

Saurabh Kabra

List of Publications by Year in descending order

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66
papers

1,583
citations

331670

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315739

38
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66
all docs

66
docs citations

66
times ranked

1674
citing authors

#	ARTICLE	IF	CITATIONS
1	In situ neutron diffraction unravels deformation mechanisms of a strong and ductile FeCrNi medium entropy alloy. <i>Journal of Materials Science and Technology</i> , 2022, 116, 103-120.	10.7	16
2	Revealing the residual stress distribution in laser welded Eurofer97 steel by neutron diffraction and Bragg edge imaging. <i>Journal of Materials Science and Technology</i> , 2022, 114, 249-260.	10.7	8
3	In situ neutron diffraction reveals the effect of Cu micro-alloying on low-temperature tensile properties of TWIP steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 845, 143211.	5.6	3
4	Mechanical performance and deformation mechanisms at cryogenic temperatures of 316L stainless steel processed by laser powder bed fusion: In situ neutron diffraction. <i>Scripta Materialia</i> , 2022, 218, 114806.	5.2	10
5	Evaluation of fracture toughness and residual stress in AISI 316L electron beam welds. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2021, 44, 2015-2032.	3.4	6
6	Quantitative analysis and benchmarking of positional accuracies of neutron strain scanners. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2021, 999, 165230.	1.6	4
7	Lattice strain development in an alpha titanium alloy studied using synchrotron and neutron diffraction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 819, 141489.	5.6	4
8	Macro- and micro-mechanical behaviour of a ϵ -strengthened Ni-based superalloy at cryogenic temperatures. <i>Materials and Design</i> , 2021, 209, 109954.	7.0	10
9	In situ neutron diffraction study of a new type of stress-induced confined martensitic transformation in Fe ₂₂ Co ₂₀ Ni ₁₉ Cr ₂₀ Mn ₁₂ Al ₇ high-entropy alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 771, 138555.	5.6	15
10	Deformation mechanisms of FeCoCrNiMo _{0.2} high entropy alloy at 77 and 15 K. <i>Scripta Materialia</i> , 2020, 178, 166-170.	5.2	41
11	Synergistic deformation pathways in a TWIP steel at cryogenic temperatures: In situ neutron diffraction. <i>Acta Materialia</i> , 2020, 200, 943-958.	7.9	72
12	Temperature effect on strain-induced phase transformation of cobalt. <i>Materials Letters</i> , 2020, 281, 128812.	2.6	11
13	A novel insight into the primary creep regeneration behaviour of a polycrystalline material at high-temperature using in-situ neutron diffraction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 786, 139374.	5.6	4
14	In situ measurement of elastic and total strains during ambient and high temperature deformation of a polygranular graphite. <i>Carbon</i> , 2020, 163, 308-323.	10.3	15
15	Measurement of residual strain in tantalum-clad tungsten after hot isostatic pressing. <i>Journal of Neutron Research</i> , 2020, 22, 287-297.	1.1	0
16	Measurement of strain evolution in overloaded roller bearings using energy dispersive X-ray diffraction. <i>Tribology International</i> , 2019, 140, 105893.	5.9	8
17	Residual stress in laser clad rail. <i>Tribology International</i> , 2019, 140, 105844.	5.9	28
18	Using Variant Selection to Facilitate Accurate Fitting of ϵ Peaks in Neutron Diffraction. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019, 50, 5421-5432.	2.2	9

