Marcela M Bilek

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/8790743/publications.pdf

Version: 2024-02-01

115 papers	3,277 citations	156536 32 h-index	198040 52 g-index
116 all docs	116 docs citations	116 times ranked	3758 citing authors

#	Article	IF	Citations
1	Biomimetic Culture Strategies for the Clinical Expansion of Mesenchymal Stromal Cells. ACS Biomaterials Science and Engineering, 2023, 9, 3742-3759.	2.6	5
2	Truncated vascular endothelial cadherin enhances rapid endothelialization of small diameter synthetic vascular grafts. Materials Today Advances, 2022, 14, 100222.	2.5	3
3	Local activation of focal adhesion kinase orchestrates the positioning of presynaptic scaffold proteins and Ca2+ signalling to control glucose-dependent insulin secretion. ELife, 2022, 11, .	2.8	6
4	Cold plasma treatment of porous scaffolds: Design principles. Plasma Processes and Polymers, 2022, 19, .	1.6	5
5	Continuum modelling of an asymmetric CCRF argon plasma reactor: Influence of higher excited states and sensitivity to model parameters. Plasma Processes and Polymers, 2021, 18, 2000243.	1.6	3
6	Effect of Recombinant Human Perlecan Domain V Tethering Method on Protein Orientation and Blood Contacting Activity on Polyvinyl Chloride. Advanced Healthcare Materials, 2021, 10, 2100388.	3.9	3
7	Nanostructured AlCoCrCu0.5FeNi high entropy oxide (HEO) thin films fabricated using reactive magnetron sputtering. Applied Surface Science, 2021, 553, 149491.	3.1	17
8	Plasma Surface Engineering to Biofunctionalise Polymers for Î²-Cell Adhesion. Coatings, 2021, 11, 1085.	1.2	1
9	Biomimetic silk biomaterials: Perlecan-functionalized silk fibroin for use in blood-contacting devices. Acta Biomaterialia, 2021, 132, 162-175.	4.1	16
10	Hydrogelâ^'Solid Hybrid Materials for Biomedical Applications Enabled by Surfaceâ€Embedded Radicals. Advanced Functional Materials, 2020, 30, 2004599.	7.8	26
11	Atmospheric Pressure Plasma Jet Treatment of Polymers Enables Reagent-Free Covalent Attachment of Biomolecules for Bioprinting. ACS Applied Materials & Interfaces, 2020, 12, 38730-38743.	4.0	18
12	Dry Surface Treatments of Silk Biomaterials and Their Utility in Biomedical Applications. ACS Biomaterials Science and Engineering, 2020, 6, 5431-5452.	2.6	24
13	High entropy nitride (HEN) thin films of AlCoCrCu0.5FeNi deposited by reactive magnetron sputtering. Surface and Coatings Technology, 2020, 402, 126327.	2.2	34
14	Bioactivation of Encapsulation Membranes Reduces Fibrosis and Enhances Cell Survival. ACS Applied Materials & Interfaces, 2020, 12, 56908-56923.	4.0	9
15	RF magnetron sputtered AlCoCrCu0.5FeNi high entropy alloy (HEA) thin films with tuned microstructure and chemical composition. Journal of Alloys and Compounds, 2020, 836, 155348.	2.8	45
16	Covalent Biofunctionalization of the Inner Surfaces of a Hollow-Fiber Capillary Bundle Using Packed-Bed Plasma Ion Implantation. ACS Applied Materials & Interfaces, 2020, 12, 32163-32174.	4.0	9
17	Immobilized Macrophage Colony-Stimulating Factor (M-CSF) Regulates the Foreign Body Response to Implanted Materials. ACS Biomaterials Science and Engineering, 2020, 6, 995-1007.	2.6	11
18	A multifaceted biomimetic interface to improve the longevity of orthopedic implants. Acta Biomaterialia, 2020, 110, 266-279.	4.1	34

