

Boris B Straumal

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/287474/publications.pdf>

Version: 2024-02-01

275
papers

10,822
citations

13827

67
h-index

43802

91
g-index

283
all docs

283
docs citations

283
times ranked

5357
citing authors

#	ARTICLE	IF	CITATIONS
1	Magnetization study of nanograined pure and Mn-doped ZnO films: Formation of a ferromagnetic grain-boundary foam. <i>Physical Review B</i> , 2009, 79, .	1.1	343
2	The $\beta \rightarrow \alpha'$ Transformation in Titanium-Cobalt Alloys under High-Pressure Torsion. <i>Metals</i> , 2018, 8, 1.	1.0	281
3	Formation of nanograined structure and decomposition of supersaturated solid solution during high pressure torsion of Al–Zn and Al–Mg alloys. <i>Acta Materialia</i> , 2004, 52, 4469-4478.	3.8	247
4	Silicon carbide and diamond for high temperature device applications. <i>Journal of Materials Science: Materials in Electronics</i> , 2006, 17, 1-25.	1.1	227
5	Nanomaterials by severe plastic deformation: review of historical developments and recent advances. <i>Materials Research Letters</i> , 2022, 10, 163-256.	4.1	215
6	Regions of existence of special and non-special grain boundaries. <i>Acta Metallurgica</i> , 1985, 33, 1735-1749.	2.1	163
7	Softening of nanostructured Al–Zn and Al–Mg alloys after severe plastic deformation. <i>Acta Materialia</i> , 2006, 54, 3933-3939.	3.8	161
8	Microstructure evolution and mechanical behavior of ultrafine Ti 6Al 4V during low-temperature superplastic deformation. <i>Acta Materialia</i> , 2016, 121, 152-163.	3.8	148
9	Increase of Mn solubility with decreasing grain size in ZnO. <i>Journal of the European Ceramic Society</i> , 2009, 29, 1963-1970.	2.8	142
10	Increase of Co solubility with decreasing grain size in ZnO. <i>Acta Materialia</i> , 2008, 56, 6246-6256.	3.8	125
11	Unusual super-ductility at room temperature in an ultrafine-grained aluminum alloy. <i>Journal of Materials Science</i> , 2010, 45, 4718-4724.	1.7	125
12	The $\beta \rightarrow \alpha'$ and $\beta \rightarrow \alpha''$ phase transformations in Ti–Fe alloys under high-pressure torsion. <i>Acta Materialia</i> , 2018, 144, 337-351.	3.8	118
13	Accelerated Diffusion and Phase Transformations in Co–Cu Alloys Driven by the Severe Plastic Deformation. <i>Materials Transactions</i> , 2012, 53, 63-71.	0.4	117
14	Phase transitions in metallic alloys driven by the high pressure torsion. <i>Archives of Civil and Mechanical Engineering</i> , 2014, 14, 242-249.	1.9	112
15	Grain boundary films in Al–Zn alloys after high pressure torsion. <i>Scripta Materialia</i> , 2014, 70, 59-62.	2.6	110
16	Ferromagnetism of zinc oxide nanograined films. <i>JETP Letters</i> , 2013, 97, 367-377.	0.4	109
17	Ferromagnetic properties of the Mn-doped nanograined ZnO films. <i>Journal of Applied Physics</i> , 2010, 108, .	1.1	108
18	Thermodynamic aspects of the grain boundary segregation in Cu(Bi) alloys. <i>Acta Materialia</i> , 1999, 47, 4041-4046.	3.8	105

#	ARTICLE	IF	CITATIONS
19	Grain-boundary melting phase transition in the Cu-Fe system. <i>Physical Review B</i> , 2005, 71, .	1.1	104
20	Grain boundary wetting by a solid phase; microstructural development in a Zn-5 wt% Al alloy. <i>Acta Materialia</i> , 2004, 52, 4537-4545.	3.8	103
21	Complete and Incomplete Wetting of Ferrite Grain Boundaries by Austenite in the Low-Alloyed Ferritic Steel. <i>Journal of Materials Engineering and Performance</i> , 2012, 21, 667-670.	1.2	102
22	Grain boundaries as the controlling factor for the ferromagnetic behaviour of Co-doped ZnO. <i>Philosophical Magazine</i> , 2013, 93, 1371-1383.	0.7	100
23	Competition between precipitation and dissolution in Cu-Ag alloys under high pressure torsion. <i>Acta Materialia</i> , 2017, 122, 60-71.	3.8	100
24	Ferromagnetic behaviour of ZnO: the role of grain boundaries. <i>Beilstein Journal of Nanotechnology</i> , 2016, 7, 1936-1947.	1.5	99
25	Grain boundary complexions and pseudopartial wetting. <i>Current Opinion in Solid State and Materials Science</i> , 2016, 20, 247-256.	5.6	99
26	Strengthening zones in the Co matrix of WC-Co cemented carbides. <i>Scripta Materialia</i> , 2014, 83, 17-20.	2.6	98
27	Interfacial dominated ferromagnetism in nanograined ZnO: a ¹ / ₄ SR and DFT study. <i>Scientific Reports</i> , 2015, 5, 8871.	1.6	97
28	Review: grain boundary faceting-roughening phenomena. <i>Journal of Materials Science</i> , 2016, 51, 382-404.	1.7	97
29	Phase Transformations in Ti-Fe Alloys Induced by High-Pressure Torsion. <i>Advanced Engineering Materials</i> , 2015, 17, 1835-1841.	1.6	95
30	Strain rate sensitivity studies in an ultrafine-grained Al-30wt.% Zn alloy using micro- and nanoindentation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 543, 117-120.	2.6	92
31	Ferromagnetic behaviour of Fe-doped ZnO nanograined films. <i>Beilstein Journal of Nanotechnology</i> , 2013, 4, 361-369.	1.5	92
32	Grain Boundary Phenomena in an Ultrafine-Grained Al-Zn Alloy with Improved Mechanical Behavior for Micro-Devices. <i>Advanced Engineering Materials</i> , 2014, 16, 1000-1009.	1.6	92
33	Gradual softening of Al-Zn alloys during high-pressure torsion. <i>Materials Letters</i> , 2012, 84, 63-65.	1.3	90
34	Thermal evolution and grain boundary phase transformations in severely deformed nanograined Al-Zn alloys. <i>Acta Materialia</i> , 2008, 56, 6123-6131.	3.8	89
35	Amorphous interlayers between crystalline grains in ferromagnetic ZnO films. <i>Materials Letters</i> , 2012, 71, 21-24.	1.3	89
36	Effect of composition, annealing temperature, and high pressure torsion on structure and hardness of Ti-V and Ti-V-Al alloys. <i>Journal of Applied Physics</i> , 2019, 125, .	1.1	88

