

# Roland WÃ¼rschum

## List of Publications by Year in descending order

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167  
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4,565  
citations

117619

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118840

62  
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170  
all docs

170  
docs citations

170  
times ranked

3423  
citing authors

#	ARTICLE	IF	CITATIONS
1	Charge-Induced Reversible Strain in a Metal. <i>Science</i> , 2003, 300, 312-315.	12.6	485
2	Structure of nanometer-sized polycrystalline iron investigated by positron lifetime spectroscopy. <i>Physical Review B</i> , 1988, 38, 9545-9554.	3.2	234
3	Oxygen diffusion in ultrafine grained monoclinic ZrO <sub>2</sub> . <i>Journal of Applied Physics</i> , 1999, 85, 7646-7654.	2.5	183
4	Simultaneous Study of Vacancy Formation and Migration at High Temperatures in B <sub>2</sub> -Type Fe Aluminides. <i>Physical Review Letters</i> , 1995, 75, 97-100.	7.8	179
5	Nanocrystalline materials: a way to solids with tunable electronic structures and properties?. <i>Acta Materialia</i> , 2001, 49, 737-745.	7.9	160
6	Atomic Structure and Structural Stability of Sc <sub>75</sub> Fe <sub>25</sub> Nanoglasses. <i>Nano Letters</i> , 2012, 12, 458-463.	9.1	143
7	Diffusion in Nanocrystalline Metals and Alloys – A Status Report. <i>Advanced Engineering Materials</i> , 2003, 5, 365-372.	3.5	112
8	Magnetic properties of nanocrystalline nickel. <i>Scripta Materialia</i> , 1992, 1, 523-529.	0.5	95
9	Thermal vacancies and positron-lifetime measurements in Fe <sub>76.3</sub> Al <sub>23.7</sub> . <i>Physical Review B</i> , 1990, 41, 11869-11874.	3.2	92
10	Effect of dipolar and exchange interactions on magnetic blocking of maghemite nanoparticles. <i>Journal of Magnetism and Magnetic Materials</i> , 2011, 323, 1998-2004.	2.3	92
11	Thermal formation of vacancies in TiAl. <i>Physical Review B</i> , 1994, 49, 6457-6461.	3.2	81
12	Positron lifetime spectroscopy in nanocrystalline iron. <i>Physics Letters, Section A: General, Atomic and Solid State Physics</i> , 1987, 119, 370-374.	2.1	80
13	Characterization of radiation-induced lattice vacancies in intermetallic compounds by means of positron-lifetime studies. <i>Physical Review B</i> , 1996, 54, 849-856.	3.2	78
14	Absolute concentration of free volume-type defects in ultrafine-grained Fe prepared by high-pressure torsion. <i>Scripta Materialia</i> , 2010, 63, 452-455.	5.2	77
15	Nanometre-sized solids, their structure and properties. <i>Journal of the Less Common Metals</i> , 1988, 140, 161-169.	0.8	68
16	Time-Differential Length Change Measurements for Thermal Defect Investigations: Intermetallic B <sub>2</sub> -FeAl and B <sub>2</sub> -NiAl Compounds, a Case Study. <i>Physical Review Letters</i> , 1999, 82, 948-951.	7.8	68
17	High-temperature atomic defect properties and diffusion processes in intermetallic compounds. <i>Intermetallics</i> , 1999, 7, 277-287.	3.9	65
18	Distribution of internal strains in nanocrystalline Pd studied by x-ray diffraction. <i>Journal of Applied Physics</i> , 1997, 81, 7186-7192.	2.5	64

