

Alexey V Panin

List of Publications by Year in descending order

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125
papers

1,360
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279487

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901
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#	ARTICLE	IF	CITATIONS
1	The effect of ultrasonic impact treatment on deformation and fracture of electron beam additive manufactured Ti-6Al-4V under uniaxial tension. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 832, 142458.	2.6	9
2	Transformations of the Microstructure and Phase Compositions of Titanium Alloys during Ultrasonic Impact Treatment Part II: Ti-6Al-4V Titanium Alloy. <i>Metals</i> , 2022, 12, 732.	1.0	10
3	Improving mechanical properties of wire-based EBAM $\langle \text{Ti-6Al-4V} \rangle$ parts by adding $\langle \text{TiC} \rangle$ powders. <i>Material Design and Processing Communications</i> , 2021, 3, e136.	0.5	3
4	Molecular dynamics study of dislocation-twin boundary interaction in titanium subjected to scratching. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 800, 140327.	2.6	9
5	Transformations of the Microstructure and Phase Compositions of Titanium Alloys during Ultrasonic Impact Treatment. Part I. Commercially Pure Titanium. <i>Metals</i> , 2021, 11, 562.	1.0	11
6	Different Approaches for Manufacturing Ti-6Al-4V Alloy with Triply Periodic Minimal Surface Sheet-Based Structures by Electron Beam Melting. <i>Materials</i> , 2021, 14, 4912.	1.3	26
7	Effect of Ta alloying on isothermal oxidation behavior of DC magnetron sputtered Ti _{1-x} Al _x N coatings on titanium substrate. <i>Surface and Coatings Technology</i> , 2021, 421, 127488.	2.2	6
8	Effects of Water Cooling on the Microstructure of Electron Beam Additive-Manufactured Ti-6Al-4V. <i>Metals</i> , 2021, 11, 1742.	1.0	12
9	Deformation Behavior of Wrought and EBAM Ti-6Al-4V under Scratch Testing. <i>Metals</i> , 2021, 11, 1882.	1.0	7
10	Scale levels of quasi-static and dynamic fracture behavior of Ti-6Al-4V parts built by various additive manufacturing methods. <i>Theoretical and Applied Fracture Mechanics</i> , 2020, 110, 102781.	2.1	14
11	Recovery of Scratch Grooves in Ti-6Al-4V Alloy Caused by Reversible Phase Transformations. <i>Metals</i> , 2020, 10, 1332.	1.0	9
12	Combustion of Titanium-Carbon Black High-Energy Ball-Milled Mixtures in Nitrogen: Formation of Titanium Carbonitrides at Atmospheric Pressure. <i>Materials</i> , 2020, 13, 1810.	1.3	3
13	Change in the Phase Composition and Lattice Parameters of the Solid Solution Based on $\hat{\pm}$ -Ti in the Surface Layers of the Ti-6Al-4V Alloy Subjected to Electron-Beam Treatment. <i>Physics of Metals and Metallography</i> , 2020, 121, 143-149.	0.3	1
14	Effect of the Lattice Curvature of Ti-6Al-4V Titanium Alloy on Their Fatigue Life and Fracture Toughness. <i>Physical Mesomechanics</i> , 2020, 23, 369-375.	1.0	5
15	The Effect of Nanoscale Mesoscopic Structural States Associated with Lattice Curvature on the Mechanical Behavior of Ti-6Al-4V Alloy. <i>Physical Mesomechanics</i> , 2020, 23, 457-465.	1.0	5
16	Numerical study on combined electropulsing and ultrasonic surface impact treatments of $\langle \text{Ti-6Al-4V} + \text{TiC} \rangle$ composite. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	0
17	Surface modification of EBF3-Fabricated Ti-6Al-4V parts by ultrasonic impact treatment. <i>AIP Conference Proceedings</i> , 2020, , .	0.3	3
18	Continuous Electron Beam Post-Treatment of EBF3-Fabricated Ti-6Al-4V Parts. <i>Metals</i> , 2019, 9, 699.	1.0	29

