

# Mark Daymond

## List of Publications by Year in descending order

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309  
papers

8,965  
citations

38742

50  
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60623

81  
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311  
all docs

311  
docs citations

311  
times ranked

4928  
citing authors

#	ARTICLE	IF	CITATIONS
1	Deep learning and crystal plasticity: A preconditioning approach for accurate orientation evolution prediction. Computer Methods in Applied Mechanics and Engineering, 2022, 389, 114392.	6.6	10
2	High temperature hardness testing of $\gamma$ -zirconium hydride: Yield stress estimation by analytical and numerical models. Journal of Nuclear Materials, 2022, 560, 153424.	2.7	3
3	Diffusion of H in Zircaloy-2 and Zr-2.5%Nb rolled plates between 250°C and 350°C by off-situ neutron imaging experiments. Journal of Nuclear Materials, 2022, 561, 153547.	2.7	6
4	Characterization of Zr-Nb-Fe(-Cr) precipitates in Zr-based alloys using density functional theory. Materials Today Communications, 2022, 31, 103381.	1.9	2
5	Evaluation of irradiation hardening in proton-irradiated $\gamma$ -zirconium hydride and Zr <sub>2.5</sub> Nb. Journal of Nuclear Materials, 2022, 562, 153600.	2.7	5
6	Atomistic structure and thermal stability of dislocation loops, stacking fault tetrahedra, and voids in face-centered cubic Fe. Journal of Nuclear Materials, 2022, 563, 153636.	2.7	9
7	Characterization of microstructure and microhardness of Neutron irradiated Inconel X-750. Journal of Nuclear Materials, 2022, 563, 153644.	2.7	3
8	Investigating the stability of reoriented hydrides and their reprecipitation using in-situ heating experiments. Journal of Nuclear Materials, 2022, 564, 153670.	2.7	1
9	Radiation-induced segregation on dislocation loops in austenitic Fe-Cr-Ni alloys. Physical Review Materials, 2022, 6, .	2.4	3
10	New insights into the structure and chemical reduction of graphene oxide membranes for use in isotopic water separations. Journal of Membrane Science, 2022, 659, 120785.	8.2	6
11	Towards resolving a long existing phase stability controversy in the Zr-H, Ti-H systems. Journal of Nuclear Materials, 2021, 543, 152540.	2.7	10
12	Effects of Heat Treatment on CANDU® Pressure Tube Electrical Resistivity. Journal of Nuclear Materials, 2021, 545, 152597.	2.7	2
13	The dependence of damage accumulation on irradiation dose rate in zirconium alloys: Rate theory, atomistic simulation and experimental validation. Journal of Nuclear Materials, 2021, 543, 152478.	2.7	8
14	Quantifying the effect of hydride microstructure on zirconium alloys embrittlement using image analysis. Journal of Nuclear Materials, 2021, 547, 152817.	2.7	21
15	Indentation size effect, geometrically necessary dislocations and pile-up effects in hardness testing of irradiated nickel. Acta Materialia, 2021, 207, 116702.	7.9	47
16	Toward a Mechanistic Understanding of Pellet Cladding Interaction Using Advanced 3D Characterization and Atomistic Simulation. , 2021, , 904-926.		0
17	Back-Calculated Indentation Stress-Strain Curves from Small Scale Testing and Verification Using Finite Element Models: Application to Nanoindentation and Micropillar Compression Study of a Heavy Ion Irradiated Zr-2.5Nb Alloy. , 2021, , 294-318.		0
18	Crystal Structure of Hydride Platelets in Hot Rolled Zircaloy-2, Characterized with Synchrotron X-Ray Diffraction, S/TEM, and EELS. , 2021, , 732-761.		2