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19	Thermal Vacancy Formation and Self-Diffusion in Intermetallic Fe <sub>3</sub> Si Nanocrystallites of Nanocomposite Alloys. <i>Physical Review Letters</i> , 1997, 79, 4918-4921.	7.8	64
20	Bulk Nanostructured Functional Materials By Severe Plastic Deformation. <i>Advanced Engineering Materials</i> , 2010, 12, 692-700.	3.5	64
21	Direct Experimental Determination of Grain Boundary Excess Volume in Metals. <i>Physical Review Letters</i> , 2012, 108, 055504.	7.8	62
22	Self-diffusion in high-density nanocrystalline Fe. <i>Scripta Materialia</i> , 1999, 12, 681-684.	0.5	59
23	Defects in semiconductors after electron irradiation or in high-temperature thermal equilibrium, as studied by positron annihilation. <i>Journal of Physics Condensed Matter</i> , 1989, 1, SA33-SA48.	1.8	58
24	Interfacial free volumes in ultra-fine grained metals prepared by severe plastic deformation, by spark erosion, or by crystallization of amorphous alloys. <i>Scripta Metallurgica Et Materialia</i> , 1991, 25, 2451-2456.	1.0	51
25	Grain boundary excess volume and defect annealing of copper after high-pressure torsion. <i>Acta Materialia</i> , 2014, 68, 189-195.	7.9	51
26	Magnetic properties of high purity nanocrystalline nickel. <i>Scripta Materialia</i> , 1995, 6, 925-928.	0.5	50
27	Microstructure and vacancy-type defects in high-pressure torsion deformed Al-Cu-Mg-Mn alloy. <i>Scripta Materialia</i> , 2009, 61, 383-386.	5.2	48
28	Spin-glass freezing of maghemite nanoparticles prepared by microwave plasma synthesis. <i>Journal of Applied Physics</i> , 2012, 111, .	2.5	47
29	Nanocrystalline Metals and Semiconductors Studied by Positron Lifetime Spectroscopy. <i>Physica Status Solidi A</i> , 1987, 102, 119-126.	1.7	46
30	Electrically Tunable Resistance of a Metal. <i>Physical Review Letters</i> , 2006, 96, 156601.	7.8	41
31	Structural free volumes and systematics of positron lifetimes in quasicrystalline decagonal and adjacent crystalline phases of Al-Ni-Co, Al-Cu-Co, and Al-Ni-Fe alloys. <i>Physical Review B</i> , 1995, 52, 6411-6416.	3.2	40
32	Sol-gel synthesis and characterization of single-phase Ni ferrite nanoparticles dispersed in SiO <sub>2</sub> matrix. <i>Journal of Alloys and Compounds</i> , 2010, 493, 385-390.	5.5	38
33	Study of an Order-Disorder Phase Transition on an Atomic Scale: The Example of Decagonal Al-Ni-Co Quasicrystals. <i>Physical Review Letters</i> , 2004, 92, 127403.	7.8	36
34	Positron trapping model for point defects and grain boundaries in polycrystalline materials. <i>Physical Review B</i> , 2009, 79, .	3.2	36
35	Adsorption-driven tuning of the electrical resistance of nanoporous gold. <i>Journal of Applied Physics</i> , 2010, 108, .	2.5	34
36	Combined volumetric, energetic and microstructural defect analysis of ECAP-processed nickel. <i>Acta Materialia</i> , 2016, 103, 396-406.	7.9	34

