Eugen Rabkin

List of Publications by Year in descending order

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		109137	133063
150	4,339	35	59
papers	citations	h-index	g-index
152	152	152	3439
all docs	docs citations	times ranked	citing authors

#	Article	IF	CITATIONS
1	Diffusion-induced recrystallization during the early stages of solid-state dewetting of Ni-Pt bilayers. Acta Materialia, 2022, 225, 117537.	3.8	6
2	Structure Refinement and Fragmentation of Precipitates under Severe Plastic Deformation: A Review. Materials, 2022, 15, 601.	1.3	20
3	Solid state infiltration of porous steel with aluminium by the forcefill process. International Journal of Materials Research, 2022, 96, 1193-1195.	0.1	O
4	Thermal stability of polycrystalline nanowires. International Journal of Materials Research, 2022, 96, 1119-1123.	0.1	2
5	Solid-state dewetting of thin Au films on oxidized surface of biomedical TiAlV alloy. Acta Materialia, 2022, 231, 117919.	3.8	10
6	Selfâ∈Healing of Crystal Voids in Double Perovskite Nanocrystals Is Related to Surface Passivation. Advanced Functional Materials, 2022, 32, .	7.8	6
7	Solid state dewetting of Ni-Co bilayers on sapphire during slow heating and cooling. Acta Materialia, 2022, 233, 117984.	3.8	3
8	Grain boundary self-diffusion in α-iron of different purity: effect of dislocation enhanced diffusion. International Journal of Materials Research, 2022, 95, 945-952.	0.1	2
9	The effect of exposure to elevated temperatures on the microstructure and hardness of Mg–Ca–Zn alloy. International Journal of Materials Research, 2022, 97, 64-71.	0.1	0
10	Imaging the facet surface strain state of supported multi-faceted Pt nanoparticles during reaction. Nature Communications, 2022, 13, .	5.8	11
11	Microstructure and mechanical properties of Mg–GdH2 composite prepared by internal hydrogenation. Journal of Materials Science, 2022, 57, 11649-11662.	1.7	4
12	Magnesium- and intermetallic alloys-based hydrides for energy storage: modelling, synthesis and properties. Progress in Energy, 2022, 4, 032007.	4.6	29
13	Thermal ridges – Formation of hillock-like structures in deformed bulk nickel. Acta Materialia, 2022, 237, 118151.	3.8	2
14	Recovery, recrystallization and diffusion in cold-rolled Ni. International Journal of Materials Research, 2021, 106, 554-564.	0.1	7
15	Gradient bandgap narrowing in severely deformed ZnO nanoparticles. Materials Research Letters, 2021, 9, 58-64.	4.1	13
16	The role of defects in solid state dewetting of ultrathin Ag film on Si(557). Scripta Materialia, 2021, 194, 113655.	2.6	2
17	Inâ€situ force measurement during nanoâ€indentation combined with Laue microdiffraction. Nano Select, 2021, 2, 99-106.	1.9	2
18	Simultaneous Multi-Bragg Peak Coherent X-ray Diffraction Imaging. Crystals, 2021, 11, 312.	1.0	6

