Krzysztof Zdunek

List of Publications by Year
in descending order

100 papers	1,142 citations	394421 19 h-index	552781 26 g-index
101 all docs	101 docs citations	101 times ranked	814 citing authors

#	Article	IF	Citations
1	Nanoparticle Direct Doping: Novel Method for Manufacturing Threeâ€Dimensional Bulk Plasmonic Nanocomposites. Advanced Functional Materials, 2013, 23, 3443-3451.	14.9	48
2	Characterization of microstructural, mechanical and optical properties of TiO2 layers deposited by GIMS and PMS methods. Surface and Coatings Technology, 2015, 282, 16-23.	4.8	44
3	Mechanism of crystallization of multicomponent metallic coatings using the impulse plasma method. Journal of Materials Science, 1991, 26, 4433-4438.	3.7	40
4	Concept, techniques, deposition mechanism of impulse plasma deposition â€" A short review. Surface and Coatings Technology, 2007, 201, 4813-4816.	4.8	40
5	Diamond, graphite, and graphene oxide nanoparticles decrease migration and invasiveness in glioblastoma cell lines by impairing extracellular adhesion. International Journal of Nanomedicine, 2017, Volume 12, 7241-7254.	6.7	33
6	Gas injection as a tool for plasma process control during coating deposition. Surface and Coatings Technology, 2013, 228, S367-S373.	4.8	31
7	Spreading of impulse plasma within a coaxial accelerator. Surface and Coatings Technology, 1995, 74-75, 949-952.	4.8	29
8	Chemical and structural characterization of tungsten nitride (WNx) thin films synthesized via Gas Injection Magnetron Sputtering technique. Vacuum, 2019, 165, 266-273.	3.5	28
9	Physical model of dynamic phenomena in impulse plasma coaxial accelerator. Vacuum, 1997, 48, 715-718.	3.5	27
10	Optical TiO2 layers deposited on polymer substrates by the Gas Injection Magnetron Sputtering technique. Applied Surface Science, 2019, 466, 12-18.	6.1	27
11	State of impulse plasma in the coaxial generator with continuous gas flow examined by indirect observations. Vacuum, 1989, 39, 55-61.	3.5	25
12	The structure and mechanical properties of carbon layers formed by crystallization from pulse plasma. Journal of Materials Science, 1986, 21, 763-767.	3.7	24
13	Dependence of the specific features of two PAPVD methods: Impulse Plasma Deposition (IPD) and Pulsed Magnetron Sputtering (PMS) on the structure of Feâ€"Cu alloy layers. Applied Surface Science, 2013, 275, 14-18.	6.1	23
14	Copper nitride layers synthesized by pulsed magnetron sputtering. Thin Solid Films, 2018, 645, 32-37.	1.8	23
15	Investigation of adhesion between component layers of a multi-layer coating TiC/Ti(Cx, N1â^'x)/TiN by the scratch-test method. Vacuum, 1999, 55, 45-50.	3.5	22
16	Phase composition of copper nitride coatings examined by the use of X-ray diffraction and Raman spectroscopy. Journal of Molecular Structure, 2018, 1165, 79-83.	3.6	22
17	Snow plow model of IPD discharge. Vacuum, 2003, 70, 303-306.	3.5	21
18	Diamond layers deposited from impulse plasma. Surface and Coatings Technology, 1991, 47, 144-155.	4.8	20