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37	Atomic defects in hexagonal tungsten carbide studied by positron annihilation. <i>Physical Review B</i> , 2000, 61, 5945-5948.	3.2	32
38	Thermal Formation of Vacancies in Intermetallic Compounds. <i>Materials Science Forum</i> , 1992, 105-110, 439-450.	0.3	31
39	<i>In Situ</i> Probing of Fast Defect Annealing in Cu and Ni with a High-Intensity Positron Beam. <i>Physical Review Letters</i> , 2010, 105, 146101.	7.8	31
40	The Structure of Nanocrystalline Metals Investigated by Positron Lifetime Spectroscopy. <i>Materials Science Forum</i> , 1987, 15-18, 955-962.	0.3	30
41	Diffusion-reaction model for the trapping of positrons in grain boundaries. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1996, 73, 1489-1501.	0.6	30
42	Diffusion and free volumes in nanocrystalline Pd. <i>Scripta Materialia</i> , 1995, 6, 869-872.	0.5	29
43	Preparation and positron lifetime spectroscopy of nanocrystalline metals. <i>Scripta Materialia</i> , 1993, 2, 55-62.	0.5	28
44	Thermal vacancy formation and positron-vacancy interaction in Ti3Al at high temperatures. <i>Journal of Applied Physics</i> , 1996, 80, 724-728.	2.5	28
45	Interface structure studies by atomic resolution electron microscopy, order-disorder phenomena and atomic diffusion in gas-phase synthesized nanocrystalline solids. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2000, 286, 24-33.	5.6	28
46	Tuneable magnetic susceptibility of nanocrystalline palladium. <i>Applied Physics Letters</i> , 2006, 88, 253103.	3.3	27
47	High-temperature studies of grain boundaries in ultrafine grained alloys by means of positron lifetime. <i>Physical Review B</i> , 2000, 62, 12021-12027.	3.2	26
48	Magneto-ionic Switching of Superparamagnetism. <i>Small</i> , 2019, 15, e1904523.	10.0	26
49	Recrystallization kinetics of ultrafine-grained Ni studied by dilatometry. <i>Journal of Alloys and Compounds</i> , 2011, 509, S309-S311.	5.5	23
50	Magnetic after-effect and approach to ferromagnetic saturation in nanocrystalline iron. <i>Journal of Magnetism and Magnetic Materials</i> , 1995, 146, 117-122.	2.3	22
51	Correlation between the kinetics of the amorphous-to-nanocrystalline transformation and the diffusion in alloys. <i>Journal of Applied Physics</i> , 1996, 80, 747-751.	2.5	22
52	Self-Diffusion in Nanocrystalline Fe and Fe-Rich Alloys. <i>Defect and Diffusion Forum</i> , 2001, 194-199, 1199-1204.	0.4	21
53	Positrons as probes in C60fullerites. <i>Physical Review B</i> , 1992, 45, 12164-12166.	3.2	20
54	Correlation between Interfacial Structure, Tracer Diffusion and Crystal Growth in Nanocrystalline Metals and Alloys. <i>Defect and Diffusion Forum</i> , 1997, 143-147, 1463-1468.	0.4	20

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55	18O Diffusion in nano crystalline ZrO <sub>2</sub> . Scripta Materialia, 1999, 12, 871-874.	0.5	20
56	Fe diffusion in Nanocrystalline alloys and the influence of Amorphous Intergranular Layers. Scripta Materialia, 1999, 12, 555-558.	0.5	19
57	Magnetization of Fe-oxide based nanocomposite tuned by surface charging. Physica Status Solidi - Rapid Research Letters, 2011, 5, 150-152.	2.4	19
58	Dilatometry: a powerful tool for the study of defects in ultrafine-grained metals. Journal of Materials Science, 2012, 47, 7921-7925.	3.7	19
59	Free volumes in bulk nanocrystalline metals studied by the complementary techniques of positron annihilation and dilatometry. Physica B: Condensed Matter, 2012, 407, 2670-2675.	2.7	19
60	Thermal Vacancy Formation in Ni <sub>3</sub> Al and <sup>3</sup> TiAl Compounds Studied by Positron Lifetime and Nearest-Neighbour Bond Models. Materials Science Forum, 1995, 175-178, 295-298.	0.3	18
61	Charging-induced defect formation in Li <sub>x</sub> CoO <sub>2</sub> battery cathodes studied by positron annihilation spectroscopy. Applied Physics Letters, 2013, 102, .	3.3	18
62	Charging of lithium cobalt oxide battery cathodes studied by means of magnetometry. Solid State Ionics, 2016, 293, 64-71.	2.7	18
63	Operando magnetometry on Li <sub>x</sub> CoO <sub>2</sub> during charging/discharging. Journal of Solid State Electrochemistry, 2016, 20, 1491-1496.	2.5	18
64	Structure and glass transition of amorphous Zr <sub>65</sub> Cu <sub>17.5</sub> Ni <sub>10</sub> Al <sub>7.5</sub> studied by positron lifetime. Solid State Communications, 1998, 105, 221-224.	1.9	17
65	High temperature Mössbauer effect study of Fe <sub>90</sub> Zr <sub>7</sub> B <sub>3</sub> nanocrystalline alloy. Journal of Physics Condensed Matter, 2005, 17, 3183-3196.	1.8	17
66	Electrochemical cell for <i>in situ</i> electrodeposition of magnetic thin films in a superconducting quantum interference device magnetometer. Review of Scientific Instruments, 2015, 86, 063903.	1.3	17
67	Interface diffusion and amorphous intergranular layers in nanocrystalline Fe <sub>90</sub> Zr <sub>7</sub> B <sub>3</sub> . Journal of Applied Physics, 2004, 95, 5075-5080.	2.5	16
68	SQUID magnetometry combined with <i>in situ</i> cyclic voltammetry: A case study of tunable magnetism of $\text{Fe}_2\text{O}_3$ nanoparticles. Journal of Magnetism and Magnetic Materials, 2013, 329, 43-48.	2.3	16
69	Direct measurement of vacancy relaxation by dilatometry. Applied Physics Letters, 2016, 109, .	3.3	16
70	Continuous monitoring of the bulk oxidation states in Li <sub>x</sub> Ni <sub>1/3</sub> Mn <sub>1/3</sub> Co <sub>1/3</sub> O <sub>2</sub> during charging and discharging. Applied Physics Letters, 2016, 109, .	3.3	16
71	Reply to the comment by S. Dannefaer et al. on the paper of H. E. Schaefer et al. on "amorphous hydrogenated silicon studied by positron lifetime spectroscopy". Applied Physics A: Solids and Surfaces, 1987, 43, 295-296.	1.4	15
72	Phase transformation and interface structure of nanocrystalline ZrO <sub>2</sub> . Scripta Materialia, 1993, 3, 225-230.	0.5	15