#	ARTICLE	IF	CITATIONS
37	Grain Boundary Phase Transitions and their Influence on Properties of Polycrystals. Journal of Materials Science, 2004, 12, 147-155.	1.2	87
38	Wetting of grain boundaries in Al by the solid Al ₃ Mg ₂ phase. Journal of Materials Science, 2010, 45, 2057-2061.	1.7	87
39	Grain boundary layers in nanocrystalline ferromagnetic zinc oxide. JETP Letters, 2010, 92, 396-400.	0.4	87
40	Grain Boundary Wetting by a Second Solid Phase in Ti-Fe Alloys. Journal of Materials Engineering and Performance, 2018, 27, 4989-4992.	1.2	87
41	Amorphous grain boundary layers in the ferromagnetic nanograined ZnO films. Thin Solid Films, 2011, 520, 1192-1194.	0.8	86
42	Ultrafine Grained Structures Resulting from SPD-Induced Phase Transformation in Al-Zn Alloys. Advanced Engineering Materials, 2015, 17, 1821-1827.	1.6	86
43	Wetting transition of grain-boundary triple junctions. Acta Materialia, 2008, 56, 925-933.	3.8	85
44	Instabilities of interfaces between dissimilar metals induced by high pressure torsion. Materials Letters, 2018, 222, 172-175.	1.3	85
45	Ferromagnetism of nanostructured zinc oxide films. Physics of Metals and Metallography, 2012, 113, 1244-1256.	0.3	82
46	Grain Boundary Wetting by a Second Solid Phase in the Zr-Nb Alloys. Journal of Materials Engineering and Performance, 2012, 21, 721-724.	1.2	82
47	Influence of texture on the ferromagnetic properties of nanograined ZnO films. Physica Status Solidi (B): Basic Research, 2011, 248, 1581-1586.	0.7	81
48	Temperature influence on the faceting of 3 and 9 grain boundaries in Cu. Acta Materialia, 2006, 54, 167-172.	3.8	80
49	Continuous and discontinuous grain-boundary wetting in Zn . Physical Review B, 2008, 78, ...	1.1	80
50	Grain boundary phase transitions and phase diagrams. Solid State Sciences, 2001, 3, 1113-1115.	0.8	77
51	Inversed solid-phase grain boundary wetting in the Al-Zn system. Journal of Materials Science, 2011, 46, 4349-4353.	1.7	77
52	Increase of Fe solubility in ZnO induced by the grain boundary adsorption. Journal of Materials Science, 2014, 49, 4490-4498.	1.7	77
53	Contact angles by the solid-phase grain boundary wetting (coverage) in the Co-Cu system. Journal of Materials Science, 2010, 45, 4271-4275.	1.7	76
54	Phase transitions induced by severe plastic deformation: steady-state and equifinality. International Journal of Materials Research, 2015, 106, 657-664.	0.1	76

#	ARTICLE	IF	CITATIONS
55	Faceting of $\{111\}$ and $\{100\}$ Grain Boundaries in Copper. <i>Journal of Materials Science</i> , 2001, 9, 287-292.	1.2	75
56	Penetration of tin and zinc along tilt grain boundaries 43° [100] in Fe-5 at.% Si alloy: Premelting phase transition?. <i>Acta Metallurgica Et Materialia</i> , 1991, 39, 627-639.	1.9	74
57	The wetting transition in high and low energy grain boundaries in the Cu(In) system. <i>Acta Metallurgica Et Materialia</i> , 1992, 40, 939-945.	1.9	74
58	Fe-C nanograined alloys obtained by high-pressure torsion: Structure and magnetic properties. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009, 503, 185-189.	2.6	74
59	Structure and Properties of Nanograined Fe-C Alloys after Severe Plastic Deformation. <i>Advanced Engineering Materials</i> , 2011, 13, 463-469.	1.6	74
60	Hypereutectic Al-Si based alloys with a thixotropic microstructure produced by ultrasonic treatment. <i>Materials & Design</i> , 1997, 18, 323-326.	5.1	73
61	Transmission electron microscopy investigation of boundaries between amorphous α -grains in Ni ₅₀ Nb ₂₀ Y ₃₀ alloy. <i>Journal of Materials Science</i> , 2011, 46, 4336-4342.	1.7	73
62	The Solidus Line of the Cu-Bi Phase Diagram. <i>Journal of Phase Equilibria and Diffusion</i> , 1997, 18, 128-135.	0.3	72
63	Grain Boundary Grooving as an Indicator of Grain Boundary Phase Transformations. <i>Journal of Materials Science</i> , 2001, 9, 43-53.	1.2	72
64	Transformation of $\sim 17^\circ$ special tilt boundaries to general boundaries in tin. <i>Acta Metallurgica</i> , 1988, 36, 1573-1583.	2.1	71
65	Pressure influence on the grain boundary wetting phase transition in Fe-Si alloys. <i>Acta Materialia</i> , 1997, 45, 1931-1940.	3.8	71
66	Effect of faceting on grain boundary motion in Zn. <i>Acta Materialia</i> , 2008, 56, 2728-2734.	3.8	71
67	Phase transitions during high pressure torsion of Cu Co alloys. <i>Materials Letters</i> , 2014, 118, 111-114.	1.3	71
68	Temperature dependence of the grain boundary segregation of Bi in Cu polycrystals. <i>Scripta Materialia</i> , 1997, 37, 729-735.	2.6	70
69	The effect of pressure on migration of $\sim 001^\circ$ tilt grain boundaries in tin bicrystals. <i>Scripta Metallurgica</i> , 1984, 18, 207-211.	1.2	68
70	GRAIN BOUNDARIES: PHASE TRANSITIONS AND CRITICAL PHENOMENA. <i>International Journal of Modern Physics B</i> , 1991, 05, 2989-3028.	1.0	68
71	Acceleration of grain boundary motion in Al by small additions of Ga. <i>Philosophical Magazine Letters</i> , 1995, 72, 361-368.	0.5	68
72	Wetting and premelting phase transitions in 38° [100] tilt grain boundary in (Fe-12 at.% Si)-Zn alloy in the vicinity of the A2-B2 bulk ordering in Fe-12 at.% Si alloy. <i>Acta Metallurgica Et Materialia</i> , 1991, 39, 3091-3098.	1.9	67