#	ARTICLE	IF	CITATIONS
19	Investigation on the deformation mechanisms and size-dependent hardening effect of He bubbles in 84 dpa neutron irradiated Inconel X-750. Nuclear Materials and Energy, 2021, 28, 101025.	1.3	4
20	Investigation of $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si2.svg"} \rangle \langle \text{mml:mi} \hat{\Gamma} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ zirconium hydride morphology in a single crystal using quantitative phase field simulations supported by experiments. Journal of Nuclear Materials, 2021, 557, 153303.	2.7	12
21	Interstitialcy-based reordering kinetics of Ni <sub>3</sub> Al precipitates in irradiated Ni-based super alloys. Materialia, 2021, 19, 101180.	2.7	0
22	Stability of vacancy and interstitial dislocation loops in $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si24.svg"} \rangle \langle \text{mml:mi} \rangle \hat{\Gamma} \langle \text{mml:mi} \rangle \langle \text{mml:math} \rangle$ -zirconium: atomistic calculations and continuum modelling. Journal of Nuclear Materials, 2021, 554, 153059.	2.7	11
23	Identifying the true structure and origin of the water-quench induced hydride phase in Zr-2.5Nb alloy. Acta Materialia, 2021, 221, 117369.	7.9	12
24	Transformation behavior of hydrides precipitated with or without stress in Zr-2.5Nb investigated by in-situ S/TEM thermal cycling. Journal of Nuclear Materials, 2021, 559, 153428.	2.7	6
25	Orientation-dependent irradiation hardening in pure Zr studied by nanoindentation, electron microscopies, and crystal plasticity finite element modeling. International Journal of Plasticity, 2020, 124, 133-154.	8.8	32
26	In situ TEM and multiscale study of dislocation loop formation in the vicinity of a grain boundary. Journal of Nuclear Materials, 2020, 528, 151872.	2.7	6
27	Influence of Al Addition Strategy on the Microstructure of a Low-Cr Oxide Dispersion-Strengthened Ferritic Steel. Advanced Engineering Materials, 2020, 22, 1900879.	3.5	11
28	High-Resolution Residual Stress Mapping of Magnesium AZ80 Friction Stir Welds for Three Processing Conditions. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 1195-1207.	2.2	2
29	A method for calculation of bias factor in anisotropic mediums, application to $\hat{\Gamma}$ -zirconium. Journal of Nuclear Materials, 2020, 528, 151882.	2.7	3
30	Graphene Oxide Membranes for Isotopic Water Mixture Filtration: Preparation, Physicochemical Characterization, and Performance Assessment. ACS Applied Materials & Interfaces, 2020, 12, 34736-34745.	8.0	18
31	Effect of He on the Order-Disorder Transition in Ni <sub>3</sub> Al under Irradiation. Physical Review Letters, 2020, 124, 075901.	7.8	9
32	Crack propagation path selection and plastic deformation at a crack tip in zirconium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 779, 139143.	5.6	10
33	Correlation of microstructural, textural characteristics and hardness of Ti-6Al-4V sheet $\hat{\Gamma}$ -cooled at different rates. Journal of Materials Science, 2020, 55, 8346-8362.	3.7	38
34	Phase Transformation and Atypical Variants in an Extruded Two Phase Zirconium Tube. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 2724-2737.	2.2	3
35	A mechanism for basal vacancy loop formation in zirconium. Scripta Materialia, 2019, 172, 72-76.	5.2	19
36	A synchrotron X-ray diffraction study of strain and microstrain distributions in $\hat{\Gamma}$ -Zr caused by hydride precipitation. Surfaces and Interfaces, 2019, 17, 100388.	3.0	4

