Igor Y Litovchenko

List of Publications by Year
in descending order

49 papers	387 citations	840776 11 h-index	839539 18 g-index
51 all docs	51 docs citations	51 times ranked	178 citing authors

#	Article	IF	Citations
1	Mechanism of deformation and crystal lattice reorientation in strain localization bands and deformation twins of the B2 phase of titanium nickelide. Acta Materialia, 2004, 52, 2067-2074.	7.9	56
2	Nucleation of dislocations and twins in fcc nanocrystals: Dynamics of structural transformations. Journal of Materials Science and Technology, 2019, 35, 201-206.	10.7	46
3	Evolution of structural and phase states at large plastic deformations of an austenitic steel 17Cr-14Ni-2Mo. Physics of Metals and Metallography, 2011, 112, 412-423.	1.0	22
4	Microstructure of EK-181 ferritic-martensitic steel after heat treatment under various conditions. Technical Physics, 2012, 57, 48-54.	0.7	20
5	Thermal stability of the microstructure of 12% chromium ferriticâ€"martensitic steels after long-term aging at high temperatures. Technical Physics, 2016, 61, 209-214.	0.7	20
6	Effect of high-temperature thermomechanical treatment in the austenite region on microstructure and mechanical properties of low-activated 12% chromium ferritic-martensitic steel EK-181. Technical Physics, 2017, 62, 736-740.	0.7	18
7	Structureâ€"phase transformations and physical properties of ferriticâ€"martensitic 12% chromium steels EK-181 and ChS-139. Technical Physics, 2016, 61, 97-102.	0.7	15
8	Martensitic transformations and the evolution of the defect microstructure of metastable austenitic steel during severe plastic deformation by high-pressure torsion. Physics of Metals and Metallography, 2016, 117, 847-856.	1.0	14
9	The effect of heat treatment on the microstructure and mechanical properties of heat-resistant ferriticâ€"martensitic steel EK-181. Journal of Nuclear Materials, 2014, 455, 665-668.	2.7	13
10	The Features of Microstructure and Mechanical Properties of Metastable Austenitic Steel Subjected to Low-Temperature and Subsequent Warm Deformation. Russian Physics Journal, 2016, 59, 782-787.	0.4	12
11	Structural Transformations and Mechanical Properties of Metastable Austenitic Steel under High Temperature Thermomechanical Treatment. Metals, 2021, 11, 645.	2.3	12
12	Temperature Dependences of Mechanical Properties and Fracture Features of Low-Activation Ferritic-Martensitic EK-181 Steel in a Temperature Range from â€" 196 to 720Â°C. Physics of Atomic Nuclei, 2018, 81, 1024-1032.	0.4	11
13	Microstructure and Mechanical Properties of Austenitic Steel EK-164 After Thermomechanical Treatments. Russian Physics Journal, 2019, 62, 698-704.	0.4	11
14	The Microstructure and Mechanical Properties of Ferritic-Martensitic Steel EP-823 after High-Temperature Thermomechanical Treatment. Metals, 2022, 12, 79.	2.3	11
15	Atomic models of the nucleation of dislocations and mechanical twinning in fcc crystals. Doklady Physics, 2005, 50, 401-404.	0.7	7
16	The effect of tempering temperature on the features of phase transformations in the ferriticâ€"martensitic steel EK-181. Journal of Nuclear Materials, 2014, 455, 496-499.	2.7	7
17	Thermal Stability of Ti-C-Ni-Cr and Ti-C-Ni-Cr-Al-Si Nanocomposite Coatings. Journal of Physics: Conference Series, 2015, 652, 012057.	0.4	7
18	The Effect of Heat-Treatment Modes on Microstructure of Reduced-Activation Ferritic-Martensitic Steel EK-181. Russian Physics Journal, 2013, 56, 542-545.	0.4	6

