Ion N MihÄilescu

List of Publications by Year
in descending order

96 papers	2,235 citations	236925 25 h-index	254184 43 g-index
98 all docs	98 docs citations	98 times ranked	2237 citing authors

#	Article	IF	Citations
1	Strontium-substituted hydroxyapatite coatings synthesized by pulsed-laser deposition: In vitro osteoblast and osteoclast response. Acta Biomaterialia, 2008, 4, 1885-1893.	8.3	313
2	Human osteoblast response to pulsed laser deposited calcium phosphate coatings. Biomaterials, 2005, 26, 2381-2389.	11.4	180
3	Levan Nanostructured Thin Films by MAPLE Assembling. Biomacromolecules, 2011, 12, 2251-2256.	5.4	76
4	Magnesium and strontium doped octacalcium phosphate thin films by matrix assisted pulsed laser evaporation. Journal of Inorganic Biochemistry, 2012, 107, 65-72.	3.5	73
5	Biocompatible nanocrystalline octacalcium phosphate thin films obtained by pulsed laser deposition. Biomaterials, 2004, 25, 2539-2545.	11.4	70
6	Biofunctional alendronateâ€“Hydroxyapatite thin films deposited by Matrix Assisted Pulsed Laser Evaporation. Biomaterials, 2009, 30, 6168-6177.	11.4	68
7	Artificial Neural Network Algorithms for 3D Printing. Materials, 2021, 14, 163.	2.9	65
8	Structural, compositional, mechanical characterization and biological assessment of bovine-derived hydroxyapatite coatings reinforced with MgF 2 or MgO for implants functionalization. Materials Science and Engineering C, 2016, 59, 863-874.	7.3	53
9	Strontium and zoledronate hydroxyapatites graded composite coatings for bone prostheses. Journal of Colloid and Interface Science, 2015, 448, 1-7.	9.4	51
10	Biocompatibility evaluation of a novel hydroxyapatite-polymer coating for medical implants (inÂvitro) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	3.6	48
11	Structural and biological evaluation of lignin addition to simple and silver-doped hydroxyapatite thin films synthesized by matrix-assisted pulsed laser evaporation. Journal of Materials Science: Materials in Medicine, 2015, 26, 5333.	3.6	47
12	Fibronectin layers by matrix-assisted pulsed laser evaporation from saline buffer-based cryogenic targets. Acta Biomaterialia, 2011, 7, 3780-3788.	8.3	44
13	Combinatorial MAPLE gradient thin film assemblies signalling to human osteoblasts. Biofabrication, 2014, 6, 035010.	7.1	39
14	Synergistic effects of BMP-2, BMP-6 or BMP-7 with human plasma fibronectin onto hydroxyapatite coatings: A comparative study. Acta Biomaterialia, 2017, 55, 481-492.	8.3	39
15	Metal Matrix Composites Synthesized by Laser-Melting Deposition: A Review. Materials, 2020, 13, 2593.	2.9	37
16	MAPLE applications in studying organic thin films. Laser Physics, 2007, 17, 66-70.	1.2	36
17	Combinatorial matrix-assisted pulsed laser evaporation: Single-step synthesis of biopolymer compositional gradient thin film assemblies. Applied Physics Letters, 2012, 101, .	3.3	36
18	Fabrication of antimicrobial silver-doped carbon structures by combinatorial pulsed laser deposition. International Journal of Pharmaceutics, 2016, 515, 592-606.	5.2	34