#	ARTICLE	IF	CITATIONS
73	Grain Boundary Segregation in the Cu-Bi System. Defect and Diffusion Forum, 1998, 156, 135-146.	0.4	66
74	Formation of the δ Phase in the Titanium-Iron System under Shear Deformation. JETP Letters, 2020, 111, 568-574.	0.4	65
75	Premelting transition on 38° tilt grain boundaries in (Fe-10 at.% Si)-Zn alloys. Acta Metallurgica Et Materialia, 1992, 40, 795-801.	1.9	64
76	Deformation-driven formation of equilibrium phases in the Cu-Ni alloys. Journal of Materials Science, 2012, 47, 360-367.	1.7	63
77	Phase Transformations Induced by Severe Plastic Deformation. Materials Transactions, 2019, 60, 1489-1499.	0.4	63
78	Wear-resistance and hardness: Are they directly related for nanostructured hard materials?. International Journal of Refractory Metals and Hard Materials, 2015, 49, 203-211.	1.7	62
79	Phase transformations in the severely plastically deformed Zr-Nb alloys. Materials Letters, 2012, 81, 225-228.	1.3	61
80	Phase transitions in Cu-based alloys under high pressure torsion. Journal of Alloys and Compounds, 2017, 707, 20-26.	2.8	61
81	The Grain Boundary Wetting Phenomena in the Ti-Containing High-Entropy Alloys: A Review. Metals, 2021, 11, 1881.	1.0	54
82	Growth of (\pm Ti) grain-boundary layers in Ti-Co alloys. Russian Journal of Non-Ferrous Metals, 2016, 57, 703-709.	0.2	53
83	Pseudopartial wetting of WC/WC grain boundaries in cemented carbides. Materials Letters, 2015, 147, 105-108.	1.3	51
84	Bulk and Surface Low Temperature Phase Transitions in the Mg-Alloy EZ33A. Metals, 2020, 10, 1127.	1.0	44
85	Apparently complete grain boundary wetting in Cu-In alloys. Journal of Materials Science, 2012, 47, 8336-8343.	1.7	43
86	Reversible α -Wetting of grain boundaries by the second solid phase in the Cu-In system. JETP Letters, 2014, 100, 535-539.	0.4	43
87	Pseudopartial wetting of grain boundaries in severely deformed Al-Zn alloys. Russian Journal of Non-Ferrous Metals, 2015, 56, 44-51.	0.2	42
88	High-pressure torsion driven phase transformations in Cu-Al-Ni shape memory alloys. Acta Materialia, 2017, 125, 274-285.	3.8	41
89	Grain boundary wetting transition in Al-Mg alloys. Materials Letters, 2017, 186, 82-85.	1.3	41
90	The effect of crystallographic parameters of interphase boundaries on their surface tension and parameters of the boundary diffusion. Acta Metallurgica, 1984, 32, 1355-1364.	2.1	40

#	ARTICLE	IF	CITATIONS
91	Tie Lines of the Grain Boundary Wetting Phase Transition in the Zn-Rich Part of the Zn-Sn Phase Diagram. <i>Materials Science Forum</i> , 1999, 294-296, 411-414.	0.3	40
92	The influence of pressure on indium diffusion along single tin-germanium interphase boundaries. <i>Scripta Metallurgica</i> , 1983, 17, 275-279.	1.2	37
93	Bulk Nanocrystalline Ferrite Stabilized through Grain Boundary Carbon Segregation. <i>Advanced Engineering Materials</i> , 2018, 20, 1800443.	1.6	37
94	First observation of a wetting phase transition in low-angle grain boundaries. <i>JETP Letters</i> , 2008, 88, 537-542.	0.4	36
95	Preparation of Fe-Si single crystals and bicrystals for diffusion experiments by the electron-beam floating zone technique. <i>Journal of Crystal Growth</i> , 1995, 151, 180-186.	0.7	35
96	Grain boundary wetting in the NdFeB-based hard magnetic alloys. <i>Journal of Materials Science</i> , 2012, 47, 8352-8359.	1.7	35
97	Amorphization of Nd-Fe-B alloy under the action of high-pressure torsion. <i>Materials Letters</i> , 2015, 145, 63-66.	1.3	35
98	Observation of Pseudopartial Grain Boundary Wetting in the NdFeB-Based Alloy. <i>Journal of Materials Engineering and Performance</i> , 2016, 25, 3303-3309.	1.2	35
99	Diffusive and displacive phase transitions in Ti-Fe and Ti-Co alloys under high pressure torsion. <i>Journal of Alloys and Compounds</i> , 2018, 735, 2281-2286.	2.8	35
100	Using Severe Plastic Deformation to Produce Nanostructured Materials with Superior Properties. <i>Annual Review of Materials Research</i> , 2022, 52, 357-382.	4.3	34
101	Wetting-Phase Transitions by the Second Solid Phase for Linear Defects (Grain Boundary Triple) <i>Tj ETQq1 1 0,784314 ggBT /Over</i>	0.4	33
102	Influence of the grain boundary character on the temperature of transition to complete wetting in the Cu-In system. <i>Journal of Materials Science</i> , 2015, 50, 4762-4771.	1.7	32
103	Competition for impurity atoms between defects and solid solution during high pressure torsion. <i>Scripta Materialia</i> , 2019, 173, 46-50.	2.6	32
104	The influence of an ordering transition on the interdiffusion in Fe-Si alloys. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 3075-3083.	1.9	31
105	Grain boundary phase observed in Al-5 at.% Zn alloy by using HREM. <i>Philosophical Magazine Letters</i> , 2007, 87, 423-430.	0.5	30
106	Hardmetals with nanograin reinforced binder: Binder fine structure and hardness. <i>International Journal of Refractory Metals and Hard Materials</i> , 2008, 26, 583-588.	1.7	30
107	Lines of Grain Boundary Phase Transitions in Bulk Phase Diagrams. <i>Materials Science Forum</i> , 1996, 207-209, 59-68.	0.3	29
108	Amorphization of crystalline phases in the Nd-Fe-B alloy driven by the high-pressure torsion. <i>Materials Letters</i> , 2015, 161, 735-739.	1.3	29