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73	Thermal vacancy formation and D <sub>03</sub> ordering in nanocrystalline intermetallic (Fe <sub>3</sub> Si) <sub>95</sub> Nb <sub>5</sub> . Physical Review B, 2001, 63, .	3.2	15
74	Electrochemically Tunable Resistance of Nanoporous Platinum Produced by Dealloying. Langmuir, 2016, 32, 7757-7764.	3.5	15
75	Vacancy studies in melt-spun shape memory alloys by positron lifetime measurements. Scripta Metallurgica Et Materialia, 1991, 25, 1875-1878.	1.0	14
76	Free volumes and thermal stability of electro-deposited nanocrystalline Pd. Scripta Materialia, 1997, 9, 615-618.	0.5	14
77	Perturbed-angular-correlation study of electric quadrupole interactions in nanocrystalline ZrO <sub>2</sub> . Physical Review B, 1998, 57, 5177-5181.	3.2	14
78	Chemically sensitive free-volume study of amorphization of Cu <sub>60</sub> Zr <sub>40</sub> induced by cold rolling and folding. Journal of Applied Physics, 2007, 101, 123512.	2.5	14
79	A high-stability non-contact dilatometer for low-amplitude temperature-modulated measurements. Review of Scientific Instruments, 2016, 87, 075116.	1.3	13
80	Charging processes in the cathode LiNi <sub>0.6</sub> Mn <sub>0.2</sub> Co <sub>0.2</sub> O <sub>2</sub> as revealed by operando magnetometry. Journal of Power Sources, 2018, 396, 791-795.	7.8	13
81	Sign-inversion of charging-induced variation of electrical resistance of nanoporous platinum. Journal of Applied Physics, 2012, 112, .	2.5	12
82	Free volumes in the quasicrystalline decagonal Al-Cu-Co phase and in the adjacent crystalline phases studied by positron lifetime measurements. The Philosophical Magazine: Physics of Condensed Matter B, Statistical Mechanics, Electronic, Optical and Magnetic Properties, 1994, 70, 913-917.	0.6	11
83	Intergranular Melting of Ultrafine Grained Nd <sub>2</sub> Fe <sub>14</sub> B Studied by Means of Radiotracer Diffusion. Journal of Materials Science, 2001, 9, 337-341.	1.2	11
84	Grain-boundary diffusion of Nd <sup>147</sup> in nanocrystalline Nd <sub>2</sub> Fe <sub>14</sub> B. Journal of Applied Physics, 2005, 98, 074314.	2.5	11
85	Microwave plasma synthesis of nano-crystalline YSZ. Physica Status Solidi - Rapid Research Letters, 2007, 1, 107-109.	2.4	11
86	Vacancy-type defects in amorphous and nanocrystalline Al alloys: Variation with preparation route and processing. Scripta Materialia, 2010, 62, 439-442.	5.2	11
87	High-precision isothermal dilatometry as tool for quantitative analysis of precipitation kinetics: case study of dilute Al alloy. Journal of Materials Science, 2019, 54, 5083-5091.	3.7	11
88	Defects in Low-Temperature Electron-Irradiated GaAs Studied by Positrons. Physica Status Solidi A, 1987, 103, 101-105.	1.7	10
89	Quantitative volumetric identification of precipitates in dilute alloys using high-precision isothermal dilatometry. Philosophical Magazine Letters, 2018, 98, 301-309.	1.2	10
90	Precipitation processes in Al-Mg-Si extending down to initial clustering revealed by the complementary techniques of positron lifetime spectroscopy and dilatometry. Journal of Materials Science, 2018, 53, 14657-14665.	3.7	10