#	Article	IF	Citations
19	Bending shape memory behaviours of carbon fibre reinforced polyurethane-type shape memory polymer composites under relatively small deformation: Characterisation and computational simulation. Journal of the Mechanical Behavior of Biomedical Materials, 2019, 100, 103372.	1.5	20
20	High entropy alloy thin films of AlCoCrCu0.5FeNi with controlled microstructure. Applied Surface Science, 2019, 495, 143560.	3.1	69
21	Multifunctional Ti-xCu coatings for cardiovascular interfaces: Control of microstructure and surface chemistry. Materials Science and Engineering C, 2019, 104, 109969.	3.8	20
22	Substrate geometry modulates self-assembly and collection of plasma polymerized nanoparticles. Communications Physics, 2019, 2, .	2.0	14
23	Bioactive Materials Facilitating Targeted Local Modulation of Inflammation. JACC Basic To Translational Science, 2019, 4, 56-71.	1.9	33
24	Transparent Conductive Dielectricâ^'Metalâ^'Dielectric Structures for Electrochromic Applications Fabricated by High-Power Impulse Magnetron Sputtering. ACS Applied Materials & Interfaces, 2019, 11, 14871-14881.	4.0	45
25	Enhanced biocompatibility of polyurethane-type shape memory polymers modified by plasma immersion ion implantation treatment and collagen coating: An in vivo study. Materials Science and Engineering C, 2019, 99, 863-874.	3.8	19
26	A plasma ion bombardment process enabling reagent-free covalent binding of multiple functional molecules onto magnetic particles. Materials Science and Engineering C, 2019, 98, 118-124.	3.8	6
27	Plasmaâ€Activated Substrate with a Tropoelastin Anchor for the Maintenance and Delivery of Multipotent Adult Progenitor Cells. Macromolecular Bioscience, 2019, 19, 1800233.	2.1	5
28	Catalytic Formation of Nitric Oxide Mediated by Tiâ€“Cu Coatings Provides Multifunctional Interfaces for Cardiovascular Applications. Advanced Materials Interfaces, 2018, 5, 1701487.	1.9	12
29	Electric fields control the orientation of peptides irreversibly immobilized on radical-functionalized surfaces. Nature Communications, 2018, 9, 357.	5.8	77
30	Effect of plasma immersion ion implantation on polycaprolactone with various molecular weights and crystallinity. Journal of Materials Science: Materials in Medicine, 2018, 29, 5.	1.7	11
31	Plasma Synthesis of Carbon-Based Nanocarriers for Linker-Free Immobilization of Bioactive Cargo. ACS Applied Nano Materials, 2018, 1, 580-594.	2.4	20
32	Plasma processing of PDMS based spinal implants for covalent protein immobilization, cell attachment and spreading. Journal of Materials Science: Materials in Medicine, 2018, 29, 178.	1.7	7
33	Plasma ion implantation enabled bio-functionalization of PEEK improves osteoblastic activity. APL Bioengineering, 2018, 2, 026109.	3.3	31
34	Multifunctional Protein-Immobilized Plasma Polymer Films for Orthopedic Applications. ACS Biomaterials Science and Engineering, 2018, 4, 4084-4094.	2.6	27
35	Local Integrin Activation in Pancreatic Î² Cells Targets Insulin Secretion to the Vasculature. Cell Reports, 2018, 24, 2819-2826.e3.	2.9	64
36	Direct covalent attachment of silver nanoparticles on radical-rich plasma polymer films for antibacterial applications. Journal of Materials Chemistry B, 2018, 6, 5845-5853.	2.9	40