#	ARTICLE	IF	CITATIONS
109	Faceting of $\{111\}$ and $\{110\}$ grain boundaries in Cu-Bi alloys. <i>Acta Materialia</i> , 2005, 53, 247-254.	3.8	28
110	Formation regularities of grain-boundary interlayers of the β -Ti phase in binary titanium alloys. <i>Russian Journal of Non-Ferrous Metals</i> , 2016, 57, 229-235.	0.2	26
111	Pseudopartial Grain Boundary Wetting: Key to the Thin Intergranular Layers. <i>Defect and Diffusion Forum</i> , 0, 333, 175-192.	0.4	25
112	Cytotoxicity of biodegradable magnesium alloy WE43 to tumor cells in vitro: Bioresorbable implants with antitumor activity?. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2020, 108, 167-173.	1.6	24
113	Effect of internal stress on short-circuit diffusion in thin films and nanolaminates: Application to Cu/W nano-multilayers. <i>Applied Surface Science</i> , 2020, 508, 145254.	3.1	24
114	High pressure torsion of Cu-Ag and Cu-Sn alloys: Limits for solubility and dissolution. <i>Acta Materialia</i> , 2020, 195, 184-198.	3.8	24
115	Corrosion behaviour of the protective and decorative TiN coatings on large area steel strips. <i>Surface and Coatings Technology</i> , 2000, 125, 229-232.	2.2	23
116	Transformation Pathway upon Heating of Ti-Al Fe Alloys Deformed by High-Pressure Torsion. <i>Advanced Engineering Materials</i> , 2018, 20, 1700933.	1.6	23
117	Coarsening of $(\beta\text{-Ti})_{x\%} + (\beta\text{-Ti})_{y\%}$ Microstructure in the Ti-Al-V Alloy at Constant Temperature. <i>Advanced Engineering Materials</i> , 2018, 20, 1800510.	1.6	23
118	Plastic flow and microstructural instabilities during high-pressure torsion of Cu/ZnO composites. <i>Materials Characterization</i> , 2018, 145, 389-401.	1.9	23
119	Faceting and migration of twin grain boundaries in zinc. <i>International Journal of Materials Research</i> , 2005, 96, 161-166.	0.8	23
120	Grain Boundary Wetting by a Second Solid Phase in the High Entropy Alloys: A Review. <i>Materials</i> , 2021, 14, 7506.	1.3	23
121	Grain Boundary Phase Transitions in the Al-Mg System and Their Influence on High-Strain Rate Superplasticity. <i>Defect and Diffusion Forum</i> , 2003, 216-217, 307-312.	0.4	22
122	Structural changes in aluminum alloys upon severe plastic deformation. <i>Physics of the Solid State</i> , 2007, 49, 868-873.	0.2	22
123	Grain boundary wetting phase transitions in peritectic copper-cobalt alloys. <i>Physics of the Solid State</i> , 2016, 58, 742-746.	0.2	22
124	How to Tune the Alumina Aerogels Structure by the Variation of a Supercritical Solvent. Evolution of the Structure During Heat Treatment. <i>Journal of Physical Chemistry C</i> , 2016, 120, 3319-3325.	1.5	22
125	Pseudopartial wetting of W/W grain boundaries by the nickel-rich layers. <i>Materials Letters</i> , 2017, 192, 101-103.	1.3	22
126	Structural and Mechanical Properties of Ti-Co Alloys Treated by High Pressure Torsion. <i>Materials</i> , 2019, 12, 426.	1.3	22

#	ARTICLE	IF	CITATIONS
127	Wetting of grain boundary triple junctions by intermetallic delta-phase in the Cu–In alloys. <i>Journal of Materials Science</i> , 2021, 56, 7840-7848.	1.7	22
128	Influence of faceting-roughening on triple-junction migration in zinc. <i>International Journal of Materials Research</i> , 2005, 96, 1147-1151.	0.8	21
129	Enhanced Ductility in Ultrafine-Grained Al Alloys Produced by SPD Techniques. <i>Materials Science Forum</i> , 0, 633-634, 321-332.	0.3	20
130	Effective Temperature of High Pressure Torsion in Zr-Nb Alloys. <i>High Temperature Materials and Processes</i> , 2012, 31, .	0.6	20
131	Effect of the wetting of grain boundaries on the formation of a solid solution in the Al-Zn system. <i>JETP Letters</i> , 2012, 96, 380-384.	0.4	20
132	Grain refinement of intermetallic compounds in the Cu–Sn system under high pressure torsion. <i>Materials Letters</i> , 2016, 179, 12-15.	1.3	20
133	Contact angles of WC/WC grain boundaries with binder in cemented carbides with various carbon content. <i>Materials Letters</i> , 2017, 196, 1-3.	1.3	20
134	The Effect of Equal-Channel Angular Pressing on the Microstructure, the Mechanical and Corrosion Properties and the Anti-Tumor Activity of Magnesium Alloyed with Silver. <i>Materials</i> , 2019, 12, 3832.	1.3	20
135	Structure Refinement and Fragmentation of Precipitates under Severe Plastic Deformation: A Review. <i>Materials</i> , 2022, 15, 601.	1.3	20
136	High Entropy Alloys Coatings Deposited by Laser Cladding: A Review of Grain Boundary Wetting Phenomena. <i>Coatings</i> , 2022, 12, 343.	1.2	20
137	Indium diffusion along interphase twist boundaries Sn–Ge. <i>Scripta Metallurgica</i> , 1981, 15, 1197-1200.	1.2	18
138	Influence of Grain Boundary Phase Transitions on the Properties of Cu-Bi Polycrystals. <i>Defect and Diffusion Forum</i> , 2001, 188-190, 185-0.	0.4	18
139	Effect of severe plastic deformation on the coercivity of Co–Cu alloys. <i>Philosophical Magazine Letters</i> , 2009, 89, 649-654.	0.5	18
140	Wetting transition of grain boundaries in the Sn-rich part of the Sn–Bi phase diagram. <i>Journal of Materials Science</i> , 2011, 46, 1557-1562.	1.7	18
141	Heat effect of grain boundary wetting in Al–Mg alloys. <i>Journal of Materials Science</i> , 2012, 47, 8367-8371.	1.7	18
142	Phase transformations in a Cu Cr alloy induced by high pressure torsion. <i>Materials Characterization</i> , 2016, 114, 151-156.	1.9	18
143	Phase transitions at grain boundaries in the presence of impurities. <i>Acta Metallurgica</i> , 1989, 37, 1995-1998.	2.1	17
144	Liquid film migration in a Mo(Ni) bicrystal. <i>Philosophical Magazine Letters</i> , 1996, 73, 187-194.	0.5	17