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19	The impact of alloying on defect-free nanoparticles exhibiting softer but tougher behavior. Nature Communications, 2021, 12, 2515.	5.8	16
20	A convolutional neural network for defect classification in Bragg coherent X-ray diffraction. Npj Computational Materials, 2021, 7, .	3.5	9
21	Grain boundary grooving in a bicrystal with passivation coating. Continuum Mechanics and Thermodynamics, 2021, 33, 2431-2451.	1.4	0
22	When More Is Less: Plastic Weakening of Single Crystalline Ag Nanoparticles by the Polycrystalline Au Shell. ACS Nano, 2021, 15, 14061-14070.	7.3	5
23	Size and shape effects on the strength of platinum nanoparticles. Journal of Materials Science, 2021, 56, 18300-18312.	1.7	12
24	Twin boundary migration in an individual platinum nanocrystal during catalytic CO oxidation. Nature Communications, 2021, 12, 5385.	5.8	14
25	Thermodynamics and kinetics of surface/interface segregation in the stressed ultrathin alloy film on inert substrate. Applied Surface Science, 2021, 562, 150050.	3.1	0
26	The Grain Boundary Wetting Phenomena in the Ti-Containing High-Entropy Alloys: A Review. Metals, 2021, 11, 1881.	1.0	54
27	Grain Boundary Wetting Phenomena in High Entropy Alloys Containing Nitrides, Carbides, Borides, Silicides, and Hydrogen: A Review. Crystals, 2021, 11, 1540.	1.0	13
28	Grain Boundary Wetting by a Second Solid Phase in the High Entropy Alloys: A Review. Materials, 2021, 14, 7506.	1.3	23
29	Hillocks formation in the Cr-doped Ni thin films: growth mechanisms and the nano-marker experiment. Journal of Materials Science, 2020, 55, 2588-2603.	1.7	4
30	Faceting of Twin Grain Boundaries in Highâ€Purity Copper Subjected to High Pressure Torsion. Advanced Engineering Materials, 2020, 22, 1900589.	1.6	4
31	Pseudoelasticity of Metal Nanoparticles Is Caused by Their Ultrahigh Strength. Advanced Functional Materials, 2020, 30, 1807554.	7.8	13
32	Metal hetero-diffusion along the metal-ceramic interfaces: A case study of Au diffusion along the Ni-sapphire interface. Acta Materialia, 2020, 186, 242-249.	3.8	16
33	The effect of stress on surface and interface segregation in thin alloy films on inert substrates. Journal of Materials Science, 2020, 55, 3629-3635.	1.7	7
34	Architectured hybrid conductors: Aluminium with embedded copper helix. Materials and Design, 2020, 187, 108398.	3.3	13
35	Stabilization of ultrafine-grained microstructure in high-purity copper by gas-filled pores produced by severe plastic deformation. Scripta Materialia, 2020, 178, 29-33.	2.6	11
36	Plastic Forming of Metals at the Nanoscale: Interdiffusion-Induced Bending of Bimetallic Nanowhiskers. ACS Nano, 2020, 14, 11691-11699.	7.3	3

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37	Oxidation induced cubic-tetragonal phase transformation in titanium hydride powders. International Journal of Hydrogen Energy, 2020, 45, 25043-25053.	3.8	5
38	Interdiffusion in bimetallic Au–Fe nanowhiskers controlled by interface mobility. Acta Materialia, 2020, 197, 137-145.	3.8	9
39	Giant shape- and size-dependent compressive strength of molybdenum nano- and microparticles. Acta Materialia, 2020, 198, 72-84.	3.8	26
40	Microstructure evolution of thin nickel films with embedded chromium oxide nanoparticles. Acta Materialia, 2020, 201, 561-571.	3.8	2
41	Continuous scanning for Bragg coherent X-ray imaging. Scientific Reports, 2020, 10, 12760.	1.6	6
42	The Effect of a Small Copper Addition on the Electrical Conductivity of Aluminum. Advanced Engineering Materials, 2020, 22, 2000058.	1.6	4
43	Relative grain boundary energies in ultrafine grain Ni obtained by high pressure torsion. Scripta Materialia, 2020, 182, 90-93.	2.6	13
44	Pores shrinkage and growth in polycrystalline hollow nanoparticles and nanotubes. Scripta Materialia, 2020, 180, 93-96.	2.6	1
45	Grain growth stagnation in thin films due to shear-coupled grain boundary migration. Scripta Materialia, 2020, 180, 83-87.	2.6	10
46	Multi-wavelength Bragg coherent X-ray diffraction imaging of Au particles. Journal of Applied Crystallography, 2020, 53, 170-177.	1.9	9
47	Phase transformations observed at the interfaces between crystalline grains in pure metals. Nature, 2020, 579, 350-351.	13.7	4
48	The role of interface diffusion in solid state dewetting of thin films: The nano-marker experiment. Acta Materialia, 2019, 177, 121-130.	3.8	16
49	The effect of defects on strength of gold microparticles. Scripta Materialia, 2019, 171, 83-86.	2.6	14
50	Ultrafine-Grained Magnesium Alloys for Hydrogen Storage Obtained by Severe Plastic Deformation. Frontiers in Materials, 2019, 6, .	1.2	17
51	Magnesium based materials for hydrogen based energy storage: Past, present and future. International Journal of Hydrogen Energy, 2019, 44, 7809-7859.	3.8	460
52	Improving the thermal stability of nickel thin films on sapphire by a minor alloying addition of gold. Applied Surface Science, 2019, 484, 1070-1079.	3.1	17
53	Effect of SPD Processing on the Strength and Conductivity of AA6061 Alloy. Advanced Engineering Materials, 2019, 21, 1801370.	1.6	14
54	The role of surface coarsening and sintering during thermal decomposition of titanium hydride. International Journal of Hydrogen Energy, 2019, 44, 6045-6054.	3.8	12