#	Article	IF	Citations
37	Plasma Ion Implantation of Silk Biomaterials Enabling Direct Covalent Immobilization of Bioactive Agents for Enhanced Cellular Responses. ACS Applied Materials & Interfaces, 2018, 10, 17605-17616.	4.0	36
38	Plasma activated coatings with dual action against fungi and bacteria. Applied Materials Today, 2018, 12, 72-84.	2.3	52
39	A sterilizable, biocompatible, tropoelastin surface coating immobilized by energetic ion activation. Journal of the Royal Society Interface, 2017, 14, 20160837.	1.5	19
40	Evolution of target condition in reactive HiPIMS as a function of duty cycle: An opportunity for refractive index grading. Journal of Applied Physics, 2017, 121, .	1.1	24
41	Plasma mediated protein immobilisation enhances the vascular compatibility of polyurethane with tissue matched mechanical properties. Biomedical Materials (Bristol), 2017, 12, 045002.	1.7	17
42	Structural Analysis and Protein Functionalization of Electroconductive Polypyrrole Films Modified by Plasma Immersion Ion Implantation. ACS Biomaterials Science and Engineering, 2017, 3, 2247-2258.	2.6	10
43	Plasma activated coating immobilizes apolipoprotein A-I to stainless steel surfaces in its bioactive form and enhances biocompatibility. Nanomedicine: Nanotechnology, Biology, and Medicine, 2017, 13, 2141-2150.	1.7	7
44	Covalent linker-free immobilization of conjugatable oligonucleotides on polypropylene surfaces. RSC Advances, 2016, 6, 83328-83336.	1.7	12
45	A centre-triggered magnesium fuelled cathodic arc thruster uses sublimation to deliver a record high specific impulse. Applied Physics Letters, 2016, 109, .	1.5	8
46	Plasma-Activated Tropoelastin Functionalization of Zirconium for Improved Bone Cell Response. ACS Biomaterials Science and Engineering, 2016, 2, 662-676.	2.6	23
47	Mechanically Robust Plasma-Activated Interfaces Optimized for Vascular Stent Applications. ACS Applied Materials & Interfaces, 2016, 8, 9635-9650.	4.0	31
48	Substrate-Regulated Growth of Plasma-Polymerized Films on Carbide-Forming Metals. Langmuir, 2016, 32, 10835-10843.	1.6	27
49	Plasma Ion Activated Expanded Polytetrafluoroethylene Vascular Grafts with a Covalently Immobilized Recombinant Human Tropoelastin Coating Reducing Neointimal Hyperplasia. ACS Biomaterials Science and Engineering, 2016, 2, 1286-1297.	2.6	19
50	Blended Polyurethane and Tropoelastin as a Novel Class of Biologically Interactive Elastomer. Tissue Engineering - Part A, 2016, 22, 524-533.	1.6	16
51	Biointerfaces: Nanoâ€Bioâ€Chemical Braille for Cells: The Regulation of Stem Cell Responses using Biâ€Functional Surfaces (Adv. Funct. Mater. 2/2015). Advanced Functional Materials, 2015, 25, 339-339.	7.8	3
52	Immobilization of bioactive plasmin reduces the thrombogenicity of metal surfaces. Colloids and Surfaces B: Biointerfaces, 2015, 136, 944-954.	2.5	12
53	Bio-functionalisation of polyether ether ketone using plasma immersion ion implantation. Proceedings of SPIE, 2015, , .	0.8	1
54	Controlled deposition of plasma activated coatings on zirconium substrates. , 2015, , .		1

#	Article	IF	Citations
55	Bioengineering stents with proactive biocompatibility. Interventional Cardiology, 2015, 7, 571-584.	0.0	2
56	Interactions of energetic ions with polymers: chemical picture. , 2015, , 29-67.		1
57	Biological and medical applications. , 2015, , 185-216.		2
58	Direct covalent coupling of proteins to nanostructured plasma polymers: a route to tunable cell adhesion. Applied Surface Science, 2015, 351, 537-545.	3.1	13
59	Nanoâ€Bioâ€Chemical Braille for Cells: The Regulation of Stem Cell Responses using Biâ€Functional Surfaces. Advanced Functional Materials, 2015, 25, 193-205.	7.8	36
60	Mechanical Properties of Plasma Immersion Ion Implanted PEEK for Bioactivation of Medical Devices. ACS Applied Materials & Interfaces, 2015, 7, 23029-23040.	4.0	44
61	Temperature Activated Diffusion of Radicals through Ion Implanted Polymers. ACS Applied Materials & Interfaces, 2015, 7, 26340-26345.	4.0	16
62	Ion implantation treatment of beads for covalent binding of molecules: Application to bioethanol production using thermophilic beta-glucosidase. Enzyme and Microbial Technology, 2014, 54, 20-24.	1.6	18
63	Cell surface antigen profiling using a novel type of antibody array immobilised to plasma ion-implanted polycarbonate. Cellular and Molecular Life Sciences, 2014, 71, 3841-3857.	2.4	10
64	Increasing binding density of yeast cells by control of surface charge with allylamine grafting to ion modified polymer surfaces. Colloids and Surfaces B: Biointerfaces, 2014, 122, 537-544.	2.5	3
65	Biocompatibility of silk-tropoelastin protein polymers. Biomaterials, 2014, 35, 5138-5147.	5.7	60
66	Immobilisation of a fibrillin-1 fragment enhances the biocompatibility of PTFE. Colloids and Surfaces B: Biointerfaces, 2014, 116, 544-552.	2.5	17
67	Surface plasma modification and tropoelastin coating of a polyurethane co-polymer for enhanced cell attachment and reduced thrombogenicity. Biomaterials, 2014, 35, 6797-6809.	5.7	74
68	Optimising Ion Production in Pulsed Refractory and Non-Refractory Cathodic Arcs. , 2014, , .		1
69	Influence of pH on yeast immobilization on polystyrene surfaces modified by energetic ion bombardment. Colloids and Surfaces B: Biointerfaces, 2013, 104, 145-152.	2.5	22
70	The Vroman effect: Competitive protein exchange with dynamic multilayer protein aggregates. Colloids and Surfaces B: Biointerfaces, 2013, 103, 395-404.	2.5	240
71	The use of plasma-activated covalent attachment of early domains of tropoelastin to enhance vascular compatibility of surfaces. Biomaterials, 2013, 34, 7584-7591.	5.7	37
72	An integrated solution for rapid biosensing with robust linker free covalent bindingsurfaces. Biosensors and Bioelectronics, 2013, 42, 447-452.	5.3	8

