Behnam Akhavan

List of Publications by Year
in descending order

52 papers	1,437 citations	293460 24 h-index	388640 36 g-index
52 all docs	52 docs citations	52 times ranked	1708 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	Design Optimization of Perfluorinated Liquidâ€Infused Surfaces for Bloodâ€Contacting Applications. Advanced Materials Interfaces, 2022, 9, .	1.9	8
3	Effect of plasma ion immersion implantation on physiochemical and biological properties of silk towards creating a versatile biomaterial platform. Materials Today Advances, 2022, 13, 100212.	2.5	9
4	Design Optimization of Perfluorinated Liquidâ€Infused Surfaces for Bloodâ€Contacting Applications (Adv.) Tj ETQq0 0 0 rgBT /Overlock	1.9	1
5	Truncated vascular endothelial cadherin enhances rapid endothelialization of small diameter synthetic vascular grafts. Materials Today Advances, 2022, 14, 100222.	2.5	3
6	Shellac: A Bioactive Coating for Surface Engineering of Cardiovascular Devices. Advanced Materials Interfaces, 2022, 9, .	1.9	4
7	Cold plasma treatment of porous scaffolds: Design principles. Plasma Processes and Polymers, 2022, 19, .	1.6	5
8	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
9	Nanostructured AlCoCrCu0.5FeNi high entropy oxide (HEO) thin films fabricated using reactive magnetron sputtering. Applied Surface Science, 2021, 553, 149491.	3.1	17
10	Biomimetic silk biomaterials: Perlecan-functionalized silk fibroin for use in blood-contacting devices. Acta Biomaterialia, 2021, 132, 162-175.	4.1	16
11	ITO-free silver-doped DMD structures: HiPIMS transparent-conductive nano-composite coatings for electrochromic applications. Solar Energy Materials and Solar Cells, 2021, 231, 111268.	3.0	9
12	External magnetic field guiding in HiPIMS to control sp³ fraction of tetrahedral amorphous carbon films. Journal Physics D: Applied Physics, 2021, 54, 045002.	1.3	10
13	Noble gas control of diamond-like content and compressive stress in carbon films by arc-mixed mode high power impulse magnetron sputtering. Surface and Coatings Technology, 2021, 427, 127785.	2.2	11
14	Mechanically robust nitrogen-rich plasma polymers: Biofunctional interfaces for surface engineering of biomedical implants. Materials Today Advances, 2021, 12, 100188.	2.5	13
15	Hydrogelâˆ'Solid Hybrid Materials for Biomedical Applications Enabled by Surfaceâ€Embedded Radicals. Advanced Functional Materials, 2020, 30, 2004599.	7.8	26
16	Tiâ€"Cu Coatings Deposited by a Combination of HiPIMS and DC Magnetron Sputtering: The Role of Vacuum Annealing on Cu Diffusion, Microstructure, and Corrosion Resistance. Coatings, 2020, 10, 1064.	1.2	5
17	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
18	Dry Surface Treatments of Silk Biomaterials and Their Utility in Biomedical Applications. ACS Biomaterials Science and Engineering, 2020, 6, 5431-5452.	2.6	24