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19	Comparative study on Pulsed Laser Deposition and Matrix Assisted Pulsed Laser Evaporation of urease thin films. Thin Solid Films, 2009, 517, 4299-4302.	1.8	33
20	Radical modification of the wetting behavior of textiles coated with ZnO thin films and nanoparticles when changing the ambient pressure in the pulsed laser deposition process. Journal of Applied Physics, 2011, 110, .	2.5	33
21	Antiresorption implant coatings based on calcium alendronate and octacalcium phosphate deposited by matrix assisted pulsed laser evaporation. Colloids and Surfaces B: Biointerfaces, 2015, 136, 449-456.	5.0	33
22	Gradient coatings of strontium hydroxyapatite/zinc Î²-tricalcium phosphate as a tool to modulate osteoblast/osteoclast response. Journal of Inorganic Biochemistry, 2018, 183, 1-8.	3.5	32
23	Accurate analysis of indiumâ€“zinc oxide thin films via laser-induced breakdown spectroscopy based on plasma modeling. Journal of Analytical Atomic Spectrometry, 2014, 29, 553.	3.0	29
24	Estimation of clad geometry and corresponding residual stress distribution in laser melting deposition: analytical modeling and experimental correlations. International Journal of Advanced Manufacturing Technology, 2020, 111, 77-91.	3.0	29
25	About the nature of particulates covering the surface of thin films obtained by reactive pulsed laser deposition. Journal Physics D: Applied Physics, 1998, 31, 2236-2240.	2.8	25
26	Three-Jet Powder Flow and Laserâ€“Powder Interaction in Laser Melting Deposition: Modelling Versus Experimental Correlations. Metals, 2020, 10, 1113.	2.3	25
27	Structural investigations of ITO-ZnO films grown by the combinatorial pulsed laser deposition technique. Applied Surface Science, 2009, 255, 5288-5291.	6.1	23
28	A parametric study of the deposition of the TiN thin films by laser reactive ablation of titanium targets in nitrogen: the roles of the total gas pressure and the contaminations with oxides. Journal of Materials Science, 1996, 31, 2909-2915.	3.7	22
29	New bio-active, antimicrobial and adherent coatings of nanostructured carbon double-reinforced with silver and silicon by Matrix-Assisted Pulsed Laser Evaporation for medical applications. Applied Surface Science, 2018, 441, 871-883.	6.1	22
30	Advanced Biomimetic Implants Based on Nanostructured Coatings Synthesized by Pulsed Laser Technologies. Springer Series in Materials Science, 2010, , 235-260.	0.6	22
31	Interfacial titanium oxide between hydroxyapatite and TiAlFe substrate. Journal of Materials Science: Materials in Medicine, 2007, 18, 2347-2354.	3.6	21
32	Inorganicâ€“Organic Thin Implant Coatings Deposited by Lasers. ACS Applied Materials & Interfaces, 2015, 7, 911-920.	8.0	21
33	Stainless steel surface biofunctionalization with PMMA-bioglass coatings: compositional, electrochemical corrosion studies and microbiological assay. Journal of Materials Science: Materials in Medicine, 2015, 26, 195.	3.6	21
34	Combinatorial MAPLE deposition of antimicrobial orthopedic maps fabricated from chitosan and biomimetic apatite powders. International Journal of Pharmaceutics, 2016, 511, 505-515.	5.2	21
35	Multi-layer haemocompatible diamond-like carbon coatings obtained by combined radio frequency plasma enhanced chemical vapor deposition and magnetron sputtering. Journal of Materials Science: Materials in Medicine, 2013, 24, 2695-2707.	3.6	20
36	Thickness Influence on In Vitro Biocompatibility of Titanium Nitride Thin Films Synthesized by Pulsed Laser Deposition. Materials, 2016, 9, 38.	2.9	19

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37	Functionalized Antimicrobial Composite Thin Films Printing for Stainless Steel Implant Coatings. Molecules, 2016, 21, 740.	3.8	19
38	Multi-pulse laser nitridation of titanium, zirconium and hafnium in a nitrogen atmosphere containing oxygen. Journal Physics D: Applied Physics, 1987, 20, 1519-1524.	2.8	18
39	Laser Coatings via State-of-the-Art Additive Manufacturing: A Review. Coatings, 2021, 11, 296.	2.6	18
40	Characteristic features of the laser radiationâ€“target interactions during reactive pulsed laser ablation of Si targets in ammonia. Journal of Applied Physics, 1999, 86, 7123-7128.	2.5	17
41	Pulsed laser deposition of silicon nitride thin films by laser ablation of a Si target in low pressure ammonia. Journal of Materials Science, 1996, 31, 2839-2847.	3.7	16
42	Mesoscopic Computational Fluid Dynamics Modelling for the Laser-Melting Deposition of AISI 304 Stainless Steel Single Tracks with Experimental Correlation: A Novel Study. Metals, 2021, 11, 1569.	2.3	16
43	Functional Bioglassâ€”Biopolymer Double Nanostructure for Natural Antimicrobial Drug Extracts Delivery. Nanomaterials, 2020, 10, 385.	4.1	15
44	Biomimetic Collagen/Zn2+-Substituted Calcium Phosphate Composite Coatings on Titanium Substrates as Prospective Bioactive Layer for Implants: A Comparative Study Spin Coating vs. MAPLE. Nanomaterials, 2019, 9, 692.	4.1	14
45	Fish Bone Derived Bi-Phasic Calcium Phosphate Coatings Fabricated by Pulsed Laser Deposition for Biomedical Applications. Marine Drugs, 2020, 18, 623.	4.6	14
46	Antimicrobial and Cytocompatible Bovine Hydroxyapatite-Alumina-Zeolite Composite Coatings Synthesized by Pulsed Laser Deposition from Low-Cost Sustainable Natural Resources. ACS Sustainable Chemistry and Engineering, 2020, 8, 4026-4036.	6.7	14
47	Grain refinement and mechanical properties for AISI304 stainless steel single-tracks by laser melting deposition: Mathematical modelling versus experimental results. Results in Physics, 2021, 22, 103880.	4.1	14
48	Keyhole Formation by Laser Drilling in Laser Powder Bed Fusion of Ti6Al4V Biomedical Alloy: Mesoscopic Computational Fluid Dynamics Simulation versus Mathematical Modelling Using Empirical Validation. Nanomaterials, 2021, 11, 3284.	4.1	13
49	Thin films of vitronectin transferred by MAPLE. Applied Physics A: Materials Science and Processing, 2011, 105, 611-617.	2.3	12
50	Tailoring immobilization of immunoglobulin by excimer laser for biosensor applications. Journal of Biomedical Materials Research - Part A, 2011, 96A, 384-394.	4.0	12
51	Biocompatibility and bioactivity enhancement of Ce stabilized ZrO₂ doped HA coatings by controlled porosity change of Al₂O₃ substrates. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2011, 96B, 218-224.	3.4	12
52	Pulsed Laser Deposition of Aluminum Nitride Films: Correlation between Mechanical, Optical, and Structural Properties. Coatings, 2019, 9, 195.	2.6	12
53	Gradient multifunctional biopolymer thin film assemblies synthesized by combinatorial MAPLE. Applied Surface Science, 2019, 466, 628-636.	6.1	12
54	Non-Fourier Estimate of Electron Temperature in Case of Femtosecond Laser Pulses Interaction with Metals. Metals, 2020, 10, 606.	2.3	12