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91	Nanoporous Pd <sub>1-x</sub> Cox for hydrogen-intercalation magneto-ionics. APL Materials, 2021, 9, .	5.1	10
92	In-Situ Study of the Migration of Grain Boundary Facets in Au Bicrystals under High Driving Forces. Physica Status Solidi A, 1993, 136, 323-336.	1.7	9
93	Nuclear spectroscopy of nanocrystalline metals and alloys. Scripta Materialia, 1995, 6, 93-104.	0.5	9
94	Synthesis of nanoamorphous alloys by particle condensation and compaction. Scripta Materialia, 1995, 6, 377-380.	0.5	9
95	Self-Diffusion in Liquid Interfaces. Physical Review Letters, 2004, 92, 095901.	7.8	9
96	In situ characterization of hydrogen absorption in nanoporous palladium produced by dealloying. Beilstein Journal of Nanotechnology, 2016, 7, 1197-1201.	2.8	9
97	Dealloying progress during nanoporous structure evolution analyzed by <i>in situ</i> resistometry. Physical Chemistry Chemical Physics, 2017, 19, 29880-29885.	2.8	9
98	Diffusion-reaction model for positron trapping and annihilation at spherical extended defects and in precipitate-matrix composites. Physical Review B, 2018, 97, .	3.2	9
99	Operando monitoring of charging-induced defect formation in battery electrodes by positrons. Applied Physics Letters, 2019, 114, 013905.	3.3	9
100	Evolution of superparamagnetism in the electrochemical dealloying process. Journal of Applied Physics, 2020, 128, .	2.5	9
101	Thermal Vacancies and Their Effects in Intermetallic Alloys. Materials Science Forum, 1997, 255-257, 81-85.	0.3	8
102	Structural Stability and High-Temperature Positron Lifetime Study of Mechanically Alloyed Nanocrystalline Pd-Zr. Materials Science Forum, 2000, 343-346, 726-731.	0.3	8
103	Positrons as chemically sensitive probes in interfaces of multicomponent complex materials: Nanocrystalline Fe <sub>90</sub> Zr <sub>7</sub> B <sub>3</sub> . International Journal of Materials Research, 2003, 94, 1073-1078.	0.8	8
104	In-situ dispersion of ZrO <sub>2</sub> nanoparticles coated with pentacene. Physica Status Solidi - Rapid Research Letters, 2008, 2, 203-205.	2.4	8
105	Microstructure and vacancy-type defects of high-pressure torsion deformed Al-3wt%Cu alloy. Journal of Applied Physics, 2012, 112, 103506.	2.5	8
106	In situ monitoring magnetism and resistance of nanophase platinum upon electrochemical oxidation. Beilstein Journal of Nanotechnology, 2013, 4, 394-399.	2.8	8
107	Enhanced magnetic moment of ultrathin Co films measured by in situ electrodeposition in a SQUID. Journal of Magnetism and Magnetic Materials, 2016, 397, 96-100.	2.3	8
108	Structural anisotropy in equal-channel angular extruded nickel revealed by dilatometric study of excess volume. International Journal of Materials Research, 2017, 108, 81-88.	0.3	8