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55	Grain growth and solid-state dewetting of Bi-Crystal Ni-Fe thin films on sapphire. Acta Materialia, 2019, 168, 237-249.	3.8	17
56	Engineering of hollow AlAu2 nanoparticles on sapphire by solid state dewetting and oxidation of Al. Materials and Design, 2019, 165, 107557.	3.3	10
57	Hydrogenation effect on microstructure and mechanical properties of Mg-Gd-Y-Zn-Zr alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2018, 719, 171-177.	2.6	13
58	Whiskers growth in thin passivated Au films. Acta Materialia, 2018, 149, 154-163.	3.8	37
59	Effect of equal channel angular pressing (ECAP) on hydrogen storage properties of commercial magnesium alloy AZ61. International Journal of Hydrogen Energy, 2018, 43, 4371-4380.	3.8	35
60	Improving hydrogen storage performance of AZ31 Mg alloy by equal channel angular pressing and additives. Journal of Alloys and Compounds, 2018, 743, 437-447.	2.8	34
61	Hydrogen storage kinetics: The graphene nanoplatelet size effect. Carbon, 2018, 130, 369-376.	5.4	32
62	Anomalous diffusion along metal/ceramic interfaces. Nature Communications, 2018, 9, 5251.	5.8	51
63	Nickel nanoparticles set a new record of strength. Nature Communications, 2018, 9, 4102.	5.8	74
64	Plastic flow and microstructural instabilities during high-pressure torsion of Cu/ZnO composites. Materials Characterization, 2018, 145, 389-401.	1.9	23
65	Thermodynamic model of porosity stabilization in polycrystalline solids. Scripta Materialia, 2018, 156, 75-79.	2.6	1
66	Generation and healing of porosity in high purity copper by high-pressure torsion. Materials Characterization, 2018, 145, 1-9.	1.9	14
67	Chemically-induced solid-state dewetting of thin Au films. Acta Materialia, 2017, 129, 300-311.	3.8	20
68	The effect of bismuth on microstructure evolution of ultrafine grained copper. Materials Letters, 2017, 199, 156-159.	1.3	9
69	Tuning the thermal conductivity of hydrogenated porous magnesium hydride composites with the aid of carbonaceous additives. International Journal of Hydrogen Energy, 2017, 42, 22395-22405.	3.8	24
70	Grain boundaries effects on hole morphology and growth during solid state dewetting of thin films. Scripta Materialia, 2017, 134, 115-118.	2.6	6
71	3D Imaging of a Dislocation Loop at the Onset of Plasticity in an Indented Nanocrystal. Nano Letters, 2017, 17, 6696-6701.	4.5	37
72	Shape Memory: Selfâ€Healing and Shape Memory Effects in Gold Microparticles through the Defectsâ€Mediated Diffusion (Adv. Sci. 8/2017). Advanced Science, 2017, 4, .	5.6	0

