Alexey Markov

List of Publications by Year in descending order

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59	1,728	430874	302126
papers	citations	18 h-index	39 g-index

59	59	59	534
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Pulsed electron-beam technology for surface modification of metallic materials. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 1998, 16, 2480-2488.	2.1	329
2	Physical foundations for surface treatment of materials with low energy, high current electron beams. Surface and Coatings Technology, 2000, 125, 49-56.	4.8	304
3	Production and application of low-energy, high-current electron beams. Laser and Particle Beams, 2003, 21, 157-174.	1.0	151
4	Surface Treatment of Materials with Low-Energy, High-Current Electron Beams. , 2006, , 205-240.		104
5	Surface alloying of stainless steel 316 with copper using pulsed electron-beam melting of filmâ€“substrate system. Surface and Coatings Technology, 2006, 200, 6378-6383.	4.8	86
6	Surface modification and alloying of metallic materials with low-energy high-current electron beams. Surface and Coatings Technology, 2004, 180-181, 377-381.	4.8	72
7	Calculation and experimental determination of dimensions of hardening and tempering zones in quenched U7A steel irradiated with a pulsed electron beam. Nuclear Instruments & Methods in Physics Research B, 1997, 132, 79-86.	1.4	69
8	A ÐÐ˜Ð¢Ðœ-Ð¡ÐŸ facility for the surface alloying. Instruments and Experimental Techniques, 2011, 54, 862-866.	0.5	69
9	Microstructural characterization of Ti-Ta-based surface alloy fabricated on TiNi SMA by additive pulsed electron-beam melting of film/substrate system. Journal of Alloys and Compounds, 2018, 730, 376-385.	5.5	56
10	Microstructure of the near-surface layers of austenitic stainless steels irradiated with a low-energy, high-current electron beam. Surface and Coatings Technology, 2004, 180-181, 382-386.	4.8	46
11	Effect of inclusions on cratering behavior in TiNi shape memory alloys irradiated with a low-energy, high-current electron beam. Surface and Coatings Technology, 2016, 302, 495-506.	4.8	41
12	Formation of Surface Alloys With a Low-Energy High-Current Electron Beam for Improving High-Voltage Hold-Off of Copper Electrodes. IEEE Transactions on Plasma Science, 2013, 41, 2177-2182.	1.3	33
13	Surface alloying of metallic substrates with pre-deposited films through a pulsed electron-beam mixing. EPJ Applied Physics, 2008, 43, 283-288.	0.7	31
14	Synthesis of Ti3Al and TiAl based surface alloys by pulsed electron-beam melting of Al(film)/Ti(substrate) system. Technical Physics Letters, 2011, 37, 226-229.	0.7	31
15	A study on the effects of porous structure on the environmental and radiative characteristics of cylindrical Ni-Al burners. Energy, 2018, 160, 399-409.	8.8	27
16	The effect of pulsed electron-beam treatment of electrodes on vacuum breakdown. IEEE Transactions on Dielectrics and Electrical Insulation, 1995, 2, 237-242.	2.9	26
17	Synthesis of a Cr-Cu surface alloy using a low-energy high-current electron beam. Results in Physics, 2019, 12, 1915-1924.	4.1	25
18	Mixing of Ta-Fe and Mo-Fe systems using a low-energy, high-current electron beam. Surface and Coatings Technology, 1998, 99, 98-110.	4.8	22

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19	Anode jet in a high-current vacuum arc. Technical Physics, 2012, 57, 938-944.	0.7	22
20	Modification of the Î±-Fe surface using a low energy high current electron beam. Physics Letters, Section A: General, Atomic and Solid State Physics, 1993, 175, 433-440.	2.1	18
21	Deformation behavior and spalling fracture of a heterophase aluminum alloy with ultrafine-grained and coarse-grained structure subjected to a nanosecond relativistic high-current electron beam. Russian Physics Journal, 2011, 54, 713-720.	0.4	18
22	Spall Fracture Patterns for the Heterophase Cuâ€“Alâ€“Ni Alloy in Ultrafine- and Coarse-Grained States Exposed to a Nanosecond Relativistic High-Current Electron Beam. Russian Physics Journal, 2013, 55, 1451-1457.	0.4	17
23	Rapid thermal processing of TiN coatings deposited by chemical and physical vapor deposition using a low-energy, high-current electron beam: Microstructural studies and properties. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 2931-2939.	2.2	11
24	Observation of an anode spot shell at the high-current vacuum arc. , 2010, , .		11
25	The effect of rapid thermal processing (RTP) on TiN coatings deposited by PVD and the steel-turning performance of coated cemented carbide. Surface and Coatings Technology, 1999, 120-121, 337-342.	4.8	8
26	Electron-beam pulse annealed Ti-implanted GaP. Journal of Applied Physics, 2016, 120, 085103.	2.5	8
27	Surface and near surface structure and composition of high-dose implanted and electron beam annealed single crystal copper. Surface and Coatings Technology, 1997, 89, 90-96.	4.8	7
28	Mechanisms for Hardening of Carbon Steel with a Nanosecond High-Energy, High-Current Electron Beam. Materials and Manufacturing Processes, 1999, 14, 205-216.	4.7	7
29	Low-energy high-current electron beam heating of target with second-phase microinclusions. Technical Physics Letters, 2011, 37, 772-775.	0.7	7
30	The mechanism of increase of the thickness of the zone of thermal effect during pulse-periodic treatment of a target by an electron beam. High Temperature, 2000, 38, 15-19.	1.0	6
31	Surface doping of VT6 alloy with zirconium by pulsed electron-beam mixing of predeposited multilayer Zr/Ti film. Technical Physics Letters, 2008, 34, 891-894.	0.7	6
32	Spall fracture of coarse- and ultrafine-grained FCC metals under nanosecond high-current relativistic beam irradiation. Russian Physics Journal, 2009, 52, 239-244.	0.4	6
33	Effect of conditions of pulsed electron-beam melting for Al (film)/Ti (substrate) systems on phase formation and properties of Ti-Al surface alloys. Technical Physics Letters, 2012, 38, 780-783.	0.7	6
34	Effect of nonmetallic and intermetallic inclusions on crater formation on the surface of TiNi alloys under the electron-beam impact. Procedia Structural Integrity, 2016, 2, 1465-1472.	0.8	6
35	High-Current Pulsed Vacuum-Arc Evaporator for Surface-Alloying Technologies. IEEE Transactions on Plasma Science, 2009, 37, 1504-1510.	1.3	5
36	Formation of microcraters and hierarchically-organized surface structures in TiNi shape memory alloy irradiated with a low-energy, high-current electron beam. AIP Conference Proceedings, 2015, , .	0.4	5