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37	Asymmetrical response of edge pyramidal dislocations in HCP zirconium under tension and compression: A molecular dynamics study. <i>Computational Materials Science</i> , 2019, 170, 109183.	3.0	8
38	Characterizing the crystal structure and formation induced plasticity of $\beta^3$ -hydride phase in zirconium. <i>Materialia</i> , 2019, 8, 100454.	2.7	14
39	Mode I fracture testing validation on non-plane strain zirconium foils. <i>Engineering Fracture Mechanics</i> , 2019, 209, 48-60.	4.3	6
40	Effect of temperature and loading sense on deformation-induced phase transformation in a high Sn content zirconium alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 748, 313-326.	5.6	3
41	On the measurement of dislocations and dislocation substructures using EBSD and HRSD techniques. <i>Acta Materialia</i> , 2019, 175, 297-313.	7.9	128
42	In-situ study of heavy ion irradiation induced lattice defects and phase instability in $\beta^2$ -Zr of a Zr-Nb alloy. <i>Journal of Nuclear Materials</i> , 2019, 522, 192-199.	2.7	6
43	Effect of rate on the deformation properties of metastable $\beta^2$ in a high Sn content zirconium alloy. <i>International Journal of Plasticity</i> , 2019, 119, 102-122.	8.8	4
44	A direct comparison of annealing in TEM thin foils and bulk material: Application to Zr-2.5Nb-0.5Cu alloy. <i>Materials Characterization</i> , 2019, 151, 175-181.	4.4	11
45	Hydrogen in zirconium alloys: A review. <i>Journal of Nuclear Materials</i> , 2019, 518, 440-460.	2.7	203
46	Effect of the addition of Cu on irradiation induced defects and hardening in Zr-Nb alloys. <i>Journal of Nuclear Materials</i> , 2019, 519, 10-21.	2.7	9
47	Effects of heavy ion irradiation on Zr-2.5Nb pressure tube alloy. I. Orientation dependent mechanical response. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	2
48	Phase transformation and microstructural changes during the hydriding and aging processes in dual phase Zr alloy. <i>Materials Chemistry and Physics</i> , 2019, 231, 48-59.	4.0	2
49	Comparison of electron backscatter and X-ray diffraction techniques for measuring dislocation density in Zircaloy-2. <i>Journal of Applied Crystallography</i> , 2019, 52, 415-427.	4.5	8
50	Effects of heavy ion irradiation on Zr-2.5Nb pressure tube alloy. II. Orientation dependent dislocation loop propagation and elemental redistribution. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	2
51	Crystallographic orientation sensitive measurement of strain rate sensitivity in Zircaloy-2 via synchrotron X-ray diffraction. <i>International Journal of Plasticity</i> , 2019, 113, 1-17.	8.8	9
52	Advanced Characterization of Hydrides in Zirconium Alloys. <i>Minerals, Metals and Materials Series</i> , 2019, , 1793-1813.	0.4	5
53	Irradiation damage and hardening in pure Zr and Zr-Nb alloys at 573 K from self-ion irradiation. <i>Materials and Design</i> , 2019, 161, 147-159.	7.0	33
54	Radiation effect on nano-indentation properties and deformation mechanisms of a Ni-based superalloy X-750. <i>Journal of Nuclear Materials</i> , 2019, 515, 1-13.	2.7	13

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55	A solution to FIB induced artefact hydrides in Zr alloys. Journal of Nuclear Materials, 2019, 515, 122-134.	2.7	48
56	Dislocation evolution at a crack-tip in a hexagonal close packed metal under plane-stress conditions. Acta Materialia, 2019, 164, 25-38.	7.9	22
57	Combination of back stress strengthening and Orowan strengthening in bimodal structured Fe-9Cr-Al ODS steel with high Al addition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 739, 45-52.	5.6	37
58	Primary damage production in the presence of extended defects and growth of vacancy-type dislocation loops in hcp zirconium. Physical Review Materials, 2019, 3, .	2.4	11
59	Determination of very low concentrations of hydrogen in zirconium alloys by neutron imaging. Journal of Nuclear Materials, 2018, 503, 98-109.	2.7	29
60	Nano-scale Mechanical Properties and Microstructure of Irradiated X-750 Ni-Based Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 498-514.	2.2	14
61	Synchrotron X-ray diffraction study of zirconium hydride distribution in Zr-2.5Nb and its redistribution during thermal cycling. Materials Characterization, 2018, 136, 183-195.	4.4	10
62	Strain localisation and failure of dissimilar magnesium-based alloy friction stir welds. Science and Technology of Welding and Joining, 2018, 23, 628-634.	3.1	8
63	In situ heavy ion irradiation in ferritic/martensitic ODS steels at 500°C. Materials Science and Technology, 2018, 34, 42-46.	1.6	6
64	Evidence for deformation-induced phase transformation in a high Sn content zirconium alloy. Acta Materialia, 2018, 161, 311-319.	7.9	11
65	Strain evolution in Zr-2.5 wt% Nb observed with synchrotron X-ray diffraction. Materials Characterization, 2018, 146, 35-46.	4.4	7
66	Determinación de bajas concentraciones de hidrógeno en aleaciones de circonio utilizando radiografía de neutrones como técnica no destructiva. Revista Materia, 2018, 23, .	0.2	1
67	Orientation dependent evolution of plasticity of irradiated Zr-2.5Nb pressure tube alloy studied by nanoindentation and finite element modeling. Journal of Nuclear Materials, 2018, 512, 371-384.	2.7	23
68	Micropillar compression study on heavy ion irradiated Zr-2.5Nb pressure tube alloy. Journal of Nuclear Materials, 2018, 511, 487-495.	2.7	12
69	Effect of pre-existing dislocations on the formation of dislocation loops: Pure magnesium under electron irradiation. Journal of Nuclear Materials, 2018, 511, 43-55.	2.7	19
70	Phase Transformation Temperatures and Solute Redistribution in a Quaternary Zirconium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 3468-3485.	2.2	4
71	A tomographic TEM study of tension-compression asymmetry response of pyramidal dislocations in a deformed Zr-2.5Nb alloy. Scripta Materialia, 2018, 153, 94-98.	5.2	17
72	Retention of metastable $\beta$ phase in a two-phase quaternary zirconium alloy. Materials and Design, 2018, 156, 622-630.	7.0	9