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73	Selfâ∈Healing and Shape Memory Effects in Gold Microparticles through the Defectsâ∈Mediated Diffusion. Advanced Science, 2017, 4, 1700159.	5.6	19
74	Solid state dewetting of polycrystalline Mo film on sapphire. Acta Materialia, 2017, 139, 51-61.	3.8	15
75	Tuning Mg hydriding kinetics with nanocarbons. Journal of Alloys and Compounds, 2017, 725, 616-622.	2.8	20
76	Annealing-induced recovery of indents in thin Au(Fe) bilayer films. Beilstein Journal of Nanotechnology, 2016, 7, 2088-2099.	1.5	4
77	Cross-Split of Dislocations: An Athermal and Rapid Plasticity Mechanism. Scientific Reports, 2016, 6, 25966.	1.6	19
78	Phase Transformations in Au-Fe Particles and Thin Films: Size Effects at the Micro- and Nano-scales. Jom, 2016, 68, 1335-1342.	0.9	10
79	Formation of hollow gold-silver nanoparticles through the surface diffusion induced bulk intermixing. Acta Materialia, 2016, 117, 188-196.	3.8	11
80	Coherency strain reduction in particles on a substrate as a driving force for solute segregation. Scripta Materialia, 2016, 122, 89-92.	2.6	4
81	The equilibrium crystal shape of iron. Scripta Materialia, 2016, 123, 109-112.	2.6	16
82	Hydrogen storage and thermal transport properties of pelletized porous Mg-2 wt.% multiwall carbon nanotubes and Mg-2 wt.% graphite composites. International Journal of Hydrogen Energy, 2016, 41, 14461-14474.	3.8	54
83	Hydrogen storage and spillover kinetics in carbon nanotube-Mg composites. International Journal of Hydrogen Energy, 2016, 41, 2814-2819.	3.8	32
84	Encapsulation by segregation – A multifaceted approach to gold segregation in iron particles on sapphire. Acta Materialia, 2016, 102, 342-351.	3.8	13
85	Persistence of ultrafast atomic diffusion paths in recrystallizing ultrafine grained Ni. Scripta Materialia, 2015, 101, 91-94.	2.6	15
86	Mechano-stimulated equilibration of gold nanoparticles on sapphire. Scripta Materialia, 2015, 107, 149-152.	2.6	26
87	On the nucleation of pores during the nanoscale Kirkendall effect. Materials Letters, 2015, 161, 508-510.	1.3	16
88	Mechanisms of solid-state dewetting of thin Au films in different annealing atmospheres. Acta Materialia, 2015, 83, 91-101.	3.8	72
89	A model of Kirkendall hollowing of core–shell nanowires and nanoparticles controlled by short-circuit diffusion. Acta Materialia, 2015, 83, 180-186.	3.8	17
90	The kinetics of hollowing of Ag–Au core–shell nanowhiskers controlled by short-circuit diffusion. Acta Materialia, 2015, 82, 145-154.	3.8	6

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91	Solid state dewetting and stress relaxation in a thin single crystalline Ni film on sapphire. Acta Materialia, 2014, 74, 30-38.	3.8	38
92	Grain boundary grooving in thin films revisited: The role of interface diffusion. Acta Materialia, 2014, 69, 386-396.	3.8	7 5
93	β-TCP–polylactide composite scaffolds with high strength and enhanced permeability prepared by a modified salt leaching method. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 32, 89-98.	1.5	50
94	Grain boundary migration and grooving in thin 3-D systems. Acta Materialia, 2014, 65, 194-206.	3.8	16
95	The effect of surface contact conditions on grain boundary interdiffusion in a semi-infinite bicrystal. Philosophical Magazine, 2014, 94, 3398-3412.	0.7	2
96	Core(Fe)–Shell(Au) Nanoparticles Obtained from Thin Fe/Au Bilayers Employing Surface Segregation. ACS Nano, 2014, 8, 10687-10693.	7.3	45
97	The role of grain boundary sliding in solid-state dewetting of thin polycrystalline films. Scripta Materialia, 2014, 82, 33-36.	2.6	26
98	Effect of recrystallization on diffusion in ultrafine-grained Ni. Acta Materialia, 2014, 69, 314-325.	3.8	26
99	Solid-state dewetting of thin iron films on sapphire substrates controlled by grain boundary diffusion. Acta Materialia, 2013, 61, 3148-3156.	3.8	54
100	Metastable porosity in thin polycrystalline films. Scripta Materialia, 2013, 69, 764-767.	2.6	9
101	Grain growth inhibition in thin nanocrystalline Au films by grain boundary diffusion and oxidation of Ti. Acta Materialia, 2013, 61, 529-539.	3.8	8
102	On the role of Fe in the growth of single crystalline heteroepitaxial Au thin films on sapphire. Acta Materialia, 2013, 61, 4113-4126.	3.8	27
103	Sintering of spherical particles of two immiscible phases controlled by surface and interphase boundary diffusion. Acta Materialia, 2013, 61, 2607-2616.	3.8	12
104	Phase transformations in Au(Fe) nano- and microparticles obtained by solid state dewetting of thin Au–Fe bilayer films. Acta Materialia, 2013, 61, 5130-5143.	3.8	30
105	Capillary-driven interdiffusion along interphase boundaries in solids. Philosophical Magazine, 2013, 93, 2033-2043.	0.7	4
106	Accelerated Diffusion and Phase Transformations in Co& ndash; Cu Alloys Driven by the Severe Plastic Deformation. Materials Transactions, 2012, 53, 63-71.	0.4	117
107	Mg3Cd: A model alloy for studying the destabilization of magnesium hydride. International Journal of Hydrogen Energy, 2012, 37, 10724-10732.	3.8	37
108	The effect of evaporation on size and shape evolution of faceted gold nanoparticles on sapphire. Acta Materialia, 2012, 60, 261-268.	3.8	24

