Ekaterina N Stepanova

List of Publications by Year
in descending order

48 papers	247 citations	1163117 8 h-index	1199594 12 g-index
48 all docs	48 docs citations	48 times ranked	164 citing authors

#	Article	IF	Citations
1	Properties and structural state of the surface layer in a zirconium alloy modified by a pulsed electron beam and saturated by hydrogen. Technical Physics, 2012, 57, 392-398.	0.7	23
2	Hydrogen effect on Ti-6.5Al-3.5Mo-1.5Zr-0.3Si parts produced by electron beam melting. International Journal of Hydrogen Energy, 2019, 44, 29380-29388.	7.1	16
3	Structure and mechanical properties of ultrafine-grained Ti-6Al-4V alloy made by applying reversible hydrogen alloying. Inorganic Materials: Applied Research, 2013, 4, 92-97.	0.5	12
4	Effect of hydrogen on the structural and phase state and the deformation behavior of the ultrafine-grained Zrâ€"1Nb alloy. Journal of Alloys and Compounds, 2015, 645, S271-S274.	5.5	12
5	Effect of hydrogen on the creep of the ultrafine-grained zirconium Zrâ€"1Nb alloy at 673ÂK. International Journal of Hydrogen Energy, 2017, 42, 22633-22640.	7.1	12
6	Influence of beam current on microstructure of electron beam melted Ti-6Al-4V alloy. Progress in Natural Science: Materials International, 2019, 29, 440-446.	4.4	11
7	Positron annihilation spectroscopy study of defects in hydrogen loaded Zr-1Nb alloy. Journal of Alloys and Compounds, 2019, 798, 685-694.	5.5	10
8	Effect of hydrogen on the structural and phase state and defect structure of titanium alloy. AIP Conference Proceedings, 2016, , .	0.4	9
9	Surface Modification of the EBM Ti-6Al-4V Alloy by Pulsed Ion Beam. Metals, 2021, 11, 512.	2.3	9
10	Influence of Hydrogenation on Evolution of Submicrocrystalline Structure of Tiâ€"6Alâ€"4V Alloy upon Exposure to Temperature and Stress. Russian Physics Journal, 2014, 57, 423-428.	0.4	8
11	Properties of the VT1-0 titanium surface modified by a pulsed ion beam. Technical Physics, 2015, 60, 1039-1043.	0.7	8
12	Hydrogen Effect on the Defect Structure Formation in the Zr â€" 1 WT.% Nb Alloy Under Pulsed Electron Beam Irradiation. Russian Physics Journal, 2019, 62, 854-860.	0.4	8
13	Structure and defects evolution at temperature and activation treatments of the TiCr2 intermetallic compound of Laves phase C36-type. International Journal of Hydrogen Energy, 2019, 44, 10732-10743.	7.1	8
14	First-Principles Calculations and Experimental Study of H+-Irradiated Zr/Nb Nanoscale Multilayer System. Metals, 2021, 11, 627.	2.3	8
15	Evolution of the Structural-Phase State of a Titanium Alloy of the System Tiâ€"Alâ€"Vâ€"Mo During Formation of an Ultrafine-Grained Structure Using Reversible HydrogenaÑ‚ion. Russian Physics Journal, 2019, 62, 1330-1337.	0.4	7
16	Effect of Hydrogen on the Deformation Behavior and Localization of Plastic Deformation of the Ultrafine-Grained Zrâ€"1Nb Alloy. Metals, 2020, 10, 592.	2.3	7
17	Effect of the structural and phase state on the deformation behavior and mechanical properties of the ultrafine-grained titanium alloy (Tiâ€"Alâ€"Vâ€"ÐœÐ¾) at temperatures in the range of 293â€"973ÂK. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 800, 140334.	5.6	7
18	Strain behavior of the hydrogenated submicrocrystalline Tiâ€"6Alâ€"4V alloy. Russian Physics Journal, 2011, 54, 690-696.	0.4	6