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55	Spatter Formation and Splashing Induced Defects in Laser-Based Powder Bed Fusion of AlSi10Mg Alloy: A Novel Hydrodynamics Modelling with Empirical Testing. Metals, 2021, 11, 2023.	2.3	12
56	Improvement in ultraviolet based decontamination rate using meta-materials. Applied Surface Science, 2017, 417, 40-47.	6.1	11
57	Bridging the analytical and artificial neural network models for keyhole formation with experimental verification in laser melting deposition: A novel approach. Results in Physics, 2021, 26, 104440.	4.1	11
58	ZnO Thin Films Deposited on Textile Material Substrates for Biomedical Applications. NATO Science for Peace and Security Series A: Chemistry and Biology, 2012, , 207-210.	0.5	11
59	Coatings Functionalization via Laser versus Other Deposition Techniques for Medical Applications: A Comparative Review. Coatings, 2022, 12, 71.	2.6	11
60	Biopolymer Thin Films Synthesized by Advanced Pulsed Laser Techniques. , 0, , .		10
61	Pulsed Laser Fabrication of TiO2 Buffer Layers for Dye Sensitized Solar Cells. Nanomaterials, 2019, 9, 746.	4.1	10
62	Immobilization of urease by laser techniques: Synthesis and application to urea biosensors. Journal of Biomedical Materials Research - Part A, 2009, 89A, 186-191.	4.0	9
63	Laserâ€“Plasma Interactions. Springer Series in Materials Science, 2010, , 49-88.	0.6	8
64	An Analytical Multiple-Temperature Model for Flash Laser Irradiation on Single-Layer Graphene. Nanomaterials, 2020, 10, 1319.	4.1	8
65	Laser Melting Deposition Additive Manufacturing of Ti6Al4V Biomedical Alloy: Mesoscopic In-Situ Flow Field Mapping via Computational Fluid Dynamics and Analytical Modelling with Empirical Testing. Materials, 2021, 14, 7749.	2.9	8
66	Biomimetic Assemblies by Matrix-Assisted Pulsed Laser Evaporation. Biological and Medical Physics Series, 2013, , 111-141.	0.4	7
67	Thin Film Fabrication by Pulsed Laser Deposition from TiO2 Targets in O2, N2, He, or Ar for Dye-Sensitized Solar Cells. Coatings, 2022, 12, 293.	2.6	7
68	Optical metamaterials for decontamination of translucent liquids and gases. Journal Physics D: Applied Physics, 2018, 51, 385101.	2.8	6
69	Fourier two-temperature model to describe ultrafast laser pulses interaction with metals: A novel mathematical technique. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 392, 127155.	2.1	6
70	Biomaterial Thin Films by Soft Pulsed Laser Technologies for Biomedical Applications. Springer Series in Materials Science, 2014, , 271-294.	0.6	6
71	Implant Surfaces Containing Bioglasses and Ciprofloxacin as Platforms for Bone Repair and Improved Resistance to Microbial Colonization. Pharmaceutics, 2022, 14, 1175.	4.5	6
72	Quantum Fourier models for semiconductors under multiple laser irradiations. Infrared Physics and Technology, 2008, 51, 348-350.	2.9	5