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19	TiO2-based decorative coatings deposited on the AISI 316L stainless steel and glass using an industrial scale magnetron. Thin Solid Films, 2017, 627, 1-8.	1.8	19
20	Relation between modulation frequency of electric power oscillation during pulse magnetron sputtering deposition of MoNx thin films. Applied Surface Science, 2018, 456, 789-796.	6.1	19
21	Peculiarities of thin film deposition by means of reactive impulse plasma assisted chemical vapor deposition (RIPACVD) method. Thin Solid Films, 2004, 459, 160-164.	1.8	18
22	Properties of TiN coatings deposited by the modified IPD method. Vacuum, 2010, 85, 514-517.	3.5	18
23	Peculiar Role of the Metallic States on the Nanoâ€<scp>M</scp>o<scp>S</scp>₂ Ceramic Particle Surface in Antimicrobial and Antifungal Activity. International Journal of Applied Ceramic Technology, 2015, 12, 885-890.	2.1	18
24	The state of coatingâ€“substrate interfacial region formed during TiO2 coating deposition by Gas Injection Magnetron Sputtering technique. Surface and Coatings Technology, 2020, 398, 126092.	4.8	18
25	Electric Characterization and Selective Etching of Aluminum Oxide. Plasma Processes and Polymers, 2009, 6, S840.	3.0	17
26	Electric field used as the substitute for ultrasounds in the liquid exfoliation of hexagonal boron nitride. Microelectronic Engineering, 2014, 126, 124-128.	2.4	17
27	Nanocrystalline C=N thin films. Diamond and Related Materials, 1996, 5, 564-569.	3.9	16
28	Distribution of magnetic field in the coaxial accelerator of impulse plasma. Vacuum, 1996, 47, 1391-1394.	3.5	16
29	Novel GIMS technique for deposition of colored Ti/TiOâ‚‚ coatings on industrial scale. Materials Science-Poland, 2016, 34, 137-141.	1.0	16
30	Estimation of the coating/substrate interface temperature during deposition by impulse plasma excitation. Vacuum, 1993, 44, 93-97.	3.5	15
31	Effect of interlayer composition on the tribological properties of TiC/Ti(Cx,N1âˆ’x)/TiN anti-abrasive multi-layer coatings. Vacuum, 1999, 55, 147-151.	3.5	15
32	Plasmochemical investigations of DLC/WCx nanocomposite coatings synthesized by gas injection magnetron sputtering technique. Diamond and Related Materials, 2019, 96, 1-10.	3.9	15
33	The sputtering of titanium magnetron target with increased temperature in reactive atmosphere by gas injection magnetron sputtering technique. Applied Surface Science, 2022, 574, 151597.	6.1	15
34	Reduction of turbulence in an impulse-plasma accelerator operating in a quasi-stayionary mode. Vacuum, 1991, 42, 469-472.	3.5	14
35	Optimization of gas injection conditions during deposition of AlN layers by novel reactive GIMS method. Materials Science-Poland, 2014, 32, 171-175.	1.0	14
36	Characterization of sp 3 bond content of carbon films deposited by high power gas injection magnetron sputtering method by UV and VIS Raman spectroscopy. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 2018, 194, 136-140.	3.9	14

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37	Impulse plasma deposition of aluminum oxide layers for Al2O3/Si, SiC, GaN systems. Surface and Coatings Technology, 2003, 174-175, 170-175.	4.8	13
38	Combined impulse-stationary impulse plasma deposition. Surface and Coatings Technology, 1998, 98, 1448-1454.	4.8	12
39	Influence of generation control of the magnetron plasma on structure and properties of copper nitride layers. Thin Solid Films, 2020, 694, 137731.	1.8	12
40	Graphite microregions effect upon the Si-diamond layer junction properties. Diamond and Related Materials, 1992, 1, 588-593.	3.9	11
41	Optical and microstructural characterization of amorphous-like Al 2 O 3 , SnO 2 and TiO 2 thin layers deposited using a pulse gas injection magnetron sputtering technique. Thin Solid Films, 2017, 632, 112-118.	1.8	11
42	Synthesis of Copper Nitride Layers by the Pulsed Magnetron Sputtering Method Carried out under Various Operating Conditions. Materials, 2021, 14, 2694.	2.9	11
43	Synthesis of Al2O3 condensates from impulse plasma. Surface and Coatings Technology, 1993, 59, 281-286.	4.8	10
44	Computer simulations and experimental results in studies of plasma dynamics during the impulse plasma deposition process. Surface and Coatings Technology, 1999, 116-119, 679-684.	4.8	10
45	Investigation of the influence of chemical composition of Ti(CxN1â^'x) layer on the stresses value in the multilayer coating TiC/Ti(CxN1â^'x)/TiN. Surface and Coatings Technology, 1999, 116-119, 398-403.	4.8	10
46	Impulse Plasma In Surface Engineering - a review. Journal of Physics: Conference Series, 2014, 564, 012007.	0.4	10
47	Formation of metallic coatings on non-heated substrates by the impulse plasma method. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1991, 140, 709-714.	5.6	9
48	The influence of the tribological properties of the crystallographic match of TiCâ§¹Ti(CxN1-x)â§¹TiN multi-layers. Vacuum, 1998, 51, 441-444.	3.5	8
49	Experimental studies of current sheet structure in IPD coaxial accelerator. Surface and Coatings Technology, 2001, 142-144, 49-51.	4.8	8
50	Structure of Feâ€"Cu alloy layers deposited by IPD method with different frequencies of plasma impulse generation. Surface and Coatings Technology, 2010, 204, 2564-2569.	4.8	8
51	Structure of Cuâ€"N layers synthesized by pulsed magnetron sputtering with variable frequency of plasma generation. Nuclear Instruments & Methods in Physics Research B, 2017, 409, 167-170.	1.4	8
52	TiO2 coating fabrication using gas injection magnetron sputtering technique by independently controlling the gas and power pulses. Thin Solid Films, 2021, 728, 138695.	1.8	8
53	On coating adhesion during impulse plasma deposition. Physica Scripta, 2014, T161, 014063.	2.5	7
54	OES studies of plasmoids distribution during the coating deposition with the use of the Impulse Plasma Deposition method controlled by the gas injection. Vacuum, 2016, 128, 259-264.	3.5	7