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19	Application of neutron imaging to detect and quantify fatigue cracking. International Journal of Mechanical Sciences, 2019, 159, 182-194.	6.7	19
20	Evaluation of residual stresses induced by cold spraying of Ti-6Al-4V on Ti-6Al-4V substrates. Surface and Coatings Technology, 2019, 374, 591-602.	4.8	37
21	Influence of a 1.5â€‰T magnetic field on the tensile properties of Eurofer-97 steel. Fusion Engineering and Design, 2019, 141, 68-72.	1.9	8
22	Determination of very low concentrations of hydrogen in zirconium alloys by neutron imaging. Journal of Nuclear Materials, 2018, 503, 98-109.	2.7	29
23	FEM prediction of welding residual stresses in fibre laser-welded AA 2024-T3 and comparison with experimental measurement. International Journal of Advanced Manufacturing Technology, 2018, 95, 4243-4263.	3.0	22
24	Type I and type II residual stress in iron meteorites determined by neutron diffraction measurements. Planetary and Space Science, 2018, 153, 72-78.	1.7	5
25	Large An hysteretic Deformation of Shape Memory Alloys at Postcritical Temperatures and Stresses. Physica Status Solidi (B): Basic Research, 2018, 255, 1700273.	1.5	5
26	Effect of hydrogen charging on dislocation multiplication in pre-strained super duplex stainless steel. Scripta Materialia, 2018, 143, 20-24.	5.2	22
27	The influence of temperature on deformation-induced martensitic transformation in 301 stainless steel. Materials Science and Technology, 2018, 34, 2114-2125.	1.6	8
28	Modelling and neutron diffraction characterization of the interfacial bonding of spray formed dissimilar steels. Acta Materialia, 2018, 155, 318-330.	7.9	10
29	An <i>in situ</i> thermo-mechanical rig for lattice strain measurement during creep using neutron diffraction. Review of Scientific Instruments, 2018, 89, 055110.	1.3	2
30	Control of residual stress and distortion in aluminium wire + arc additive manufacture with rolling. Additive Manufacturing, 2018, 22, 775-783.	3.0	94
31	Time-of-Flight Neutron Imaging on IMAT@ISIS: A New User Facility for Materials Science. Journal of Imaging, 2018, 4, 47.	3.0	50
32	Probing deformation mechanisms of a FeCoCrNi high-entropy alloy at 293 and 77â€‰K using in situ neutron diffraction. Acta Materialia, 2018, 154, 79-89.	7.9	207
33	Deformation mechanisms of Mo alloyed FeCoCrNi high entropy alloy: In situ neutron diffraction. Acta Materialia, 2017, 127, 471-480.	7.9	153
34	Characterisation of nanovoiding in dental porcelain using small angle neutron scattering and transmission electron microscopy. Dental Materials, 2017, 33, 486-497.	3.5	5
35	Sample environment for neutron scattering measurements of internal stresses in engineering materials in the temperature range of 6 K to 300 K. Review of Scientific Instruments, 2017, 88, 025103.	1.3	15
36	Effects of strain rate on the microstructure evolution and mechanical response of magnesium alloy AZ31. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 684, 37-46.	5.6	41