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73	Characterization of MAPLE deposited WO‹sub›3‹/sub›thin films for electrochromic applications. Journal of Physics: Conference Series, 2017, 780, 012013.	0.4	5
74	Composite Drug Delivery System Based on Amorphous Calcium Phosphateâ€“Chitosan: An Efficient Antimicrobial Platform for Extended Release of Tetracycline. Pharmaceutics, 2021, 13, 1659.	4.5	5
75	‹title›Particulates in pulsed laser deposition: formation mechanisms and possible approaches to their elimination‹/title›. , 2002, 4762, 64.		4
76	Multi-photon temperature profile modeling in solids during powerful pulse laser irradiation. Infrared Physics and Technology, 2008, 51, 242-245.	2.9	4
77	Measuring Nanolayer Profiles of Various Materials by Evanescent Light Technique. Journal of Nanoscience and Nanotechnology, 2012, 12, 2668-2671.	0.9	4
78	Combinatorial Laser Synthesis of Biomaterial Thin Films: Selection and Processing for Medical Applications. Springer Series in Materials Science, 2018, , 309-338.	0.6	4
79	Metamaterials for Antimicrobial Biofilm Applications. , 2018, , 257-282.		4
80	Effects of roll pattern and reduction ratio on optical characteristics of A1008 coldâ€“rolled steel specimens: analytical approach and experimental correlations. International Journal of Advanced Manufacturing Technology, 2020, 111, 2001-2020.	3.0	4
81	Bioactive glass thin films synthesized by advanced pulsed laser techniques. Journal of Physics: Conference Series, 2016, 764, 012020.	0.4	3
82	Advances in Laser Additive Manufacturing of Cobaltâ€“Chromium Alloy Multi-Layer Mesoscopic Analytical Modelling with Experimental Correlations: From Micro-Dendrite Grains to Bulk Objects. Nanomaterials, 2022, 12, 802.	4.1	3
83	Grain-based morphological simulation via fractal theory with experimental verification and corresponding optical properties in laser melting deposition additive manufacturing: A demystified approach. Applied Mathematical Modelling, 2022, 109, 304-317.	4.2	3
84	Laser additive manufacturing of Co-Cr alloy and the induced defects thereof. International Journal of Advanced Manufacturing Technology, 2022, 121, 1385-1400.	3.0	3
85	Synthesis of ZnO thin films by 40 ps @ 532 nm laser pulses. Applied Physics A: Materials Science and Processing, 2011, 104, 871-876.	2.3	2
86	Influence of a hydrophobin underlayer on the structuring and antimicrobial properties of ZnO films. Journal of Materials Science, 2013, 48, 8329-8336.	3.7	2
87	Nanoprofiles evaluation of ZnO thin films by an evanescent light method. Microscopy Research and Technique, 2013, 76, 992-996.	2.2	2
88	Optimized silicon reinforcement of carbon coatings by pulsed laser technique for superior functional biomedical surfaces fabrication. Biofabrication, 2017, 9, 025029.	7.1	2
89	Synthesis and Modification of Nanostructured Thin Films. Nanomaterials, 2019, 9, 1427.	4.1	2
90	Biomimetic Coatings by Pulsed Laser Deposition. Biological and Medical Physics Series, 2013, , 163-191.	0.4	2

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91	Protected Laser Evaporation/Ablation and Deposition of Organic/Biological Materials: Thin Films Deposition for Nano- biomedical Applications. , 2017, , .		1
92	Thermal Nonlinear Kleinâ€“Gordon Equation for Nano-/Micro-Sized Metallic Particleâ€“Attosecond Laser Pulse Interaction. Materials, 2021, 14, 857.	2.9	1
93	Laser additive manufacturing of bulk and powder ceramic materials: mathematical modeling with experimental correlations. Rapid Prototyping Journal, 2022, 28, 1520-1529.	3.2	1
94	Non-Destructive X-ray Characterization of a Novel Joining Method Based on Laser-Melting Deposition for AISI 304 Stainless Steel. Materials, 2021, 14, 7796.	2.9	1
95	Laser Ablation of Biomaterials. , 2016, , .		0
96	The effect of the contact point asymmetry on the accuracy of thin films thermal conductivity measurement by scanning thermal microscopy using Wollaston probes. Journal of Applied Physics, 2022, 131, 094902.	2.5	0