#	Article	IF	Citations
19	Forming and deformation behavior of the ultrafine-grained Zr-1Nb alloy. Steel in Translation, 2015, 45, 111-115.	0.3	6
20	Structure and Mechanical Properties of a Zr-1Nb Alloy, Obtained by the Method of Severe Plastic Deformation. Materials Today: Proceedings, 2015, 2, 365-369.	1.8	6
21	Structure Evolution and Distributions of Grain-Boundary Misorientainons in Submicrocrystalline Molybdenum Irradiated with a Pulsed Electron Beam. Russian Physics Journal, 2018, 61, 1-6.	0.4	6
22	Effect of Hydrogen on the Development of Superplastic Deformation in the Submicrocrystalline Tiâ€“6Alâ€“4V Alloy. Materials Science Forum, 2016, 838-839, 344-349.	0.3	5
23	The Effect of Irradiation of a Titanium Alloy of the Tiâ€“6Alâ€“4Vâ€“Ð•System with Pulsed Electron Beams on Its Creep. Russian Physics Journal, 2020, 63, 932-939.	0.4	5
24	Hydrogen Effect on the Creep of Titanium Alloy of the Ti-Al-V System. Defect and Diffusion Forum, 2018, 385, 212-217.	0.4	4
25	Distribution of Hydrogen and Defects in the Zr/Nb Nanoscale Multilayer Coatings after Proton Irradiation. Materials, 2022, 15, 3332.	2.9	4
26	Effect of hydrogen on the low-temperature creep of a submicrocrystalline Ti-6Al-4V alloy. Russian Metallurgy (Metally), 2010, 2010, 229-234.	0.5	3
27	Features of the plasma saturation of nanocrystalline and coarse-crystalline titanium samples with hydrogen and deuterium. Bulletin of the Russian Academy of Sciences: Physics, 2012, 76, 721-724.	0.6	3
28	Effect of Pulsed Electron Beam Treatment and Hydrogen on Properties of Zirconium Alloy. Applied Mechanics and Materials, 2013, 302, 66-71.	0.2	3
29	Structure and mechanical properties of the Zrâ€“Nbâ€“H system alloys after pulsed electron beam exposure. AIP Conference Proceedings, 2018, , .	0.4	3
30	Heat treatment of the Ti-6Al-4V alloy manufactured by electron beam melting. AIP Conference Proceedings, 2019, , .	0.4	3
31	Effect of nonequilibrium hydrogen release in the ultrafine-grained Zr-1Nb alloy under the electron beam exposure. IOP Conference Series: Materials Science and Engineering, 2016, 110, 012061.	0.6	2
32	Research of Hydrogenation and Dehydrogenation Effect on the Structural and Phase State of the Titanium Alloy. Key Engineering Materials, 0, 683, 187-192.	0.4	2
33	Effect of deformation and heat treatment on the structure, the mechanical properties, and the fracture characteristics of an ultrafine-grained Zrâ€“1Nb alloy. Russian Metallurgy (Metally), 2017, 2017, 271-278.	0.5	2
34	Effect of Structure and Hydrogen on the Short-Term Creep of Titanium Ti-2.9Al-4.5V-4.8Mo Alloy. Materials, 2022, 15, 3905.	2.9	2
35	Structural and phase state and deformation behavior of the hydrogenated ultrafine-grained Zr-1Nb alloy. AIP Conference Proceedings, 2016, , .	0.4	1
36	Effect of hydrogen on the deformation development in titanium alloy of the Ti-Al-V system under creep. AIP Conference Proceedings, 2017, , .	0.4	1

#	Article	IF	Citations
37	Effect of hydrogen on the formation of structure and mechanical properties of the ultrafine-grained titanium alloy of Tiâ€“Alâ€“Vâ€“Mo system. AIP Conference Proceedings, 2018, , .	0.4	1
38	Effect of pulsed electron beam exposure on the creep of the Zrâ€“Nbâ€“H system alloy. AIP Conference Proceedings, 2019, , .	0.4	1
39	Effect of hydrogen on the deformation development in the titanium alloy with a hierarchical ultrafine-grained structure in the temperature range of 293â€“973â€…K. AIP Conference Proceedings, 2019, , .	0.4	1
40	Effect of Radiation Exposure on the Structure and Diffusion in the Near-Surface Layer of Ultrafine-Grained Nickel. Russian Physics Journal, 2021, 64, 859-865.	0.4	1
41	Effect of pulsed electron beam irradiation on mechanical properties of alloy of the Zrâ€“Nbâ€“H system at temperatures in the range of 293â€“973â€…K. AIP Conference Proceedings, 2020, , .	0.4	1
42	The Study of Hydrogen Accumulation Dynamics in Ti-6Al-4V Nanocrystalline Alloy. Advanced Materials Research, 0, 1097, 17-21.	0.3	0
43	Effect of Thermal Exposure on Structure of the Ultrafine-Grained Zr-1Nb Alloy. IOP Conference Series: Materials Science and Engineering, 2017, 168, 012025.	0.6	0
44	Structure and deformation behavior of ultrafine-grained Zr-2.5Nb alloy. AIP Conference Proceedings, 2017, , .	0.4	0
45	Effect of pulsed electron beam irradiation on the grain boundary heterodiffusion in ultrafine-grained molybdenum. Journal of Physics: Conference Series, 2018, 1115, 032028.	0.4	0
46	Hydrogen effect on the stability of structural and phase state and mechanical properties of the ultrafine-grained alloy (Ti-Al-V-Mo system). AIP Conference Proceedings, 2020, , .	0.4	0
47	Positron Spectroscopy of Hydrogen-Loaded Ti-6Al-4V Alloy with Different Defect Structure. Acta Physica Polonica A, 2020, 137, 242-245.	0.5	0
48	Hydrogen effect on the evolution of the structural-phase state and superplastic properties of ultrafine-grained Ti-Al-V-ÐœÐ¾ alloy. , 2022, 25, 38-50.		0