#	Article	IF	Citations
73	Carbon nanostructures for hard tissue engineering. RSC Advances, 2013, 3, 11058.	1.7	62
74	Radiation damage of polyethylene exposed in the stratosphere at an altitude ofÂ40Âkm. Polymer Degradation and Stability, 2013, 98, 1526-1536.	2.7	9
75	CelB and Î²-glucosidase immobilization for carboxymethyl cellulose hydrolysis. RSC Advances, 2013, 3, 23604.	1.7	13
76	Mechanisms for Covalent Immobilization of Horseradish Peroxidase on Ion-Beam-Treated Polyethylene. Scientifica, 2012, 2012, 1-28.	0.6	22
77	Ion-implanted polytetrafluoroethylene enhances Saccharomyces cerevisiae biofilm formation for improved immobilization. Journal of the Royal Society Interface, 2012, 9, 2923-2935.	1.5	16
78	Cell patterning via linker-free protein functionalization of an organic conducting polymer (polypyrrole) electrode. Acta Biomaterialia, 2012, 8, 2538-2548.	4.1	40
79	Plasma-based biofunctionalization of vascular implants. Nanomedicine, 2012, 7, 1907-1916.	1.7	40
80	InÂvivo biocompatibility of a plasma-activated, coronary stent coating. Biomaterials, 2012, 33, 7984-7992.	5.7	57
81	Substrate orientation effects on the nucleation and growth of the Mn+1AXn phase Ti2AlC. Journal of Applied Physics, 2011, 109, 014903.	1.1	18
82	Carbon diffusion in alumina from carbon and Ti₂AlC thin films. Journal of Applied Physics, 2011, 109, 083503.	1.1	14
83	Binding of the cell adhesive protein tropoelastin to PTFE through plasma immersion ion implantation treatment. Biomaterials, 2011, 32, 5100-5111.	5.7	67
84	Tropoelastin Switch and Modulated Endothelial Cell Binding to PTFE. BioNanoScience, 2011, 1, 123-127.	1.5	8
85	Surface attachment of horseradish peroxidase to nylon modified by plasmaâ€immersion ion implantation. Journal of Applied Polymer Science, 2011, 120, 2891-2903.	1.3	20
86	Etching and structure changes in PMMA coating under argon plasma immersion ion implantation. Nuclear Instruments & Methods in Physics Research B, 2011, 269, 1361-1369.	0.6	25
87	Universal Biomolecule Binding Interlayers Created by Energetic Ion Bombardment. Materials Research Society Symposia Proceedings, 2011, 1354, 3.	0.1	0
88	Free radical functionalization of surfaces to prevent adverse responses to biomedical devices. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 14405-14410.	3.3	178
89	The immobilization of recombinant human tropoelastin on metals using a plasma-activated coating to improve the biocompatibility of coronary stents. Biomaterials, 2010, 31, 8332-8340.	5.7	96
90	Etching and structure transformations in uncured epoxy resin under rf-plasma and plasma immersion ion implantation. Nuclear Instruments & Methods in Physics Research B, 2010, 268, 1568-1580.	0.6	15