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109	Particle rearrangement during sintering of heterogeneous powder mixtures: A combined experimental and theoretical study. Acta Materialia, 2012, 60, 123-130.	3.8	13
110	Anisotropic hole growth during solid-state dewetting of single-crystal Au–Fe thin films. Acta Materialia, 2012, 60, 3047-3056.	3.8	66
111	Deformation-driven formation of equilibrium phases in the Cu–Ni alloys. Journal of Materials Science, 2012, 47, 360-367.	1.7	63
112	Effects of focused-ion-beam irradiation and prestraining on the mechanical properties of FCC Au microparticles on a sapphire substrate. Journal of Materials Research, 2011, 26, 1653-1661.	1.2	29
113	Size effect in compression of single-crystal gold microparticles. Acta Materialia, 2011, 59, 5202-5215.	3.8	136
114	Grain boundary interdiffusion and stresses in thin polycrystalline films. Journal of Materials Science, 2011, 46, 4343-4348.	1.7	13
115	Theory of the Kirkendall effect during grain boundary interdiffusion. Acta Materialia, 2011, 59, 1389-1399.	3.8	58
116	Size and shape evolution of faceted bicrystal nanoparticles of gold on sapphire. Acta Materialia, 2011, 59, 2872-2881.	3.8	38
117	Effect of rapid solidification on hydrogen solubility in Mg-rich Mg–Ni alloys. International Journal of Hydrogen Energy, 2011, 36, 5388-5399.	3.8	34
118	Sintering of fully faceted crystalline particles. International Journal of Materials Research, 2010, 101, 75-83.	0.1	9
119	Surface Diffusion Controlled Formation of Nickel Silicides in Silicon Nanowires. Journal of Electronic Materials, 2010, 39, 365-370.	1.0	27
120	Ultraâ∈Fast Atomic Transport in Severely Deformed Materialsâ∈"A Pathway to Applications?. Advanced Engineering Materials, 2010, 12, 779-785.	1.6	24
121	Hydrogen storage properties of as-synthesized and severely deformed magnesium – multiwall carbon nanotubes composite. International Journal of Hydrogen Energy, 2010, 35, 5471-5478.	3.8	50
122	A model of grain boundary diffusion in polycrystals with evolving microstructure. International Journal of Materials Research, 2009, 100, 530-535.	0.1	12
123	Improving hydrogen storage properties of magnesium based alloys by equal channel angular pressing. International Journal of Hydrogen Energy, 2009, 34, 6320-6324.	3.8	103
124	Grain growth in porous two-dimensional nanocrystalline materials. Journal of Materials Science, 2008, 43, 5068-5075.	1.7	19
125	Nanohardness of molybdenum in the vicinity of grain boundaries and triple junctions. Acta Materialia, 2008, 56, 5640-5652.	3.8	67
126	The effect of equal channel angular pressing on hydrogen storage properties of a eutectic Mg–Ni alloy. Journal of Alloys and Compounds, 2007, 436, 99-106.	2.8	97