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73	Advanced Characterization of Hydrides in Zirconium Alloys. Minerals, Metals and Materials Series, 2018, , 577-597.	0.4	2
74	Influence of magnesium AZ80 friction stir weld texture on tensile strain localisation. Materials Science and Technology, 2017, 33, 189-199.	1.6	7
75	Crystallographic texture and microstructural changes in fusion welds of recrystallized Zry-4 rolled plates. Journal of Nuclear Materials, 2017, 488, 83-99.	2.7	9
76	The habit plane of $\epsilon$ -type dislocation loops in $\beta$ -zirconium: an atomistic study. Philosophical Magazine, 2017, 97, 944-956.	1.6	15
77	Orientation relationships between $\beta$ -zirconium and $\beta$ -hydride within a hydride blister. Journal of Applied Crystallography, 2017, 50, 349-356.	4.5	10
78	Re-investigation of phase transformations in the Zr-Excel alloy. Journal of Alloys and Compounds, 2017, 716, 7-12.	5.5	9
79	Thermal creep behavior in heat-treated and modified textured Zr-Excel pressure tube material. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 698, 326-340.	5.6	7
80	The stability of thermodynamically metastable phases in a Zr-Sn-Nb-Mo alloy: Effects of alloying elements, morphology and applied stress/strain. Journal of Nuclear Materials, 2017, 493, 84-95.	2.7	7
81	Accumulation of dislocation loops in the $\beta$ phase of Zr Excel alloy under heavy ion irradiation. Journal of Nuclear Materials, 2017, 491, 232-241.	2.7	25
82	Effect of heavy ion irradiation on thermodynamically equilibrium Zr-Excel alloy. Journal of Nuclear Materials, 2017, 488, 33-45.	2.7	5
83	An embedded atom method interatomic potential for the zirconium-iron system. Computational Materials Science, 2017, 133, 6-13.	3.0	5
84	Microstructure characterization of a hydride blister in Zircaloy-4 by EBSD and TEM. Acta Materialia, 2017, 129, 450-461.	7.9	39
85	Evolution of dislocation structure in neutron irradiated Zircaloy-2 studied by synchrotron x-ray diffraction peak profile analysis. Acta Materialia, 2017, 126, 102-113.	7.9	63
86	Stacking faults observed in $\{10\bar{1}0\}$ extension twins in a compressed high Sn content Zr alloy. Scripta Materialia, 2017, 141, 72-75.	5.2	13
87	Quasi in-situ energy dispersive X-ray spectroscopy observation of matrix and solute interactions on Y Ti O oxide particles in an austenitic stainless steel under 1 MeV Kr <sup>2+</sup> high temperature irradiation. Acta Materialia, 2017, 141, 241-250.	7.9	6
88	Evolution of dislocation density in a hot rolled Zr-2.5Nb alloy with plastic deformation studied by neutron diffraction and transmission electron microscopy. Philosophical Magazine, 2017, 97, 2888-2914.	1.6	16
89	Atomistic simulations of Ni segregation to irradiation induced dislocation loops in Zr-Ni alloys. Acta Materialia, 2017, 140, 56-66.	7.9	22
90	Study on the morphology of bulk hydrides by synchrotron X-ray tomography. Materials Characterization, 2017, 134, 362-369.	4.4	7