#	ARTICLE	IF	CITATIONS
145	Faceting and Roughening of the Asymmetric Twin Grain Boundaries in Zinc. <i>Journal of Materials Science</i> , 2001, 9, 275-279.	1.2	17
146	Pokrovsky-Talapov Critical Behavior and Rough-to-Rough Ridges of the $\Sigma 3$ Coincidence Tilt Boundary in Mo. <i>Physical Review Letters</i> , 2004, 92, 196101.	2.9	17
147	Formation of Nanostructure during High-Pressure Torsion of Al-Zn, Al-Mg and Al-Zn-Mg Alloys. <i>Defect and Diffusion Forum</i> , 2005, 237-240, 739-744.	0.4	17
148	Wetting and premelting of triple junctions and grain boundaries in the Al-Zn alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008, 495, 126-131.	2.6	17
149	The Effect of Grain Boundary Sliding and Strain Rate Sensitivity on the Ductility of Ultrafine-Grained Materials. <i>Materials Science Forum</i> , 0, 667-669, 677-682.	0.3	17
150	Grain boundary wetting and premelting in the Cu-Co alloys. <i>Journal of Alloys and Compounds</i> , 2014, 615, S183-S187.	2.8	17
151	Effect of the subsidiary misorientation components on the special grain boundary-general boundary transformation in the vicinity of the coincidence misorientation of $\Sigma 17$ in tin. <i>Acta Metallurgica</i> , 1989, 37, 2855-2860.	2.1	16
152	Corrosion resistance of the vacuum arc deposited Ti, TiN and TiO ₂ coatings on large area glass substrates. <i>Surface and Coatings Technology</i> , 2000, 125, 223-228.	2.2	16
153	Grain Boundary Phase Transitions in the Cu-Bi System. <i>Defect and Diffusion Forum</i> , 2001, 194-199, 1343-1348.	0.4	16
154	Distribution of impurities and minor components in nanostructured conducting oxides. <i>International Journal of Nanomanufacturing</i> , 2008, 2, 253.	0.3	16
155	Wetting of grain boundaries in hard-magnetic Nd-Fe-B alloys. <i>Russian Journal of Non-Ferrous Metals</i> , 2012, 53, 450-456.	0.2	16
156	Transformation of Hume-Rothery phases under the action of high pressure torsion. <i>JETP Letters</i> , 2014, 100, 376-379.	0.4	16
157	Investigation on the precipitate formation and behavior in nitrogen-containing equiatomic CoCrFeMnNi high-entropy alloy. <i>Materials Letters</i> , 2020, 258, 126806.	1.3	16
158	Grain Boundary Wetting Phase Transitions on the Al-Sn and Al-Sn-Pb Systems. <i>Materials Science Forum</i> , 1996, 207-209, 437-440.	0.3	15
159	Vacuum arc deposition of Mo films. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 1996, 14, 3252-3255.	0.9	15
160	Stable and metastable phases in the vacuum arc deposited Co thin films. <i>Thin Solid Films</i> , 1998, 319, 124-127.	0.8	15
161	Masked deposition of decorative coatings on large area glass and plastic sheets. <i>Thin Solid Films</i> , 1999, 351, 204-208.	0.8	15
162	First measurement of the heat effect of the grain boundary wetting phase transition. <i>Journal of Materials Science</i> , 2011, 46, 4243-4247.	1.7	15

#	ARTICLE	IF	CITATIONS
163	SPD-induced changes of structure and magnetic properties in the Cu-Co alloys. <i>Materials Letters</i> , 2013, 98, 217-221.	1.3	15
164	Severe Plastic Deformation on Powder Metallurgy Cu-Al-Ni Shape Memory Alloys. <i>Materials Today: Proceedings</i> , 2015, 2, S747-S750.	0.9	15
165	Transformations of Cu(in) supersaturated solid solutions under high-pressure torsion. <i>Materials Letters</i> , 2015, 138, 255-258.	1.3	15
166	Dissolution of Ag Precipitates in the Cu-8wt.%Ag Alloy Deformed by High Pressure Torsion. <i>Materials</i> , 2019, 12, 447.	1.3	15
167	Generation and healing of porosity in high purity copper by high-pressure torsion. <i>Materials Characterization</i> , 2018, 145, 1-9.	1.9	14
168	Thermal Stability of Athermal γ -Ti(Fe) Produced upon Quenching of β -Ti(Fe). <i>Advanced Engineering Materials</i> , 2019, 21, 1800158.	1.6	14
169	Solute drag and wetting of a grain boundary. <i>Philosophical Magazine Letters</i> , 1997, 76, 133-138.	0.5	13
170	Phase transformations in Al-Mg-Zn alloys during high pressure torsion and subsequent heating. <i>Journal of Materials Science</i> , 2013, 48, 4758-4765.	1.7	13
171	Gradient bandgap narrowing in severely deformed ZnO nanoparticles. <i>Materials Research Letters</i> , 2021, 9, 58-64.	4.1	13
172	The effect of bismuth segregation on the faceting of $\Sigma 3$ and $\Sigma 9$ coincidence boundaries in copper bicrystals. <i>International Journal of Materials Research</i> , 2007, 98, 451-456.	0.1	13
173	Grain Boundary Wetting Phenomena in High Entropy Alloys Containing Nitrides, Carbides, Borides, Silicides, and Hydrogen: A Review. <i>Crystals</i> , 2021, 11, 1540.	1.0	13
174	Severe Plastic Deformation and Phase Transformations in High Entropy Alloys: A Review. <i>Crystals</i> , 2022, 12, 54.	1.0	13
175	Grain boundary faceting close to the $\Sigma 3$ coincidence misorientation in copper. <i>International Journal of Materials Research</i> , 2004, 95, 939-944.	0.8	12
176	Structure, phase composition, and microhardness of carbon steels after high-pressure torsion. <i>Journal of Materials Science</i> , 2008, 43, 3800-3805.	1.7	12
177	Study on the Solidus Line in Sn-Rich Region of Sn-In Phase Diagram. <i>Journal of Phase Equilibria and Diffusion</i> , 2009, 30, 254-257.	0.5	12
178	Effect of high pressure torsion on microstructure of Cu-Sn alloys with different content of Hume Rothery phase. <i>Materials Characterization</i> , 2016, 118, 411-416.	1.9	12
179	Grain Boundary Complexions and Phase Transformations in Al- and Cu-Based Alloys. <i>Metals</i> , 2019, 9, 10.	1.0	12
180	Formation and Thermal Stability of γ -Ti(Fe) in β -Phase-Based Ti(Fe) Alloys. <i>Metals</i> , 2020, 10, 402.	1.0	12

