Science and Engineering, 2018, 4, 3779-3791.	5.2	14
46	A Continuous and Pulsatile Flow Circulation System for Evaluation of Cardiovascular Devices. Artificial Organs, 1998, 22, 746-752.	1.9	12
47	On the ability of imatinib mesylate to inhibit smooth muscle cell proliferation without delaying endothelialization: An in vitro study. Vascular Pharmacology, 2009, 51, 50-56.	2.1	12
48	Using infrared and Raman microspectroscopies to compare<i>ex vivo</i>involved psoriatic skin with normal human skin. Journal of Biomedical Optics, 2015, 20, 067004.	2.6	12
49	Atmospheric Pressure Plasma Polymer of Ethyl Lactate: In Vitro Degradation and Cell Viability Studies. Plasma Processes and Polymers, 2016, 13, 711-721.	3.0	12
50	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
51	Air spun poly(lactic acid) nanofiber scaffold degradation for vascular tissue engineering: A 1H NMR study. Polymer Degradation and Stability, 2012, 97, 1520-1526.	5.8	11
52	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
53	Characterization of argon dielectric barrier discharges applied to ethyl lactate plasma polymerization. Journal Physics D: Applied Physics, 2017, 50, 475205.	2.8	11
54	Deposition of antiâ€fog coatings on glass substrates using the jet of an openâ€toâ€air microwave argon plasma at atmospheric pressure. Plasma Processes and Polymers, 2020, 17, 1900229.	3.0	11

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55	Impact of Peptide Micropatterning on Endothelial Cell Actin Remodeling for Cell Alignment under Shear Stress. Macromolecular Bioscience, 2012, 12, 1648-1659.	4.1	10
56	Unveiling the origin of the anti-fogging performance of plasma-coated glass: Role of the structure and the chemistry of siloxane precursors. Progress in Organic Coatings, 2020, 141, 105401.	3.9	10
57	Correlation between the Plasma Characteristics and the Surface Chemistry of Plasma-Treated Polymers through Partial Least-Squares Analysis. Langmuir, 2013, 29, 15859-15867.	3.5	9
58	Response surface methodology as a predictive tool for the fabrication of coatings with optimal anti-fogging performance. Thin Solid Films, 2021, 718, 138482.	1.8	9
59	Commercial polyurethanes: The potential influence of auxiliary chemicals on the biodegradation process. Journal of Biomaterials Science, Polymer Edition, 1999, 10, 729-749.	3.5	8
60	Modification of lipid transport through a microporous PTFE membrane wall grafted with poly(ethylene glycol). Colloids and Surfaces B: Biointerfaces, 2002, 25, 205-217.	5.0	8
61	Directing hMSCs fate through geometrical cues and mimetics peptides. Journal of Biomedical Materials Research - Part A, 2020, 108, 201-211.	4.0	8
62	Surface grafting of Fc-binding peptides as a simple platform to immobilize and identify antibodies that selectively capture circulating endothelial progenitor cells. Biomaterials Science, 2020, 8, 5465-5475.	5.4	8
63	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
64	Fibronectin grafting to enhance skin sealing around transcutaneous titanium implant. Journal of Biomedical Materials Research - Part A, 2021, 109, 2187-2198.	4.0	8
65	Lipid uptake in expanded polytetrafluoroethylene vascular grafts. Journal of Vascular Surgery, 1998, 28, 527-534.	1.1	7
66	Are Intraaortic Balloons Suitable for Reuse? A Survey Study of 112 Used Intraaortic Balloons. Artificial Organs, 1997, 21, 121-130.	1.9	7
67	Beyond microelectronics with 1,3,5,7-tetramethylcyclotetrasiloxane: A promising molecule for anti-fogging coatings. Materials Chemistry and Physics, 2020, 242, 122508.	4.0	7
68	A new approach for synthesizing plasmonic polymer nanocomposite thin films by combining a gold salt aerosol and an atmospheric pressure low-temperature plasma. Nanotechnology, 2021, 32, 175601.	2.6	7