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91	Modeling of particle coarsening and precipitation free zones. Modelling and Simulation in Materials Science and Engineering, 2017, 25, 085012.	2.0	6
92	A test of a phenomenological model of size dependent melting in Au nanoparticles. Acta Materialia, 2017, 136, 11-20.	7.9	22
93	Precipitate Stability in a Zr-2.5Nb-0.5Cu Alloy under Heavy Ion Irradiation. Metals, 2017, 7, 287.	2.3	13
94	Irradiation Induced Defect Clustering in Zircaloy-2. Applied Sciences (Switzerland), 2017, 7, 854.	2.5	6
95	In situ transmission electron microscopy study of the thermally induced formation of $\epsilon$ -ZrO in pure Zr and Zr-based alloy. Journal of Applied Crystallography, 2017, 50, 1028-1035.	4.5	13
96	Contrast factors of irradiation-induced dislocation loops in hexagonal materials. Journal of Applied Crystallography, 2016, 49, 2184-2200.	4.5	15
97	Measurement of Hydride Precipitation and Dissolution Kinetics Using Synchrotron X-Rays. , 2016, , .		0
98	Microstructural evaluation and crystallographic texture modification of heat-treated zirconium Excel pressure tube material. Journal of Alloys and Compounds, 2016, 687, 1021-1033.	5.5	13
99	Crystal plasticity modeling of damage accumulation in dissimilar Mg alloy bi-crystals under high-cycle fatigue. International Journal of Fatigue, 2016, 90, 99-108.	5.7	7
100	Zirconium hydrides and Fe redistribution in Zr-2.5Nb alloy under ion irradiation. Journal of Nuclear Materials, 2016, 480, 332-343.	2.7	19
101	Quantitative characterization of the microstructure of heat-treated Zr-Excel by neutron line profile analysis. Journal of Applied Crystallography, 2016, 49, 1609-1623.	4.5	3
102	Formation mechanisms of periodic longitudinal microstructure and texture patterns in friction stir welded magnesium AZ80. Materials Characterization, 2016, 122, 22-29.	4.4	8
103	Study of microstructure and precipitates of a Zr-2.5Nb-0.5Cu CANDU spacer material. Journal of Nuclear Materials, 2016, 481, 153-163.	2.7	20
104	Micromechanical modelling of twinning in polycrystalline materials: Application to magnesium. International Journal of Plasticity, 2016, 85, 156-171.	8.8	29
105	Modeling discrete twin lamellae in a microstructural framework. Scripta Materialia, 2016, 121, 84-88.	5.2	52
106	Atomistic simulations of the formation of $\epsilon$ -component dislocation loops in $\epsilon$ -zirconium. Journal of Nuclear Materials, 2016, 478, 125-134.	2.7	30
107	Metastable phases in Zr-Excel alloy and their stability under heavy ion (Kr <sup>2+</sup> ) irradiation. Journal of Nuclear Materials, 2016, 469, 9-19.	2.7	13
108	Effect of neutron irradiation on deformation mechanisms operating during tensile testing of Zr-2.5Nb. Acta Materialia, 2016, 102, 352-363.	7.9	48