#	ARTICLE	IF	CITATIONS
181	Radiotracer Diffusion of Ni and Ag in Ag and Ni Grain Boundaries and Oriented Ag/Ni Interphase Boundaries. <i>Materials Science Forum</i> , 1999, 294-296, 541-544.	0.3	11
182	Wetting Transition of Grain Boundaries in Tin–Rich Indium-Based Alloys and Its Influence on Electrical Properties. <i>Materials Transactions</i> , 2010, 51, 1677-1682.	0.4	11
183	Grain boundary ridges and triple lines. <i>Scripta Materialia</i> , 2010, 62, 924-927.	2.6	11
184	Faceting"roughening of twin grain boundaries. <i>Journal of Materials Science</i> , 2012, 47, 1641-1646.	1.7	11
185	Diffusion and Phase Transitions Accelerated by Severe Plastic Deformation. , 0, 5, 95-108.		11
186	Stabilization of ultrafine-grained microstructure in high-purity copper by gas-filled pores produced by severe plastic deformation. <i>Scripta Materialia</i> , 2020, 178, 29-33.	2.6	11
187	The influence of misorientation deviation on the faceting of $\Sigma 3$ grain boundaries in aluminium. <i>International Journal of Materials Research</i> , 2005, 96, 216-219.	0.8	11
188	Diffusion of indium along [001] Sn–Ge interphase boundaries: Prewetting phase transition and critical phenomena. <i>Journal of the Less Common Metals</i> , 1990, 159, 43-52.	0.9	10
189	Grain Boundary Wetting Phase Transition in the Mo-Ni System. <i>Defect and Diffusion Forum</i> , 1997, 143-147, 1517-1522.	0.4	10
190	The Effect of Equal-Channel Angular Pressing on Microstructure, Mechanical Properties, and Biodegradation Behavior of Magnesium Alloyed with Silver and Gadolinium. <i>Crystals</i> , 2020, 10, 918.	1.0	10
191	The formation of B2-precipitate and its effect on grain growth behavior in aluminum-containing CoCrNi medium-entropy alloy. <i>Materials Letters</i> , 2021, 303, 130481.	1.3	10
192	Diffusion of indium along [001] twist boundaries in tin: Concentrational $\Sigma 2$ phase transition on grain boundaries. <i>Journal of the Less Common Metals</i> , 1990, 158, 23-33.	0.9	9
193	Excess Volume of the Solid/Liquid Interface in Fe-6 at.%Si Bicrystals Wetted by Liquid Zinc. <i>Journal of Materials Science</i> , 1998, 6, 179-186.	1.2	9
194	Hall current accelerator for pre-treatment of large area glass sheets. <i>Thin Solid Films</i> , 1999, 351, 190-193.	0.8	9
195	Vacuum arc deposition of protective layers on glass and polymer substrates. <i>Thin Solid Films</i> , 2001, 383, 224-226.	0.8	9
196	Faceting of the $\Sigma 3$ coincidence tilt boundary in Nb. <i>Journal of Materials Science</i> , 2005, 40, 871-874.	1.7	9
197	Structure of Historical Brass Tongues and Shallots from Baroque Organs. <i>Defect and Diffusion Forum</i> , 2006, 249, 275-280.	0.4	9
198	Hot isostatic pressing of Cu–Bi polycrystals with liquid-like grain boundary layers. <i>Acta Materialia</i> , 2007, 55, 335-343.	3.8	9

#	ARTICLE	IF	CITATIONS
199	Motion of the faceted 57° $[1\overline{1}0]$ tilt grain boundary in zinc. Journal of Materials Science, 2008, 43, 3860-3866.	1.7	9
200	Direct observation of strain-induced non-equilibrium grain boundaries. Materials Letters, 2015, 159, 432-435.	1.3	9
201	The effect of bismuth on microstructure evolution of ultrafine grained copper. Materials Letters, 2017, 199, 156-159.	1.3	9
202	Phase Transformations in Copper-Tin Solid Solutions at High-Pressure Torsion. JETP Letters, 2019, 110, 624-628.	0.4	9
203	Ionic Nitriding of Austenitic and Ferritic Steel with the Aid of a High Aperture Hall Current Accelerator. Defect and Diffusion Forum, 2001, 194-199, 1457-1462.	0.4	8
204	Meyer-Neldel Rule for the Kinetic Properties of Grain and Interphase Boundaries. Defect and Diffusion Forum, 2001, 192-193, 15-26.	0.4	8
205	Reconstruction of Historical Alloys for Pipe Organs Brings True Baroque Music Back to Life. MRS Bulletin, 2007, 32, 249-255.	1.7	8
206	Coercivity and domain structure of nanograined Fe-C alloys after high-pressure torsion. Journal of Materials Science, 2008, 43, 3775-3781.	1.7	8
207	Non-destructive compositional analysis of historic organ reed pipes. Journal of Physics Condensed Matter, 2008, 20, 104250.	0.7	8
208	Reversible transformation of a grain-boundary facet into a rough-to-rough ridge in zinc. Philosophical Magazine Letters, 2008, 88, 27-36.	0.5	8
209	Phase transitions in copper-silver alloys under high pressure torsion. International Journal of Materials Research, 2019, 110, 608-613.	0.1	8
210	Abnormal grain growth in Al of different purity. Materials & Design, 1997, 18, 293-295.	5.1	7
211	Vacuum arc deposition of Ti coatings. Surface and Coatings Technology, 2000, 125, 157-160.	2.2	7
212	Decay kinetics of nonequilibrium Al-Si solid solutions. Physical Review B, 2000, 61, 6019-6027.	1.1	7
213	The Temperature Influence on the Faceting of $\Sigma 3$ Grain Boundaries in Aluminium. Defect and Diffusion Forum, 2005, 237-240, 603-608.	0.4	7
214	Hardness of Nanostructured Al-Zn, Al-Mg and Al-Zn-Mg Alloys Obtained by High-Pressure Torsion. Defect and Diffusion Forum, 2006, 249, 155-160.	0.4	7
215	Faceting of $\Sigma 3$ Grain Boundaries in Al. Materials Science Forum, 2007, 558-559, 949-954.	0.3	7
216	Contribution of tilt boundaries to the total energy spectrum of grain boundaries in polycrystals. JETP Letters, 2013, 96, 582-587.	0.4	7