#	Article	IF	Citations
19	High entropy nitride (HEN) thin films of AlCoCrCu0.5FeNi deposited by reactive magnetron sputtering. Surface and Coatings Technology, 2020, 402, 126327.	2.2	34
20	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
21	Reactive magnetron co-sputtering of Ti-xCuO coatings: Multifunctional interfaces for blood-contacting devices. Materials Science and Engineering C, 2020, 116, 111198.	3.8	21
22	A multifaceted biomimetic interface to improve the longevity of orthopedic implants. Acta Biomaterialia, 2020, 110, 266-279.	4.1	34
23	Radical-functionalized plasma polymers: Stable biomimetic interfaces for bone implant applications. Applied Materials Today, 2019, 16, 456-473.	2.3	37
24	High entropy alloy thin films of AlCoCrCu0.5FeNi with controlled microstructure. Applied Surface Science, 2019, 495, 143560.	3.1	69
25	A review of biomimetic surface functionalization for bone-integrating orthopedic implants: Mechanisms, current approaches, and future directions. Progress in Materials Science, 2019, 106, 100588.	16.0	147
26	Multifunctional Ti-xCu coatings for cardiovascular interfaces: Control of microstructure and surface chemistry. Materials Science and Engineering C, 2019, 104, 109969.	3.8	20
27	Carbon films deposited by mixed-mode high power impulse magnetron sputtering for high wear resistance: The role of argon incorporation. Thin Solid Films, 2019, 688, 137353.	0.8	20
28	Bioactive Materials Facilitating Targeted Local Modulation of Inflammation. JACC Basic To Translational Science, 2019, 4, 56-71.	1.9	33
29	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
30	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
31	Electric fields control the orientation of peptides irreversibly immobilized on radical-functionalized surfaces. Nature Communications, 2018, 9, 357.	5.8	77
32	External magnetic field increases both plasma generation and deposition rate in HiPIMS. Surface and Coatings Technology, 2018, 352, 671-679.	2.2	37
33	Multifunctional Protein-Immobilized Plasma Polymer Films for Orthopedic Applications. ACS Biomaterials Science and Engineering, 2018, 4, 4084-4094.	2.6	27
34	Cellular responses to radical propagation from ion-implanted plasma polymer surfaces. Applied Surface Science, 2018, 456, 701-710.	3.1	21
35	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
36	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

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37	Plasma activated coatings with dual action against fungi and bacteria. Applied Materials Today, 2018, 12, 72-84.	2.3	52
38	HiPIMS carbon coatings show covalent protein binding that imparts enhanced hemocompatibility. Carbon, 2018, 139, 118-128.	5.4	27
39	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
40	5. Surface-engineered silica via plasma polymer deposition. , 2017, , 99-112.		1
41	Inhomogeneous Growth of Micrometer Thick Plasma Polymerized Films. Langmuir, 2016, 32, 4792-4799.	1.6	17
42	Substrate-Regulated Growth of Plasma-Polymerized Films on Carbide-Forming Metals. Langmuir, 2016, 32, 10835-10843.	1.6	27
43	Controlled deposition of plasma activated coatings on zirconium substrates. , 2015, , .		1
44	Plasma polymerization of sulfur-rich and water-stable coatings on silica particles. Surface and Coatings Technology, 2015, 264, 72-79.	2.2	26
45	Plasma Polymer-Functionalized Silica Particles for Heavy Metals Removal. ACS Applied Materials & Interfaces, 2015, 7, 4265-4274.	4.0	80
46	Development of negatively charged particulate surfaces through a dry plasma-assisted approach. RSC Advances, 2015, 5, 12910-12921.	1.7	30
47	Development of Oxidized Sulfur Polymer Films through a Combination of Plasma Polymerization and Oxidative Plasma Treatment. Langmuir, 2014, 30, 1444-1454.	1.6	27
48	Hydrophobic Plasma Polymer Coated Silica Particles for Petroleum Hydrocarbon Removal. ACS Applied Materials & Interfaces, 2013, 5, 8563-8571.	4.0	80
49	Tuning the hydrophobicity of plasma polymer coated silica particles. Powder Technology, 2013, 249, 403-411.	2.1	34
50	Evolution of Hydrophobicity in Plasma Polymerised 1,7â€<scp>O</scp>ctadiene Films. Plasma Processes and Polymers, 2013, 10, 1018-1029.	1.6	36
51	Development of hydrophobic silica powders using plasma polymerization technology. , 2012, , .		1
52	Influence of Retained Austenite on the Mechanical Properties of Low Carbon Martensitic Stainless Steel Castings. ISIJ International, 2011, 51, 471-475.	0.6	32