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109	Effects of alloying elements on the formation of <i>c</i>-component loops in Zr alloy Excel under heavy ion irradiation. Journal of Materials Research, 2015, 30, 1310-1334.	2.6	19
110	Study of 3-D stress development in parent and twin pairs of a hexagonal close-packed polycrystal: Part I "in-situ three-dimensional synchrotron X-ray diffraction measurement. Acta Materialia, 2015, 93, 246-255.	7.9	56
111	Study of 3-D stress development in parent and twin pairs of a hexagonal close-packed polycrystal: Part II " crystal plasticity finite element modeling. Acta Materialia, 2015, 93, 235-245.	7.9	61
112	Discovery of a "2 1 0" fiber texture in medical-grade metastable beta titanium wire. Acta Materialia, 2015, 87, 390-398.	7.9	12
113	Ultra-small-angle X-ray scattering study of second-phase particles in heat-treated Zircaloy-4. Journal of Applied Crystallography, 2015, 48, 52-60.	4.5	1
114	On the predictions of self-consistent plasticity models: The effect of loading mode during in situ diffraction tests. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 634, 77-85.	5.6	3
115	On the deformation twinning of Mg AZ31B: A three-dimensional synchrotron X-ray diffraction experiment and crystal plasticity finite element model. International Journal of Plasticity, 2015, 70, 77-97.	8.8	103
116	Evolution of Intergranular Stresses in a Martensitic and an Austenitic NiTi Wire During Loading"Unloading Tensile Deformation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 2476-2490.	2.2	7
117	Effect of interstitial oxygen and iron on deformation of Zr"2.5 wt% Nb. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 636, 10-23.	5.6	4
118	Deformation mechanism study of a hot rolled Zr-2.5Nb alloy by transmission electron microscopy. II. <i>In situ</i> transmission electron microscopy study of deformation mechanism change of a Zr-2.5Nb alloy upon heavy ion irradiation. Journal of Applied Physics, 2015, 117, .	2.5	9
119	Deformation mechanism study of a hot rolled Zr-2.5Nb alloy by transmission electron microscopy. I. Dislocation microstructures in as-received state and at different plastic strains. Journal of Applied Physics, 2015, 117, 094307.	2.5	13
120	Contribution on the phase equilibria in Zr"Nb"Fe system. Journal of Nuclear Materials, 2015, 466, 627-633.	2.7	21
121	Evaluation of elastic"viscoplastic self-consistent polycrystal plasticity models for zirconium alloys. International Journal of Solids and Structures, 2015, 71, 308-322.	2.7	46
122	Dislocation-accelerated void formation under irradiation in zirconium. Acta Materialia, 2015, 82, 94-99.	7.9	26
123	Mechanisms of Hydride Reorientation in Zircaloy-4 Studied in Situ. , 2015, , 1107-1137.		12
124	Cavity morphology in a Ni based superalloy under heavy ion irradiation with hot pre-injected helium. II. Journal of Applied Physics, 2014, 115, 103509.	2.5	11
125	Cavity morphology in a Ni based superalloy under heavy ion irradiation with cold pre-injected helium. I. Journal of Applied Physics, 2014, 115, 103508.	2.5	13
126	Effect of heat treatment temperature on nitinol wire. Applied Physics Letters, 2014, 105, .	3.3	8