#	ARTICLE	IF	CITATIONS
217	Influence of $\hat{\Gamma}^2$ -Stabilizers on the $\hat{\Gamma}^2$ -Ti $\hat{\Gamma}^2$ -Ti Transformation in Ti-Based Alloys. <i>Processes</i> , 2020, 8, 1135.	1.3	7
218	Thermal stability and microhardness of metastable $\hat{\Gamma}^2$ -phase in the Ti-3.3 at.% Co alloy subjected to high pressure torsion. <i>Journal of Alloys and Compounds</i> , 2020, 834, 155132.	2.8	7
219	High temperature DIGM in an Fe-5 at.% Al bicrystal during Zn diffusion. <i>Scripta Metallurgica Et Materialia</i> , 1992, 26, 901-906.	1.0	6
220	Vacuum arc deposition as a complementary technology to laser processing. <i>Applied Surface Science</i> , 1997, 109-110, 437-441.	3.1	6
221	The Effect of Pressure on Grain Boundary Wetting, Segregation and Diffusion. <i>Defect and Diffusion Forum</i> , 1998, 156, 163-174.	0.4	6
222	Influence of the Grain Boundary Phase Transitions on the Diffusion-Related Properties. <i>Defect and Diffusion Forum</i> , 2003, 216-217, 53-64.	0.4	6
223	Grain Boundary Wetting in Zn Bicrystals by a Sn-Based Melt. <i>Defect and Diffusion Forum</i> , 2006, 249, 235-238.	0.4	6
224	Grain Boundary Segregation and Amount of Bulk Carbides in Severely Deformed Fe-C Alloys. <i>Defect and Diffusion Forum</i> , 0, 309-310, 51-62.	0.4	6
225	Interrelation of depletion and segregation in decomposition of nanoparticles. <i>Philosophical Magazine</i> , 2013, 93, 1677-1689.	0.7	6
226	Microstructure evolution of Cu-22% In alloy subjected to the high pressure torsion. <i>IOP Conference Series: Materials Science and Engineering</i> , 2014, 63, 012093.	0.3	6
227	Continuous and Discontinuous $\hat{\Gamma}^2$ -Ti Layers Between Grains of $\hat{\Gamma}^2$ (Ti,Co) Phase. <i>Journal of Materials Engineering and Performance</i> , 2014, 23, 1580-1584.	1.2	6
228	Phase Transformations in Nd-Fe-B-Based Alloys under High Pressure Torsion at Different Temperatures. <i>JETP Letters</i> , 2020, 112, 37-44.	0.4	6
229	Omega Phase Formation in Ti-3wt.%Nb Alloy Induced by High-Pressure Torsion. <i>Materials</i> , 2021, 14, 2262.	1.3	6
230	Second-order faceting-roughening of the tilt grain boundary in zinc. <i>International Journal of Materials Research</i> , 2009, 100, 525-529.	0.1	6
231	Grain Boundary Zinc Penetration in Fe-Si Alloys: Premelting Phase Transition on the Grain Boundaries. <i>Materials Science Forum</i> , 1993, 126-128, 391-394.	0.3	5
232	Effect of Temperature and Pressure on Grain Boundary Segregation and Wetting. <i>Defect and Diffusion Forum</i> , 1997, 143-147, 1407-1412.	0.4	5
233	Statistics of GB misorientations in 2D polycrystalline copper foil. <i>Materials Letters</i> , 2017, 196, 377-380.	1.3	5
234	Grain Boundary Wetting in the Nd-Fe-B-Based Alloy. <i>Defect and Diffusion Forum</i> , 2017, 380, 173-180.	0.4	5