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19	Improvement of Thermal Cycling Resistance of Al _x Si _{1-x} N Coatings on Cu Substrates by Optimizing Al/Si Ratio. <i>Materials</i> , 2019, 12, 2249.	1.3	3
20	Mesoscopic Structural States at the Nanoscale in Surface Layers of Titanium and Its Alloy Ti-6Al-4V in Ultrasonic and Electron Beam Treatment. <i>Physical Mesomechanics</i> , 2019, 22, 345-354.	1.0	30
21	The effect of phase transformations on the recovery of pulsed electron beam irradiated Ti-6Al-4V titanium alloy during scratching. <i>Journal of Alloys and Compounds</i> , 2019, 795, 275-283.	2.8	11
22	Concentration-Dependent Transformation Plasticity Effect During Hydrogenation of Technically Pure Titanium Irradiated with an Electron Beam. <i>Russian Physics Journal</i> , 2019, 61, 1992-2000.	0.2	5
23	Electron beam additive manufacturing of TiB ₂ /Ti-6Al-4V composite. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	1
24	Microstructure and mechanical behaviour of additive manufactured Ti-6Al-4V parts under tension. <i>EPJ Web of Conferences</i> , 2019, 221, 01037.	0.1	3
25	Effect of Ta content on fracture of Ti-1-xAl _x Ta _y N coatings under uniaxial tension. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	0
26	Impact toughness of Ti-6Al-4V parts fabricated by additive manufacturing. <i>AIP Conference Proceedings</i> , 2019, , .	0.3	7
27	Numerical study of atomic scale deformation mechanisms of Ti grains with different crystallographic orientation subjected to scratch testing. <i>Applied Surface Science</i> , 2019, 471, 318-327.	3.1	36
28	Multiscale Translation-Rotation Plastic Flow in Polycrystals. , 2019, , 1255-1292.		1
29	Multiscale Translation-Rotation Plastic Flow in Polycrystals. , 2018, , 1-38.		9
30	Strain Localization in Titanium with a Modified Surface Layer. <i>Physical Mesomechanics</i> , 2018, 21, 32-42.	1.0	26
31	Multiscale Deformation of Commercial Titanium and Ti-6Al-4V Alloy Subjected to Electron Beam Surface Treatment. <i>Physical Mesomechanics</i> , 2018, 21, 441-451.	1.0	32
32	Scratch testing of polycrystalline titanium. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	0
33	The influence of the irregular interface geometry on fracture of EB-PVD yttria-stabilized zirconia coatings. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	0
34	Unstable state of the α -Ti crystal lattice in the surface layers of titanium alloys samples treated by a low-energy high-current pulsed electron beam. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	0
35	The effect of microstructure and phase composition of Ti-6Al-4V titanium alloy hardened surface layer on its mechanical properties. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	0
36	Microstructure and phase composition of 3D-printed titanium alloy Ti-6Al-4V parts subjected to thermal post-processing. <i>AIP Conference Proceedings</i> , 2018, , .	0.3	1

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37	Surface modification of 3D-printed Ti-6Al-4V parts by continuous electron beam. AIP Conference Proceedings, 2018, , .	0.3	0
38	The effect of deposition parameters on microstructure and mechanical properties of Ti-Al-Ta-N coatings. AIP Conference Proceedings, 2018, , .	0.3	0
39	Lattice Curvature, Shear Bands, and Electroplastic Effect. Physical Mesomechanics, 2018, 21, 390-395.	1.0	8
40	The effect of crystallographic grain orientation of polycrystalline Ti on ploughing under scratch testing. Wear, 2018, 408-409, 214-221.	1.5	45
41	Strain-Induced Surface Roughening in Polycrystalline VT1-0 Titanium Specimens under Uniaxial Tension. Physical Mesomechanics, 2018, 21, 249-257.	1.0	5
42	Hydrogen-Induced Phase Transformation and Microstructure Evolution for Ti-6Al-4V Parts Produced by Electron Beam Melting. Metals, 2018, 8, 301.	1.0	45
43	The effect of ultrasonic impact treatment on the deformation behavior of commercially pure titanium under uniaxial tension. Materials and Design, 2017, 117, 371-381.	3.3	36
44	Micro- and mesomechanical aspects of deformation-induced surface roughening in polycrystalline titanium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 697, 248-258.	2.6	34
45	Scale invariance of structural transformations in plastically deformed nanostructured solids. Physical Mesomechanics, 2017, 20, 55-68.	1.0	23
46	Computational mesomechanics of titanium surface-hardened by ultrasonic treatment. Physical Mesomechanics, 2017, 20, 334-342.	1.0	3
47	Effect of local curvature of the coating-substrate interface on deformation and fracture of ceramic coatings under uniaxial tension. Physical Mesomechanics, 2017, 20, 472-479.	1.0	5
48	Study of crack resistance of TiAlN coatings by scratch testing. Physical Mesomechanics, 2017, 20, 185-192.	1.0	19
49	Structure changes in the surface layers of Ti-6Al-4V titanium alloy under electron beam treatment. AIP Conference Proceedings, 2017, , .	0.3	2
50	Micromechanical model of deformation-induced surface roughening in polycrystalline materials. Physical Mesomechanics, 2017, 20, 324-333.	1.0	16
51	The effect of Al intermediate layer on thermal resistance of EB-PVD yttria-stabilized zirconia coatings on titanium substrate. AIP Conference Proceedings, 2017, , .	0.3	0
52	Wear of electroplated gold-based coatings. Physical Mesomechanics, 2016, 19, 407-419.	1.0	5
53	Computational mesomechanics of surface-modified titanium. AIP Conference Proceedings, 2016, , .	0.3	0
54	Modification of the structure of surface layers of commercial titanium in the process of treatment by low-energy high-current electron beams. Physics of Metals and Metallography, 2016, 117, 550-561.	0.3	13