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37	Effect of boundary conditions on the evolution of lattice strains in a polycrystalline austenitic stainless steel. <i>Journal of Materials Science</i> , 2017, 52, 7929-7936.	3.7	12
38	Visco-plasticity during in-situ cooling from solidification of a nickel-base single crystal superalloy using neutron diffraction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 681, 32-40.	5.6	7
39	Materials analysis opportunities on the new neutron imaging facility IMAT@ISIS. <i>Journal of Instrumentation</i> , 2016, 11, C03014-C03014.	1.2	31
40	<i>In situ</i> time-of-flight neutron imaging of NiO-YSZ anode support reduction under influence of stress. <i>Journal of Applied Crystallography</i> , 2016, 49, 1674-1681.	4.5	21
41	Modelling and control of neutron and synchrotron beamline positioning systems. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2016, 813, 123-131.	1.6	3
42	In situ neutron measurements and modelling of the intergranular strains in the near- β titanium alloy Ti-21S. <i>Acta Materialia</i> , 2016, 109, 341-352.	7.9	35
43	In situ measurement of the strains within a mechanically loaded polygranular graphite. <i>Carbon</i> , 2016, 96, 285-302.	10.3	51
44	An Experiment Using Neutron Diffraction to Investigate Residual Strain Distribution in a Hot Isostatic Pressed (HIPED) Target Plate. <i>Materials Today: Proceedings</i> , 2015, 2, S267-S273.	1.8	2
45	A Neutron Diffraction Study of Texture Evolution under Deformation in a Hot Rolled TWIP Steel. <i>Materials Today: Proceedings</i> , 2015, 2, S261-S266.	1.8	2
46	Flexible sample environment for high resolution neutron imaging at high temperatures in controlled atmosphere. <i>Review of Scientific Instruments</i> , 2015, 86, 125109.	1.3	13
47	Phase composition mapping of a 17th century Japanese helmet. <i>Journal of Analytical Atomic Spectrometry</i> , 2015, 30, 707-712.	3.0	5
48	Characterization of the residual stresses in spray-formed steels using neutron diffraction. <i>Scripta Materialia</i> , 2015, 100, 82-85.	5.2	8
49	In-situ neutron diffraction measurement of stress redistribution in a dissimilar joint during heat treatment. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 627, 161-170.	5.6	10
50	Tensile secondary creep rate analysis of a dental veneering porcelain. <i>Thin Solid Films</i> , 2015, 596, 269-276.	1.8	6
51	Calculations of single crystal elastic constants for yttria partially stabilised zirconia from powder diffraction data. <i>Journal of Applied Physics</i> , 2014, 116, .	2.5	19
52	Martensitic Phase Transformation and Deformation Behavior of Fe-Mn-Al Twinning-Induced Plasticity Steel during High-Pressure Torsion. <i>Advanced Engineering Materials</i> , 2014, 16, 927-932.	3.5	12
53	On low temperature bainite transformation characteristics using in-situ neutron diffraction and atom probe tomography. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 589, 303-309.	5.6	28
54	Texture analysis with a time-of-flight neutron strain scanner. <i>Journal of Applied Crystallography</i> , 2014, 47, 1337-1354.	4.5	25

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55	Defect dynamics in polycrystalline zirconium alloy probed <i>in situ</i> by primary extinction of neutron diffraction. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	21
56	Evaluation of Residual Stresses in Steel-to-Nickel Dissimilar Joints. , 2013, , .		3
57	Compressive behaviour of nanocrystalline Mg ⁵ Al alloys. <i>Materials Technology</i> , 2012, 27, 85-87.	3.0	4
58	Measurement and Simulation of Residual Strain in a Laser Welded Titanium Ring. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2012, 56, 2-8.	2.5	12
59	In Situ Characterization of Lattice Structure Evolution during Phase Transformation of Zr-2.5Nb. <i>Advanced Engineering Materials</i> , 2011, 13, 882-886.	3.5	19
60	Phase transition and ordering behavior of ternary Ti-Al-Mo alloys using in-situ neutron diffraction. <i>International Journal of Materials Research</i> , 2011, 102, 697-702.	0.3	37
61	Micro-structural characterization of laboratory heats of the Ferric/Martensitic steels HT-9 and T91. <i>Journal of Nuclear Materials</i> , 2010, 403, 7-14.	2.7	17
62	Influence of strain rate on mechanical properties and deformation texture of hot-pressed and rolled beryllium. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 5181-5188.	5.6	32
63	Nanoindentation on ion irradiated steels. <i>Journal of Nuclear Materials</i> , 2009, 389, 239-247.	2.7	111
64	In situ neutron diffraction study of the plastic deformation mechanisms of B2 ordered intermetallic alloys: NiAl, CuZn, and CeAg. <i>Acta Materialia</i> , 2009, 57, 213-223.	7.9	37
65	Characterisation of Residual Stress due to Fillet Rolling on Bolts Made of a Nickel Base Superalloy. <i>Advanced Materials Research</i> , 0, 996, 670-675.	0.3	4
66	Residual Stress in Wheels: Comparison of Neutron Diffraction and Ultrasonic Methods with Trends in RCF. , 0, , .		0