#	ARTICLE	IF	CITATIONS
235	The Enrichment of (Cu, Sn) Solid Solution Driven by High-Pressure Torsion. <i>Crystals</i> , 2021, 11, 766.	1.0	5
236	Formation of two amorphous phases in the Ni60Nb18Y22 alloy after high pressure torsion. <i>Metallic Materials</i> , 2021, 49, 17-22.	0.2	5
237	The influence of an ordering transition on the interdiffusion in Au-Cu alloys. <i>Acta Metallurgica Et Materialia</i> , 1995, 43, 1817-1823.	1.9	4
238	Mechanism of Diffusion Induced Recrystallization in Single Crystals of Copper. <i>Defect and Diffusion Forum</i> , 1997, 143-147, 1589-1594.	0.4	4
239	Morphology of Mo particles and their incorporation into the growing film during vacuum arc deposition. <i>Nuclear Instruments & Methods in Physics Research B</i> , 1997, 122, 594-597.	0.6	4
240	Faceting of $\Sigma 3$ Grain Boundaries in Cu: Three-Dimensional Wulff Diagrams. <i>Defect and Diffusion Forum</i> , 2005, 237-240, 584-592.	0.4	4
241	Faceting of Twin Grain Boundaries in High-Purity Copper Subjected to High Pressure Torsion. <i>Advanced Engineering Materials</i> , 2020, 22, 1900589.	1.6	4
242	DIFFUSIVE AND DISPLACIVE PHASE TRANSFORMATIONS UNDER HIGH PRESSURE TORSION. <i>Acta Metallurgica Slovaca</i> , 2019, 25, 230-252.	0.3	4
243	Vacuum arc deposition of Ni-Ti gradient coatings. <i>Surface and Coatings Technology</i> , 1998, 100-101, 316-319.	2.2	3
244	Kinetics of the Bi Segregation at Grain Boundaries in Polycrystalline Cu. <i>Materials Science Forum</i> , 1999, 294-296, 585-588.	0.3	3
245	Pre-treatment of large area strips with the aid of a high power Hall current accelerator. <i>Surface and Coatings Technology</i> , 2000, 125, 35-39.	2.2	3
246	Grain Boundary Faceting Phase Transition and Thermal Grooving in Cu. <i>Defect and Diffusion Forum</i> , 2003, 216-217, 93-100.	0.4	3
247	Influence of grain boundary inclination on the grain boundary and triple junction motion in Zn. <i>Materialwissenschaft Und Werkstofftechnik</i> , 2005, 36, 528-532.	0.5	3
248	The Grain Boundary Wetting in the Sn-25 at% In Alloys. <i>Defect and Diffusion Forum</i> , 2006, 258-260, 491-496.	0.4	3
249	Grain boundary faceting-roughening in Zn. <i>Crystallography Reports</i> , 2009, 54, 1070-1078.	0.1	3
250	Microstructure Evolution and Some Properties of Hard Magnetic FeCr30Co8 Alloy Subjected to Torsion Combined with Tension. <i>Materials</i> , 2019, 12, 3019.	1.3	3
251	The Phase Transformations Induced by High-Pressure Torsion in Ti-Nb-Based Alloys. <i>Microscopy and Microanalysis</i> , 2022, 28, 946-952.	0.2	3
252	The zinc penetration along tilt grain boundary 38° [100] in Fe-12at.%Si alloy near ordering A2 - B2 in the bulk. <i>Scripta Metallurgica Et Materialia</i> , 1991, 25, 1441-1446.	1.0	2

#	ARTICLE	IF	CITATIONS
253	Diffusion induced recrystallization in single crystals of copper. <i>Physica Status Solidi A</i> , 1995, 150, 705-713.	1.7	2
254	The Onset of Abnormal Grain Growth in Al-Ga Polycrystals. <i>Materials Science Forum</i> , 1996, 207-209, 557-560.	0.3	2
255	Vacuum Arc Deposited Mo Layers: Grain Size and Roughness. <i>Defect and Diffusion Forum</i> , 1997, 143-147, 1637-1644.	0.4	2
256	Reconstruction of Brass for Tongues and Shallots from Baroque Organs. <i>Defect and Diffusion Forum</i> , 2006, 258-260, 397-402.	0.4	2
257	Discontinuous Dissolution Reaction in a Fe-13.5 at. % Zn Alloy. <i>Materials</i> , 2021, 14, 1939.	1.3	2
258	Computer analysis of the cemented carbidesâ€™ microstructure. <i>Letters on Materials</i> , 2021, 11, 447-451.	0.2	2
259	Formation and Thermal Stability of the γ -Phase in Tiâ€“Nb and Tiâ€“Mo Alloys Subjected to HPT. <i>Materials</i> , 2022, 15, 4136.	1.3	2
260	Wetting phenomena on external and internal interfaces in solids: common features and peculiarities. <i>Surface Science</i> , 1991, 251-252, 674-679.	0.8	1
261	Diffusion Induced Stresses as a Driving Force for the Instability of a Solid/Liquid Interface. <i>Defect and Diffusion Forum</i> , 1996, 129-130, 229-242.	0.4	1
262	Normal and Abnormal Grain Growth in Tungsten Polycrystals. <i>Materials Science Forum</i> , 1998, 294-296, 533-536.	0.3	1
263	Grain boundaries in Nd-Fe-B-based alloys. <i>Letters on Materials</i> , 2020, 10, 566-571.	0.2	1
264	Modification of Biocorrosion and Cellular Response of Magnesium Alloy WE43 by Multiaxial Deformation. <i>Metals</i> , 2022, 12, 105.	1.0	1
265	Influence of faceting-roughening on triple-junction migration in zinc. <i>International Journal of Materials Research</i> , 2022, 96, 1147-1151.	0.1	1
266	The Grain Structure of Vacuum Arc Deposited Co Thin Films. <i>Materials Science Forum</i> , 1998, 294-296, 787-790.	0.3	0
267	Diffusion Degradation of Carbon Coatings on Various Metallic Substrates. <i>Defect and Diffusion Forum</i> , 2003, 216-217, 323-330.	0.4	0
268	High-Pressure Influence on the Kinetics of Grain Boundary Segregation in the Cuâ€“Bi System. <i>Defect and Diffusion Forum</i> , 2006, 258-260, 390-396.	0.4	0
269	Shape of Moving Grain Boundary and its Influence on Grain Boundary Motion in Zinc. <i>Defect and Diffusion Forum</i> , 2006, 249, 183-188.	0.4	0
270	Evaluation of the Coverage Pattern on the Fracture Surface of Bi-Embrittled Cu Grain Boundaries by Means of Auger Electron Spectroscopy. <i>Defect and Diffusion Forum</i> , 2008, 273-276, 643-648.	0.4	0

#	ARTICLE	IF	CITATIONS
271	The Influence of Quenching Baths on Grain Boundary Wetting Transition in Sn-25 at% In alloy. Defect and Diffusion Forum, 2008, 273-276, 649-654.	0.4	0
272	Preface to the special section on high-temperature capillarity. Journal of Materials Science, 2016, 51, 1669-1670.	1.7	0
273	Diffusion in Materials Science and Technology. , 2018, , 261-275.		0
274	Phase Transformations in the Al ₃ Mg Alloys Driven by High-Pressure Torsion. Physica Status Solidi (B): Basic Research, 2021, 258, 2100210.	0.7	0
275	Grain boundary faceting close to the $\Sigma 3$ coincidence misorientation in copper. International Journal of Materials Research, 2022, 95, 939-944.	0.1	0