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73	Influence of multiscale localized plastic flow on stress-strain patterns. <i>Physical Mesomechanics</i> , 2015, 18, 8-12.	1.0	13
74	PECVD synthesis, optical and mechanical properties of silicon carbon nitride films. <i>Applied Surface Science</i> , 2015, 339, 102-108.	3.1	40
75	Mechanisms of surface roughening of commercial purity titanium during ultrasonic impact treatment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 647, 43-50.	2.6	33
76	Fundamental role of crystal structure curvature in plasticity and strength of solids. <i>Physical Mesomechanics</i> , 2015, 18, 89-99.	1.0	36
77	Effect of the number of layers in Zr-Y-O/Si-Al-N multilayer coatings on their mechanical properties and wear resistance. <i>Journal of Friction and Wear</i> , 2014, 35, 426-433.	0.1	4
78	Some aspects of erythrocyte preparation for AFM-study. , 2014, , .		0
79	Surface modification of structural materials by low-energy high-current pulsed electron beam treatment. <i>AIP Conference Proceedings</i> , 2014, , .	0.3	3
80	Effect of a hard sublayer on contact interaction and wear behavior of electrodeposited gold-based coatings. , 2014, , .		1
81	Mechanisms of stress generation and relaxation in thin films and coatings. <i>AIP Conference Proceedings</i> , 2014, , .	0.3	1
82	Wrinkling of the metal-polymer bilayer: the effect of periodical distribution of stresses and strains. <i>RSC Advances</i> , 2014, 4, 7389.	1.7	15
83	On the nature of low-temperature brittleness of BCC steels. <i>Physical Mesomechanics</i> , 2014, 17, 89-96.	1.0	26
84	Thermal effect of low-energy high-current pulsed electron beam on titanium alloy structure. , 2014, , .		0
85	O,N-coordinated Ni(II) beta-diketonate derivatives: Synthesis, thermal properties, MOCVD applications. <i>Surface and Coatings Technology</i> , 2013, 230, 290-296.	2.2	11
86	The effect of electron beam treatment on hydrogen sorption ability of commercially pure titanium. <i>Applied Surface Science</i> , 2013, 284, 750-756.	3.1	25
87	Effect of local curvature of internal and external interfaces on mass transfer responsible for thin film degradation. <i>Physical Mesomechanics</i> , 2013, 16, 348-354.	1.0	5
88	Nonlinear wave processes in a deformable solid as in a multiscale hierarchically organized system. <i>Physics-Uspekh</i> , 2012, 55, 1260-1267.	0.8	37
89	Nonlinear wave processes in a deformable solid as a hierarchically organized system. <i>Physical Mesomechanics</i> , 2012, 15, 133-146.	1.0	6
90	Role of local nanostructural states in plastic deformation and fracture of solids. <i>Physical Mesomechanics</i> , 2012, 15, 1-12.	1.0	12