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127	Short-circuit diffusion in an ultrafine-grained copper–zirconium alloy produced by equal channel angular pressing. Acta Materialia, 2007, 55, 5968-5979.	3.8	126
128	A scanning force microscopy study of grain boundary energy in copper subjected to equal channel angular pressing. Acta Materialia, 2007, 55, 6681-6689.	3.8	51
129	Onset of Plasticity in Gold Nanopillar Compression. Nano Letters, 2007, 7, 101-107.	4.5	77
130	Softening of nanostructured Al–Zn and Al–Mg alloys after severe plastic deformation. Acta Materialia, 2006, 54, 3933-3939.	3.8	161
131	Grain boundary grooving in molybdenum bicrystals. Journal of Materials Science, 2006, 41, 5151-5160.	1.7	23
132	Inter-Nanoparticle Bonds in Agglomerates Studied by Nanoindentation. Advanced Materials, 2006, 18, 2028-2030.	11.1	42
133	Correlation between grain boundary energy and geometry in Ni-rich NiAl. Acta Materialia, 2005, 53, 3795-3805.	3.8	58
134	Thermal stability and strength of polycrystalline nanowires. Materialwissenschaft Und Werkstofftechnik, 2005, 36, 505-508.	0.5	3
135	Effect of grain boundary faceting on kinetics of grain growth and microstructure evolution. Journal of Materials Science, 2005, 40, 875-879.	1.7	34
136	Nanohardness and Crack Resistance of HTS YBCO Thin Films. IEEE Transactions on Applied Superconductivity, 2005, 15, 3585-3588.	1.1	8
137	The effect of ball milling and equal channel angular pressing on the hydrogen absorption/desorption properties of Mg–4.95 wt% Zn–0.71 wt% Zr (ZK60) alloy. Acta Materialia, 2004, 52, 405-414.	3.8	171
138	Scanning probe microscopy study of grain boundary migration in NiAl. Acta Materialia, 2004, 52, 4953-4959.	3.8	20
139	Grain boundary self-diffusion in α-iron of different purity: effect of dislocation enhanced diffusion. International Journal of Materials Research, 2004, 95, 945-952.	0.8	44
140	Theory of nanoindentation creep controlled by interfacial diffusion. Scripta Materialia, 2003, 48, 1475-1481.	2.6	14
141	Modeling of aluminum via filling by forcefill. Journal of Applied Physics, 2003, 93, 5812-5815.	1.1	12
142	Generation of Electrical Currents and Magnetic Fields by Grain Boundary Motion. Journal of Materials Science, 2002, 10, 279-285.	1.2	6
143	Grain growth in thin metallic films. Acta Materialia, 2001, 49, 673-681.	3.8	49
144	Title is missing!. Journal of Materials Science, 2001, 9, 55-63.	1.2	45

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145	Structure and composition of laser produced WC alloyed layers on M2 high-speed steel. Journal of Materials Science Letters, 2001, 20, 1917-1920.	0.5	3
146	On the grain size dependent solute and particle drag. Scripta Materialia, 2000, 42, 1199-1206.	2.6	49
147	The inclination dependence of gold tracer diffusion along a Σ3 twin grain boundary in copper. Acta Materialia, 1999, 47, 1231-1239.	3.8	67
148	Theory of Triple Junctions Mobility in Crystals with Impurities. Journal of Materials Science, 1999, 7, 297-305.	1.2	6
149	Diffusion along the Grain Boundaries in Crystals with Dislocations. Journal of Materials Science, 1998, 6, 197-203.	1.2	25
150	Grain Boundary Diffusion and Segregation in the Solid State Phase Transformations. Materials Research Society Symposia Proceedings, 1998, 527, 255.	0.1	0