#	Article	IF	Citations
91	Plasma modified surfaces for covalent immobilization of functional biomolecules in the absence of chemical linkers: towards better biosensors and a new generation of medical implants. Biophysical Reviews, 2010, 2, 55-65.	1.5	144
92	The linker-free covalent attachment of collagen to plasma immersion ion implantation treated polytetrafluoroethylene and subsequent cell-binding activity. Biomaterials, 2010, 31, 2526-2534.	5.7	60
93	Direct Evidence of Covalent Immobilisation of Microperoxidaseâ€11 on Plasma Polymer Surfaces. Plasma Processes and Polymers, 2010, 7, 708-714.	1.6	14
94	Cell Adhesion to Tropoelastin Is Mediated via the C-terminal GRKRK Motif and Integrin Î±VÎ²3. Journal of Biological Chemistry, 2009, 284, 28616-28623.	1.6	147
95	Plasma Polymer Surfaces Compatible with a CMOS Process for Direct Covalent Enzyme Immobilization. Plasma Processes and Polymers, 2009, 6, 68-75.	1.6	27
96	Covalently Bound Biomimetic Layers on Plasma Polymers with Graded Metallic Interfaces for in vivo Implants. Plasma Processes and Polymers, 2009, 6, 658-666.	1.6	36
97	Covalent immobilisation of tropoelastin on a plasma deposited interface for enhancement of endothelialisation on metal surfaces. Biomaterials, 2009, 30, 1675-1681.	5.7	118
98	Linker-free covalent attachment of the extracellular matrix protein tropoelastin to a polymer surface for directed cell spreading. Acta Biomaterialia, 2009, 5, 3371-3381.	4.1	44
99	A New Surface for Immobilizing and Maintaining the Function of Enzymes in a Freeze-Dried State. Biomacromolecules, 2009, 10, 2577-2583.	2.6	20
100	Nanostructured Carbonized Thin Films Produced by Plasma Immersion Ion Implantation of Blockâ€Copolymer Assemblies. Plasma Processes and Polymers, 2008, 5, 155-160.	1.6	12
101	Reducing Water Permeability while Maintaining Transparency of PET: A Plasma Immersion Ion Implantation Study. Plasma Processes and Polymers, 2008, 5, 834-839.	1.6	10
102	Covalent Attachment and Bioactivity of Horseradish Peroxidase on Plasmaâ€Polymerized Hexane Coatings. Plasma Processes and Polymers, 2008, 5, 727-736.	1.6	20
103	Attachment of horseradish peroxidase to polytetrafluorethylene (teflon) after plasma immersion ion implantation. Acta Biomaterialia, 2008, 4, 1218-1225.	4.1	62
104	Structure of polymers after ion beam treatment. , 2008, , 75-145.		2
105	Covalent attachment of functional protein to polymer surfaces: a novel one-step dry process. Journal of the Royal Society Interface, 2008, 5, 663-669.	1.5	39
106	Interaction of ion beam with polymer. , 2008, , 29-73.		2
107	Sources for ion beam treatment. , 2008, , 11-28.		1
108	Wetting. , 2008, , 147-160.		1

#	Article	IF	Citations
109	The attachment of catalase and poly-l-lysine to plasma immersion ion implantation-treated polyethylene. Acta Biomaterialia, 2007, 3, 695-704.	4.1	53
110	Plasmaâ€Treated Polyethylene Surfaces for Improved Binding of Active Protein. Plasma Processes and Polymers, 2007, 4, 583-590.	1.6	42
111	1P519 Nanosecond responses of proteins to ultra-high temperature pulses(25. New methods and tools) Tj ETQq1 1 0.784314 rgBT /Ov	0.0	0
112	Enhancement of microarcing at a grounded chamber wall by nonvanishing ion sheath in a radio-frequency capacitive discharged plasma. Applied Physics Letters, 2005, 87, 181501.	1.5	7
113	An integrated solution for rapid biosensing combining linker free binding, freeze drying and high sensitivity ellipsometric detection. Nature Precedings, 0, , .	0.1	1
114	Local Integrin Activation in Pancreatic Cells Targets Insulin Secretion to the Vasculature. SSRN Electronic Journal, 0, , .	0.4	1
115	An effective method to optimise plasma immersion ion implantation: Sensitivity analysis and design based on lowâ€density polyethylene. Plasma Processes and Polymers, 0, , .	1.6	3