#	Article	IF	Citations
19	Structural-Phase State, Elastic Stress, and Functional Properties of Nanocomposite Coatings Based on Amorphous Carbon. Physical Mesomechanics, 2019, 22, 488-495.	1.9	6
20	Effect of Multistage High Temperature Thermomechanical Treatment on the Microstructure and Mechanical Properties of Austenitic Reactor Steel. Metals, 2022, 12, 63.	2.3	6
21	Reversible Martensitic Transformation Produced by Severe Plastic Deformation of Metastable Austenitic Steel. Materials Science Forum, 0, 738-739, 491-495.	0.3	5
22	The Influence of Deformation and Short-Term Hightemperature Annealing on the Microstructure and Mechanical Properties of Austenitic Steel 17Cr-14Ni-3Mo (316 Type). Russian Physics Journal, 2019, 62, 1511-1517.	0.4	5
23	Crystal-lattice distortions during mechanical twinning of the B2 phase of titanium nickelide via the mechanism of local reversible martensitic transformations. Physics of Metals and Metallography, 2006, 101, 223-230.	1.0	4
24	The features of microstructure and mechanical properties of austenitic steel after direct and reverse martensitic transformations. AIP Conference Proceedings, 2015, , .	0.4	4
25	Effect of thermomechanical treatment modes on structural-phase states and mechanical properties of metastable austenitic steel. AIP Conference Proceedings, 2016, , .	0.4	4
26	Atomic Models of Mechanical Twinning and <110>-Reorientations in BCC-Crystals. Russian Physics Journal, 2019, 62, 886-892.	0.4	4
27	Microstructure and mechanical properties of ferritic-martensitic steel EP-823 after high-temperature thermomechanical treatment. AIP Conference Proceedings, 2019, , .	0.4	4
28	Behavior of 12% Cr low-activation ferritic-martensitic steel EK-181 after holding in a static lead melt at 600 Â°Ð¡ for 3000 hours. Journal of Nuclear Materials, 2021, 545, 152754.	2.7	4
29	Regularities and mechanisms of mechanical twinning in TiNi alloys. Physical Mesomechanics, 2007, 10, 190-202.	1.9	3
30	Strengthening mechanisms of heat-resistant 12% Cr ferritic-martensitic steels after different modes of heat treatment. AIP Conference Proceedings, 2016, , .	0.4	3
31	A comparative investigation of mechanical properties of the ferritic-martensitic steel EK-181 in the temperature range 700â€“800Â°C after high-temperature thermomechanical and traditional heat treatments. AIP Conference Proceedings, 2018, , .	0.4	3
32	Features of Phase Transformations of Low-activation 12%-Chromium Ferritic-Martensitic Steel Ek-181. Russian Physics Journal, 2020, 62, 2314-2318.	0.4	3
33	Effect of thermomechanical treatments on the formation of submicrocrystalline structural states and mechanical properties of metastable austenitic steel. Letters on Materials, 2016, 6, 290-293.	0.7	3
34	Crystal-lattice distortions upon the formation of localized-deformation bands via combined forward-plus-reverse martensitic transformations. Physics of Metals and Metallography, 2006, 101, 296-302.	1.0	2
35	Models of Dislocation Formation and Mechanical Twinning by Local Reversible Martensitic Transformations in FCC Nanocrystals. Advanced Materials Research, 0, 1013, 234-241.	0.3	2
36	Features of structure-phase state of multielement nanocomposite coatings based on amorphous carbon. , 2014, , .		2

#	Article	IF	Citations
37	The microstructural stability of low-activation 12%-chromium ferritic-martensitic steel EK-181 during thermal aging. AIP Conference Proceedings, 2014, , .	0.4	2
38	Features of deformed structure of metastable austenitic steel after deformation-induced direct and reverse martensitic transformations. , 2014, , .		2
39	Thermal Stability of the Microstructure and Mechanical Properties of the Ferritic-Martensitic Steel EK-181. Russian Physics Journal, 2018, 61, 1536-1540.	0.4	2
40	Effect of high-temperature thermomechanical treatments on microstructure and mechanical properties of a high-nitrogen austenitic steel. AIP Conference Proceedings, 2019, , .	0.4	2
41	Microstructure and mechanical properties of heat-resistant 12% Cr ferritic-martensitic steel EK-181 after thermomechanical treatment. AIP Conference Proceedings, 2015, , .	0.4	1
42	Features of deformation localization in stable austenitic steel under thermomechanical treatment. AIP Conference Proceedings, 2016, , .	0.4	1
43	Strengthening of stable Cr-Ni austenitic stainless steel under thermomechanical treatments. AIP Conference Proceedings, 2017, , .	0.4	1
44	Deformed microstructure of ferritic-martensitic steel EK-181. AIP Conference Proceedings, 2019, , .	0.4	1
45	Investigation of the microstructure, mechanical properties and thermal stability of nanocomposite coatings based on amorphous carbon. AIP Conference Proceedings, 2015, , .	0.4	0
46	Mechanical properties and fracture features of low-activation ferritic-martensitic steel EK-181 at subzero temperatures. AIP Conference Proceedings, 2017, , .	0.4	0
47	Mechanisms for improving strength of metastable austenitic steel by thermomechanical treatments. AIP Conference Proceedings, 2017, , .	0.4	0
48	Mechanical properties and fracture of heat-resistant ferritic-martensitic steels EK-181, ChS-139 and EP-823 at the temperatures from â€“196 to 720Â°C. AIP Conference Proceedings, 2018, , .	0.4	0
49	Microstructure and elemental composition of ferritic-martensitic steel EK-181 after a prolonged contact with a coolant. AIP Conference Proceedings, 2019, , .	0.4	0