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91	Mesoscopic surface folding in EK-181 steel polycrystals under uniaxial tension. <i>Physical Mesomechanics</i> , 2012, 15, 94-103.	1.0	21
92	Effect of the nanostructuring of a Cu substrate on the fracture of heat-resistant Si-Al-N coatings during uniaxial tension. <i>Technical Physics</i> , 2012, 57, 779-786.	0.2	18
93	Fractal analysis of the evolution of friction surfaces of galvanic AuNi coatings. <i>Technical Physics Letters</i> , 2012, 38, 484-487.	0.2	5
94	Sclerometric study of galvanic AuNi and AuCo coatings. <i>Technical Physics Letters</i> , 2011, 37, 223-225.	0.2	9
95	Viscoelastic wrinkling in compression-stressed metal film-polymer sublayer system. <i>Technical Physics Letters</i> , 2011, 37, 896-899.	0.2	1
96	Strain mechanisms in annealed thin copper films on a viscoelastic sublayer. <i>Physical Mesomechanics</i> , 2011, 14, 49-56.	1.0	1
97	The role of stress distribution at the film/barrier interface in formation of copper silicides. <i>Semiconductors</i> , 2010, 44, 116-122.	0.2	8
98	Elastic deformation of Ti films during alternating bending. <i>Technical Physics</i> , 2010, 55, 1583-1587.	0.2	2
99	Mechanisms of periodic deformation of the film-substrate system under compressive stress. <i>Physical Mesomechanics</i> , 2010, 13, 79-87.	1.0	12
100	The plastic shear channeling effect and the nonlinear waves of localized plastic deformation and fracture. <i>Physical Mesomechanics</i> , 2010, 13, 215-232.	1.0	24
101	Strengthening of the RAFMS RUSFER "EK181 through nanostructuring surface layers. <i>Journal of Nuclear Materials</i> , 2009, 386-388, 466-470.	1.3	6
102	The influence of the initial structural state of armco iron on the ultrasonic treatment effect. <i>Russian Physics Journal</i> , 2009, 52, 85-93.	0.2	3
103	Nanocrystalline structure formation in EK-181 steel surface layers on ultrasonic treatment. <i>Physical Mesomechanics</i> , 2009, 12, 150-159.	1.0	8
104	Multi-level deformation of thin films caused by stress-strain distribution at the film-substrate interface. <i>Procedia Engineering</i> , 2009, 1, 23-26.	1.2	4
105	Strength enhancement of structural steel EK-181 based on the multilevel approach of physical mesomechanics. <i>Physical Mesomechanics</i> , 2008, 11, 85-96.	1.0	15
106	Deformation macrolocalisation and fracture in ultrafine-grained armco iron. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 486, 267-272.	2.6	17
107	Specific features of the determination of the mechanical characteristics of thin films by the nanoindentation technique. <i>Physics of the Solid State</i> , 2008, 50, 1050-1055.	0.2	25
108	Physical mesomechanics of a deformed solid as a multilevel system. II. Chessboard-like mesoeffect of the interface in heterogeneous media in external fields. <i>Physical Mesomechanics</i> , 2007, 10, 5-14.	1.0	43

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109	Physical mesomechanics of a deformed solid as a multilevel system. III. Inelastic precursor of plastic shear generation. <i>Physical Mesomechanics</i> , 2007, 10, 15-24.	1.0	16
110	Physical mesomechanics of a deformed solid as a multilevel system. IV. Effect of particle interpenetration without continuity violation under the action of concentrated energy fluxes. <i>Physical Mesomechanics</i> , 2007, 10, 25-31.	1.0	5
111	Scaling effects in structural-phase self-organization at the α -thin film - substrate interface. <i>Physical Mesomechanics</i> , 2007, 10, 117-128.	1.0	9
112	Field theory of multilevel plastic flow in the neck of a deformed solid. <i>Physical Mesomechanics</i> , 2007, 10, 225-234.	1.0	8
113	Nanostructuring of surface layers and production of nanostructured coatings as an effective method of strengthening modern structural and tool materials. <i>Physics of Metals and Metallography</i> , 2007, 104, 627-636.	0.3	29
114	On the nature of plastic strain localization in solids. <i>Technical Physics</i> , 2007, 52, 1024-1030.	0.2	14
115	The chess-board effect in the stress-strain distribution at interfaces of a loaded solid. <i>Doklady Physics</i> , 2006, 51, 408-411.	0.2	27
116	Fundamental role of nanoscale structural level of plastic strain in solids. <i>Metal Science and Heat Treatment</i> , 2006, 48, 533-538.	0.2	7
117	Features Of Plastic Deformation And Fracture Of Commercial Titanium Subjected To Hydrogenation. <i>AIP Conference Proceedings</i> , 2006, , .	0.3	1
118	Mechanical Properties of Thin Ag Films on a Silicon Substrate Studied Using the Nanoindentation Technique. <i>Physics of the Solid State</i> , 2005, 47, 2055.	0.2	32
119	Structural Analysis of Armco Iron Subjected to Equal Channel Angular Extrusion. <i>Russian Physics Journal</i> , 2005, 48, 406-411.	0.2	3
120	Mechanical Behavior of Hydrogenated Commercial VT1-0 Titanium. <i>Materials Science</i> , 2004, 40, 756-763.	0.3	1
121	The effect of ultrasonic treatment on mechanical behavior of titanium and steel specimens. <i>Theoretical and Applied Fracture Mechanics</i> , 2004, 41, 163-172.	2.1	19
122	Fractal analysis of electromigration-induced changes of surface topography in Au conductor lines. <i>Surface Science</i> , 2003, 524, 191-198.	0.8	14
123	Surface Morphology, Microstructure and Mechanical Properties of Thin Ag Films. <i>Journal of Korean Powder Metallurgy Institute</i> , 2003, 10, 190-194.	0.2	1
124	Effect of dopants and interlayers on the growth of thin insulating films. <i>Theoretical and Applied Fracture Mechanics</i> , 2001, 36, 51-56.	2.1	0
125	Effect of sulfur and selenium on the surface relief of insulating films and electrical characteristics of metal-insulator-p-GaAs structures. <i>Semiconductors</i> , 2001, 35, 80-85.	0.2	2