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55	TiO2 - based decorative interference coatings produced at industrial conditions. Thin Solid Films, 2020, 711, 138294.	1.8	7
56	Surface sintering of tungsten powder targets designed by electromagnetic discharge: A novel approach for film synthesis in magnetron sputtering. Materials and Design, 2020, 191, 108634.	7.0	7
57	Influence of modulation frequency on the synthesis of thin films in pulsed magnetron sputtering processes. Materials Science-Poland, 2018, 36, 697-703.	1.0	7
58	Nanoporosity of Al2O3 coatings obtained by impulse plasma deposition. Journal of Materials Science, 1995, 30, 4479-4482.	3.7	6
59	Laser-induced reactive crystallization of metastable BN from copper implanted with B+ and N2+ ions. Diamond and Related Materials, 1995, 4, 381-385.	3.9	6
60	Impulse plasma deposition of magnetic nanocomposite layers. Vacuum, 2005, 77, 287-291.	3.5	6
61	Phase structure of the Feâ€"Ti layers produced by the IPD method. Vacuum, 2005, 78, 423-426.	3.5	6
62	Computational studies of plasma dynamics in Impulse Plasma Deposition coaxial accelerator. Surface and Coatings Technology, 2007, 201, 5438-5441.	4.8	6
63	Nanostructured Alloy Layers With Magnetic Properties Obtained by the Impulse Plasma Deposition. Plasma Processes and Polymers, 2009, 6, S826.	3.0	6
64	Computational modelling of discharges within the impulse plasma deposition accelerator with a gas valve. Physica Scripta, 2014, T161, 014049.	2.5	6
65	Methods of optimization of reactive sputtering conditions of Al target during AlN films deposition. Materials Science-Poland, 2015, 33, 894-901.	1.0	6
66	Reactive sputtering of titanium compounds using the magnetron system with a grounded cathode. Thin Solid Films, 2017, 640, 73-80.	1.8	6
67	Structure of alumina oxide coatings deposited by impulse plasma method. Thin Solid Films, 1999, 343-344, 324-327.	1.8	5
68	Rayleighâ€"Taylor instability in plasma jet from IPD accelerator. Surface and Coatings Technology, 2003, 174-175, 964-967.	4.8	5
69	Synthesis of multicomponent metallic layers during impulse plasma deposition. Materials Science-Poland, 2015, 33, 841-846.	1.0	5
70	Multi-sided metallization of textile fibres by using magnetron system with grounded cathode. Materials Science-Poland, 2017, 35, 639-646.	1.0	5
71	Defects developed in Ni-coatings deposited by the impulse plasma on metal substrates. Vacuum, 1996, 47, 1437-1441.	3.5	4
72	Mechanism of coating formation in conditions of impulse plasma deposition. Surface and Coatings Technology, 2006, 200, 2718-2724.	4.8	4