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127	Microstructure evolution during electron and ion irradiation in commercial purity magnesium. Philosophical Magazine, 2014, 94, 1909-1923.	1.6	5
128	High-temperature deformation mechanisms in a polycrystalline nickel-base superalloy studied by neutron diffraction and electron microscopy. Acta Materialia, 2014, 74, 18-29.	7.9	75
129	Radiation induced microstructures in ODS 316 austenitic steel under dual-beam ions. Journal of Nuclear Materials, 2014, 455, 242-247.	2.7	16
130	Variant selection and transformation texture in zirconium alloy Excel. Journal of Nuclear Materials, 2014, 453, 120-123.	2.7	18
131	Stability of Ni <sub>3</sub> (Al, Ti) Gamma Prime Precipitates in a Nickel-Based Superalloy Inconel X-750 Under Heavy Ion Irradiation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3422-3428.	2.2	21
132	Aging response and characterization of precipitates in Zr alloy Excel pressure tube material. Journal of Nuclear Materials, 2014, 452, 265-272.	2.7	7
133	Elevated temperature irradiation damage in CANDU spacer material Inconel X-750. Journal of Nuclear Materials, 2014, 445, 227-234.	2.7	24
134	The role of chemical free energy and elastic strain in the nucleation of zirconium hydride. Journal of Nuclear Materials, 2013, 441, 395-401.	2.7	21
135	Temperature Dependence of the Activity of Deformation Modes in an HCP Zirconium Alloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 4183-4193.	2.2	29
136	Multi-scale modeling and experimental study of twin inception and propagation in hexagonal close-packed materials using a crystal plasticity finite element approach—Part I: Average behavior. Journal of the Mechanics and Physics of Solids, 2013, 61, 783-802.	4.8	78
137	Novel techniques of preparing TEM samples for characterization of irradiation damage. Journal of Microscopy, 2013, 252, 251-257.	1.8	3
138	Stress induced martensite transformation in Co-28Cr-6Mo alloy during room temperature deformation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 580, 209-216.	5.6	30
139	Evolution of lattice strain and phase transformation of $\beta$ III Ti alloy during room temperature cyclic tension. Acta Materialia, 2013, 61, 6830-6842.	7.9	20
140	Load partitioning and evidence of deformation twinning in dual-phase fine-grained Zr-2.5Nb alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 564, 548-558.	5.6	17
141	Influence of short time anneal on recoverable strain of beta III titanium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 562, 172-179.	5.6	14
142	The Zr <sub>20</sub> Nb-H phase diagram and the characterisation of hydrides in $\beta$ -Zr. Journal of Nuclear Materials, 2013, 442, 292-297.	2.7	9
143	Multi-scale modeling and experimental study of twin inception and propagation in hexagonal close-packed materials using a crystal plasticity finite element approach; part II: Local behavior. Journal of the Mechanics and Physics of Solids, 2013, 61, 803-818.	4.8	71
144	The effect of $\beta$ size and alloy chemistry on dynamic strain ageing in advanced polycrystalline nickel base superalloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 573, 54-61.	5.6	23

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145	In situ study of defect accumulation in zirconium under heavy ion irradiation. Journal of Nuclear Materials, 2013, 433, 95-107.	2.7	65
146	Phase transformation temperatures of Zr alloy Excel. Journal of Nuclear Materials, 2013, 435, 241-249.	2.7	32
147	Effect of loading mode on lattice strain measurements via neutron diffraction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2013, 577, 169-178.	5.6	5
148	Molecular dynamics simulations of irradiation cascades in alpha-zirconium under macroscopic strain. Nuclear Instruments & Methods in Physics Research B, 2013, 303, 95-99.	1.4	38
149	Evaluating zirconium-zirconium hydride interfacial strains by nano-beam electron diffraction. Journal of Nuclear Materials, 2013, 432, 366-370.	2.7	80
150	Monitoring in situ stress/strain behaviour during plastic yielding in polymineralic rocks using neutron diffraction. Journal of Structural Geology, 2013, 47, 36-51.	2.3	5
151	Irradiation induced microstructural changes in Zr-Excel alloy. Journal of Nuclear Materials, 2013, 441, 138-151.	2.7	29
152	Effect of thermo-mechanical cycling on zirconium hydride reorientation studied in situ with synchrotron X-ray diffraction. Journal of Nuclear Materials, 2013, 440, 586-595.	2.7	64
153	A furnace with rotating load frame for in situ high temperature deformation and creep experiments in a neutron diffraction beam line. Review of Scientific Instruments, 2012, 83, 053901.	1.3	15
154	Dislocation structure evolution induced by irradiation and plastic deformation in the Zr-2.5Nb nuclear structural material determined by neutron diffraction line profile analysis. Acta Materialia, 2012, 60, 5567-5577.	7.9	56
155	Deformation behaviour of an advanced nickel-based superalloy studied by neutron diffraction and electron microscopy. Acta Materialia, 2012, 60, 6829-6841.	7.9	82
156	Measurement and modeling of strain fields in zirconium hydrides precipitated at a stress concentration. Journal of Nuclear Materials, 2012, 430, 27-36.	2.7	11
157	A modified Rietveld method to model highly anisotropic ceramics. Acta Materialia, 2012, 60, 1494-1502.	7.9	9
158	Internal strain and texture development during twinning: Comparing neutron diffraction measurements with crystal plasticity finite-element approaches. Acta Materialia, 2012, 60, 2240-2248.	7.9	75
159	Deformation of high $\beta$ -phase fraction Zr-Nb alloys at room temperature. Acta Materialia, 2012, 60, 3355-3369.	7.9	39
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