69	Grafting of a model protein on lactide and caprolactone based biodegradable films for biomedical applications. Biomatter, 2014, 4, e27979.	2.6	6
70	Application of Boron Oxide as a Protective Surface Treatment to Decrease the Air Reactivity of Carbon Anodes. Metals, 2017, 7, 79.	2.3	6
71	Partial Least-Squares Regression as a Tool To Predict Fluoropolymer Surface Modification by Dielectric Barrier Discharge in a Corona Process Configuration in a Nitrogenâ€“Organic Gaseous Precursor Environment. Industrial & Engineering Chemistry Research, 2018, 57, 7476-7485.	3.7	6
72	Effect of linking arm hydrophilic/hydrophobic nature, length and end-group on the conformation and the RGD accessibility of surface-immobilized fibronectin. Materials Science and Engineering C, 2020, 107, 110335.	7.3	6

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73	Fourierâ€transform infrared spectroscopy of ethyl lactate decomposition and thinâ€film coating in a filamentary and a glow dielectric barrier discharge. Plasma Processes and Polymers, 2021, 18, 2000248.	3.0	6
74	Interplay of matrix stiffness and stress relaxation in directing osteogenic differentiation of mesenchymal stem cells. Biomaterials Science, 2022, 10, 4978-4996.	5.4	6
75	Chemical and morphological analysis of explanted polyurethane vascular prostheses: the challenge of removing fixed adhering tissue. Biomaterials, 1996, 17, 1843-1848.	11.4	5
76	Influence of a square pulse voltage on argon-ethyl lactate discharges and their plasma-deposited coatings using time-resolved spectroscopy and surface characterization. Physics of Plasmas, 2018, 25, 103504.	1.9	5
77	Interpretation of artifacts in Fourier transform infrared spectra of atmospheric pressure dielectric barrier discharges: relationship with the plasma frequency between 300 Hz and 15 kHz. Journal Physics D: Applied Physics, 2020, 53, 015201.	2.8	5
78	Isolating and expanding endothelial progenitor cells from peripheral blood on peptideâ€functionalized polystyrene surfaces. Biotechnology and Bioengineering, 2019, 116, 2598-2609.	3.3	4
79	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
80	Atmospheric pressure Townsend discharges as a promising tool for the oneâ€step deposition of antifogging coatings from N 2 O/TMCTS mixtures. Plasma Processes and Polymers, 2020, 17, 1900186.	3.0	4
81	Milkweed scaffold: A new candidate for bone cell growth. International Journal of Polymeric Materials and Polymeric Biomaterials, 2020, 69, 872-883.	3.4	3
82	Atmosphericâ€pressure plasmaâ€enhanced chemical vapor deposition of nanocomposite thin films from ethyl lactate and silica nanoparticles. Plasma Processes and Polymers, 2021, 18, 2000153.	3.0	3
83	Engineering Biomaterials Surfaces Using Micropatterning. Advanced Materials Research, 2007, 15-17, 77-82.	0.3	2
84	Micropatterning Polymer Materials to Improve Endothelialization. Advanced Materials Research, 2011, 409, 777-782.	0.3	2
85	Electrode cleanliness impact on the surface treatment of fluoropolymer films for a long-lasting plasma process. Manufacturing Letters, 2020, 26, 1-5.	2.2	2
86	Effect of a thin organosilicon layer prepared by atmospheric pressure plasma on wood flame retardancy. Plasma Processes and Polymers, 0, , .	3.0	2
87	Transdermal diffusion, spatial distribution and physical state of a potential anticancer drug in mouse skin as studied by diffusion and spectroscopic techniques. Biomedical Spectroscopy and Imaging, 2018, 7, 47-61.	1.2	1
88	Polyethylene terephthalate textile heart valve: How poly(ethylene glycol) grafting limits fibrosis. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, 110, 2110-2120.	3.4	1