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109	Redox processes in sodium vanadium phosphate cathodes – insights from operando magnetometry. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 20151-20155.	2.8	8
110	Influence of defects on ionic transport in LiTaO <sub>3</sub> – A study using EXAFS and positron annihilation lifetime spectroscopy. <i>Solid State Ionics</i> , 2020, 352, 115355.	2.7	8
111	Vacancy Studies in Melt-Spun Shape Memory Alloys. <i>Materials Science Forum</i> , 1992, 105-110, 1333-1336.	0.3	7
112	Electron microscopy of nanocrystalline BaTiO <sub>3</sub> . <i>Scripta Materialia</i> , 1997, 9, 619-622.	0.5	7
113	Synthesis and optical properties of organic semiconductor: zirconia nanocomposites. <i>Journal of Nanoparticle Research</i> , 2010, 12, 2541-2551.	1.9	7
114	Positron Lifetime and Annihilation Site in C <sub>60</sub> /C <sub>70</sub> Fullerites. <i>Materials Science Forum</i> , 1992, 105-110, 815-820.	0.3	6
115	Size and Compressibility of Free Volumes in Nanocrystalline Materials. <i>Materials Science Forum</i> , 1992, 105-110, 1337-1340.	0.3	6
116	Size Distribution of Structural Free Volumes in Nanocrystalline Metals. <i>Materials Science Forum</i> , 1994, 175-178, 505-508.	0.3	6
117	Structural and optical properties of nanoparticulate Y <sub>2</sub> O <sub>3</sub> :Eu <sub>2</sub> O <sub>3</sub> made by microwave plasma synthesis. <i>Applied Physics A: Materials Science and Processing</i> , 2011, 105, 709-712.	2.3	6
118	Structure and electrical properties of nanoparticulate tungsten oxide prepared by microwave plasma synthesis. <i>Journal of Physics Condensed Matter</i> , 2011, 23, 334206.	1.8	6
119	Influence of high-pressure torsion deformation on the corrosion behaviour of a bioresorbable Mg-based alloy studied by positron annihilation. <i>Biomaterials Science</i> , 2021, 9, 4099-4109.	5.4	6
120	In Situ Study of Nanoporosity Evolution during Dealloying AgAu and CoPd by Grazing-Incidence Small-Angle X-ray Scattering. <i>Journal of Physical Chemistry C</i> , 2022, 126, 4037-4047.	3.1	6
121	Model for the Diffusion-limited ortho-para Conversion of Positronium at Reaction Centres. <i>Zeitschrift Fur Physikalische Chemie</i> , 1995, 192, 47-61.	2.8	5
122	Diffusion and induced magnetic anisotropy in nanocrystalline Fe <sub>73.5</sub> Si <sub>13.5</sub> B <sub>9</sub> Nb <sub>3</sub> Cu <sub>1</sub> . <i>Philosophical Magazine Letters</i> , 2004, 84, 531-537.	1.2	5
123	Interfacial free volumes and atomic diffusion in nanostructured solids. , 0, , .		5
124	Search for vacancies in concentrated solid-solution alloys with fcc crystal structure. <i>Physical Review Materials</i> , 2020, 4, .	2.4	5
125	Interaction of oxygen with nanocrystalline metals. <i>Scripta Materialia</i> , 1999, 11, 37-42.	0.5	4
126	In Situ Real-Time Monitoring of Aging Processes in an Aluminum Alloy by High-Precision Dilatometry. <i>Minerals, Metals and Materials Series</i> , 2017, , 669-674.	0.4	4