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37	Change of texture, microdeformation and hardness in surface layer of TiNi alloy depending on the number of pulses of electron beam effects. AIP Conference Proceedings, 2015, , .	0.4	4
38	Fracture of Coarse-Grained and Ultrafine-Grained Titanium Upon Quasi-Static and Wave-Impact Loading. Russian Physics Journal, 2015, 57, 1464-1470.	0.4	4
39	Formation of Ti-Ta-based surface alloy on TiNi SMA substrate from thin films by pulsed electron-beam melting. Journal of Physics: Conference Series, 2017, 830, 012097.	0.4	4
40	Liquid-Phase Surface Alloying of Copper with Stainless Steel Using Low-Energy, High-Current Electron Beam. Russian Physics Journal, 2017, 60, 1455-1460.	0.4	4
41	Temperature distribution in a sample with second-phase microinclusions during irradiation by a low-energy high-current pulsed electron beam. Technical Physics Letters, 2017, 43, 139-142.	0.7	3
42	A High-Current Electron Gun Integrated with a Magnetron Sputtering System. Instruments and Experimental Techniques, 2018, 61, 433-435.	0.5	3
43	Effect of pulsed electron-beam treatment of electrodes on the electric strength of the vacuum insulation. , 1994, , .		2
44	Improving the properties of metallic materials by surface alloying induced with a pulsed electron beam. , 2010, , .		2
45	Shock-wave and spalling phenomena in ultrafine-grained and coarse-grained (Î± + Î²) alloy Ti-Al-V treated by a nanosecond relativistic high-current electron beam. AIP Conference Proceedings, 2016, , .	0.4	2
46	Crystallographic changes in electron pulse annealing of Ti-implanted GaP. Radiation Effects and Defects in Solids, 2020, 175, 719-729.	1.2	2
47	Spall destruction of coarse-grained and ultrafine-grained titanium on exposure to nanosecond heavy-current electron beam. IOP Conference Series: Materials Science and Engineering, 2015, 71, 012069.	0.6	1
48	Chromium-Copper Surface Alloy Produced on Copper Electrodes by Electron-Beam Mixing of Deposited Films. , 2018, , .		1
49	The effect of reflected beam electrons on the distribution of energy deposited in a target. Technical Physics Letters, 2000, 26, 794-796.	0.7	0
50	<title>Modeling of phosphorous diffusion in ion-implanted Si at dopant transient enhanced out-diffusion during vacuum rapid thermal annealing</title>. , 2004, 5401, 669.		0
51	Electrical and tribological properties of copper-based surface alloys formed with a low-energy high-current electron beam. , 2012, , .		0
52	Investigation of structural-scale levels of spall fracture induced by a nanosecond relativistic high-current electron beam in ultrafine-grained Tiâ€“Alâ€“Vâ€“Mo alloy. AIP Conference Proceedings, 2017, , .	0.4	0
53	About the selection of transverse modes in the X-band oversized oscillator with 2.5 GW output power. Journal of Physics: Conference Series, 2017, 830, 012011.	0.4	0
54	Electron-Beam Technique for Forming High-Conductivity and High-Adhesion Surface Alloy for Application in Microelectronics. , 2018, , .		0

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55	Influence of grain structure type on spall fracture induced by a nanosecond relativistic high-current electron beam in Tiâ€“Alâ€“V alloy. AIP Conference Proceedings, 2018, , .	0.4	0
56	Ni-Al Film Multilayered Structure Effect on Melting Threshold and Melt Thickness in Ni-Al Surface Alloy Forming Process. , 2020, , .		0
57	Pulsed Electron-Beam-Assisted Synthesis of a Ni-Al Surface Alloy. , 2020, , .		0
58	Influence of High-Current Electron Beam Irradiation on the Characteristics on the Surface Layer of Target Samples Made of Cobalt-Chromium Alloy Obtained Using SLM-Technologies. , 2020, , .		0
59	Surface Topography of Samples Obtained Using Additive Technologies from Metal Powders after Irradiation with High-Current Electron Beams. , 2020, , .		0