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73	The role of magnetic energy on plasma localization during the glow discharge under reduced pressure. Nukleonika, 2016, 61, 191-194.	0.8	4
74	Application of the plasma surface sintering conditions in the synthesis of ReBxâ€“Ti targets employed for hard films deposition in magnetron sputtering technique. International Journal of Refractory Metals and Hard Materials, 2022, 103, 105756.	3.8	4
75	Design of thin DLC/TiO2 film interference coatings on glass screen protector using a neonâ€“argon-based gas injection magnetron sputtering technique. Diamond and Related Materials, 2022, 123, 108859.	3.9	4
76	The effect of structural features on mechanical properties of loose optical fiber poly(butylene) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 622	2.6	3
77	Structural features of films obtained by the impulse plasma deposition method. Surface and Coatings Technology, 2005, 200, 301-305.	4.8	3
78	Layers of magnetic alloys produced by impulse plasma deposition. Surface and Coatings Technology, 2007, 201, 5333-5335.	4.8	3
79	Morphology of the TiN coatings obtained by the IPD method with two frequencies of impulse plasma generation. Surface and Coatings Technology, 2010, 205, S28-S31.	4.8	3
80	Characteristic STATE of substrate and coatings interface formed by Impulse Plasma Deposition method. Thin Solid Films, 2018, 663, 25-30.	1.8	3
81	Duplex antiabrasive coatings (Fe-based alloy-tin) produced by impulse plasma deposition. Surface and Coatings Technology, 1998, 98, 1444-1447.	4.8	2
82	Investigation of current sheet dynamics in the IPD accelerator. Vacuum, 2001, 63, 513-516.	3.5	2
83	Studies of squirrel cage type coaxial accelerator for IPD process. Surface and Coatings Technology, 2005, 200, 788-791.	4.8	2
84	Titanium nitride coatings synthesized by IPD method with eliminated current oscillations. Materials Science-Poland, 2016, 34, 523-528.	1.0	2
85	Effect of structural features of poly(butylene terephthalate) tubes on the useful properties of the loose tube/optical fibers system in the tubular optical fiber cables. Journal of Applied Polymer Science, 2002, 86, 2124-2129.	2.6	1
86	Growth of nanopillar CNx layer during impulse plasma deposition. Surface and Coatings Technology, 2006, 200, 4448-4455.	4.8	1
87	Modeling of Flow Phenomena During the Impulse Plasma Deposition Process. , 2007, , .		1
88	The Influence of Growth Temperature on Oxygen Concentration in GaN Buffer Layer. Materials Research Society Symposia Proceedings, 2008, 1068, 1.	0.1	1
89	Structure of AlN films deposited by magnetron sputtering method. Materials Science-Poland, 2015, 33, 639-643.	1.0	1
90	The application of magnetic self-filter to optimization of AlN film growth process during the impulse plasma deposition synthesis. Materials Science-Poland, 2016, 34, 126-131.	1.0	1

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91	Physical Phenomena in Z-pinch Plasma of Impulse Plasma Deposition Process. Acta Physica Polonica A, 2002, 102, 193-197.	0.5	1
92	Influence of Plasma Dynamics on Material Synthesis Product of IPD Process. Acta Physica Polonica A, 1999, 96, 319-324.	0.5	1
93	Transmission electron microscopy investigation into the recrystallization of carbon resulting from laser processing of carbon-implanted copper. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1995, 190, L1-L3.	5.6	0
94	Influence of the gas pressure on the initial phase in coaxial accelerator. European Physical Journal D, 2004, 54, C186-C190.	0.4	0
95	Investigations of discharge phenomena in IPD coaxial accelerator with squirrel cage electrodes. European Physical Journal D, 2004, 54, C279-C284.	0.4	0
96	Studies of Discharge Parameters Influence on the IPD Plasma Deposition Process. AIP Conference Proceedings, 2006, , .	0.4	0
97	MHD Modelling of Flow Phenomena during the Impulse Plasma Deposition Process. AIP Conference Proceedings, 2008, , .	0.4	0
98	Computational Studies of the Impulse Plasma Deposition Method. , 0, , .		0
99	Modelling of plasma dynamics in coaxial IPD accelerator. High Temperature Material Processes, 2002, 6, 7.	0.6	0
100	Influence of annealing on electronic properties of thin AlN films deposited by magnetron sputtering method on silicon substrates. , 2019, , .		0