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127	Kinetics of vacancy annealing upon time-linear heating applied to dilatometry. Journal of Materials Science, 2018, 53, 2758-2765.	3.7	4
128	Nanoporous gold electrodes modified with self-assembled monolayers for electrochemical control of the surface charge. Physical Chemistry Chemical Physics, 2021, 23, 14457-14464.	2.8	4
129	Diffusion in nanocrystalline metals and alloys. Revue De Metallurgie, 1999, 96, 1547-1554.	0.3	3
130	Charge-influenced structural properties of electrically connected platinum nanoparticles. Materials Research Society Symposia Proceedings, 2001, 676, 6.10.1.	0.1	3
131	Thermal Vacancy Formation and Diffusion in Nanocrystalline Materials. Materials Science Forum, 2001, 363-365, 35-39.	0.3	3
132	Self-diffusion behaviour and microstructure of ultrafine-grained Nd <sub>2</sub> Fe <sub>14</sub> B with intergranular melting transition. International Journal of Materials Research, 2004, 95, 895-903.	0.8	3
133	Comprehensive defect characterization of different iron samples after severe plastic deformation. Journal of Physics: Conference Series, 2013, 443, 012033.	0.4	3
134	Defects and Charging Processes in Li-Ion Battery Cathodes Studied by Operando Magnetometry and Positron Annihilation. Materials Science Forum, 2016, 879, 2125-2130.	0.3	3
135	Single grain analysis on a nanoscale in ZrO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> nano-composites by means of high-resolution scanning transmission electron Microscopy. Materials Research Express, 2016, 3, 125009.	1.6	3
136	Internal stress and defect-related free volume in submicrocrystalline Ni studied by neutron diffraction and difference dilatometry. Philosophical Magazine Letters, 2017, 97, 450-458.	1.2	3
137	Hydrogen-induced plasticity in nanoporous palladium. Beilstein Journal of Nanotechnology, 2018, 9, 3013-3024.	2.8	3
138	Structural Stability and High-Temperature Positron Lifetime Study of Mechanically Alloyed Nanocrystalline Pd-Zr. Journal of Metastable and Nanocrystalline Materials, 2000, 8, 726-731.	0.1	2
139	Intermetallics: Point Defects. , 2001, , 4237-4243.		2
140	Thermal and Dynamic Properties. , 2006, , 311-430.		2
141	Chemical Sensitive Positron-Annihilation Study of Amorphization and Nanocrystallization Processes by Repeated Roll Bonding. Materials Science Forum, 2008, 584-586, 209-214.	0.3	2
142	Defects in Al-3wt%Cu after High-pressure Torsion Studied by Two-dimensional Doppler Broadening Spectroscopy. Physics Procedia, 2012, 35, 10-15.	1.2	2
143	Enhanced Charging-Induced Resistance Variations of Nanoporous Gold by Dealloying in Neutral Silver Nitrate Solution. Langmuir, 2018, 34, 13110-13115.	3.5	2
144	Process Monitoring of Charging/Discharging of Lithium Ion Battery Cathodes by Operando SQUID Magnetometry. , 2018, , 849-855.		2

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145	Positron trapping and annihilation at interfaces between matrix and cylindrical or spherical precipitates modeled by diffusion-reaction theory. AIP Conference Proceedings, 2019, , .	0.4	2
146	Adsorption and desorption of self-assembled L-cysteine monolayers on nanoporous gold monitored by in situ resistometry. Beilstein Journal of Nanotechnology, 2019, 10, 2275-2279.	2.8	2
147	Preparation And Sintering Studies Of Nanometer-Sized Polycrystalline ZrO <sub>2</sub> . Materials Research Society Symposia Proceedings, 1991, 238, 733.	0.1	1
148	Atomic Defects in Intermetallic Compounds and Diffusion Processes. Materials Research Society Symposia Proceedings, 1998, 527, 123.	0.1	1
149	Characterization of free volumes in amorphous and nanostructured Pr <sub>2</sub> Fe <sub>14</sub> B using positron lifetime spectroscopy. Physica Status Solidi A, 2003, 198, 204-209.	1.7	1
150	Self-Diffusion of <sup>147</sup> Nd in Nanocrystalline Nd <sub>2</sub> Fe <sub>14</sub> B. , 2005, , 767-772.		1
151	Recent progress in dilatometry for quantitative analysis of precipitation kinetics. IOP Conference Series: Materials Science and Engineering, 2019, 580, 012052.	0.6	1
152	Diffusion-drift-reaction model for positron trapping and annihilation at interfaces with space charge in bulk materials. Philosophical Magazine, 2020, 100, 379-397.	1.6	1
153	In situ monitoring of artificial aging and solution heat treatment of a commercial Al-Mg-Si alloy with a high intensity positron beam. Journal of Physics Condensed Matter, 2020, 32, 085705.	1.8	1
154	Modelling Dilatometry Data of Isothermal $\beta$ -Phase Formation in a Strongly $\beta$ -Stabilised TiV-Alloy. Materials Science Forum, 0, 1016, 1851-1856.	0.3	1
155	Electrochemical switching of positronium triplet quenching. Physical Chemistry Chemical Physics, 2021, 23, 25278-25283.	2.8	1
156	Operando SQUID Magnetometry for the Characterization of Electrochemical Systems: Charge Transfer in Battery Materials and Electrochemical Dealloying Processes. ECS Meeting Abstracts, 2021, MA2021-02, 1494-1494.	0.0	1
157	Water intake of cellulose materials monitored by positron annihilation lifetime spectroscopy. Cellulose, 2022, 29, 1357-1363.	4.9	1
158	Diffusion in Nanocrystalline Metallic Materials. , 0, , 501-517.		1
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