Saurabh Kabra

List of Publications by Year
in descending order

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66 papers	1,583 citations	331670 21 h-index	315739 38 g-index
66 all docs	66 docs citations	66 times ranked	1674 citing authors

#	Article	IF	Citations
1	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
2	Deformation mechanisms of Mo alloyed FeCoCrNi high entropy alloy: In situ neutron diffraction. Acta Materialia, 2017, 127, 471-480.	7.9	153
3	Nanoindentation on ion irradiated steels. Journal of Nuclear Materials, 2009, 389, 239-247.	2.7	111
4	Control of residual stress and distortion in aluminium wire + arc additive manufacture with rolling. Additive Manufacturing, 2018, 22, 775-783.	3.0	94
5	Synergistic deformation pathways in a TWIP steel at cryogenic temperatures: In situ neutron diffraction. Acta Materialia, 2020, 200, 943-958.	7.9	72
6	In situ measurement of the strains within a mechanically loaded polygranular graphite. Carbon, 2016, 96, 285-302.	10.3	51
7	Time-of-Flight Neutron Imaging on IMAT@ISIS: A New User Facility for Materials Science. Journal of Imaging, 2018, 4, 47.	3.0	50
8	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
9	Deformation mechanisms of FeCoCrNiMo0.2 high entropy alloy at 77 and 15ÂK. Scripta Materialia, 2020, 178, 166-170.	5.2	41
10	In situ neutron diffraction study of the plastic deformation mechanisms of B2 ordered intermetallic alloys: NiAl, CuZn, and CeAg. Acta Materialia, 2009, 57, 213-223.	7.9	37
11	Phase transition and ordering behavior of ternary Tiâ€“Alâ€“Mo alloys using in-situ neutron diffraction. International Journal of Materials Research, 2011, 102, 697-702.	0.3	37
12	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
13	In situ neutron measurements and modelling of the intergranular strains in the near-Î² titanium alloy Ti-Î²21S. Acta Materialia, 2016, 109, 341-352.	7.9	35
14	Influence of strain rate on mechanical properties and deformation texture of hot-pressed and rolled beryllium. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 5181-5188.	5.6	32
15	Materials analysis opportunities on the new neutron imaging facility IMAT@ISIS. Journal of Instrumentation, 2016, 11, C03014-C03014.	1.2	31
16	Determination of very low concentrations of hydrogen in zirconium alloys by neutron imaging. Journal of Nuclear Materials, 2018, 503, 98-109.	2.7	29
17	On low temperature bainite transformation characteristics using in-situ neutron diffraction and atom probe tomography. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 589, 303-309.	5.6	28
18	Residual stress in laser cladded rail. Tribology International, 2019, 140, 105844.	5.9	28

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19	Texture analysis with a time-of-flight neutron strain scanner. Journal of Applied Crystallography, 2014, 47, 1337-1354.	4.5	25
20	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
21	Effect of hydrogen charging on dislocation multiplication in pre-strained super duplex stainless steel. Scripta Materialia, 2018, 143, 20-24.	5.2	22
22	Defect dynamics in polycrystalline zirconium alloy probed in situ by primary extinction of neutron diffraction. Journal of Applied Physics, 2013, 113, .	2.5	21
23	In situ time-of-flight neutron imaging of NiOâ€“YSZ anode support reduction under influence of stress. Journal of Applied Crystallography, 2016, 49, 1674-1681.	4.5	21
24	In Situ Characterization of Lattice Structure Evolution during Phase Transformation of Zr-2.5Nb. Advanced Engineering Materials, 2011, 13, 882-886.	3.5	19
25	Calculations of single crystal elastic constants for yttria partially stabilised zirconia from powder diffraction data. Journal of Applied Physics, 2014, 116, .	2.5	19
26	Application of neutron imaging to detect and quantify fatigue cracking. International Journal of Mechanical Sciences, 2019, 159, 182-194.	6.7	19
27	Micro-structural characterization of laboratory heats of the Ferric/Martensitic steels HT-9 and T91. Journal of Nuclear Materials, 2010, 403, 7-14.	2.7	17
28	In situ neutron diffraction unravels deformation mechanisms of a strong and ductile FeCrNi medium entropy alloy. Journal of Materials Science and Technology, 2022, 116, 103-120.	10.7	16
29	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
30	In situ neutron diffraction study of a new type of stress-induced confined martensitic transformation in Fe22Co20Ni19Cr20Mn12Al7 high-entropy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 771, 138555.	5.6	15
31	In situ measurement of elastic and total strains during ambient and high temperature deformation of a polygranular graphite. Carbon, 2020, 163, 308-323.	10.3	15
32	Flexible sample environment for high resolution neutron imaging at high temperatures in controlled atmosphere. Review of Scientific Instruments, 2015, 86, 125109.	1.3	13
33	Measurement and Simulation of Residual Strain in a Laser Welded Titanium Ring. Welding in the World, Le Soudage Dans Le Monde, 2012, 56, 2-8.	2.5	12
34	Martensitic Phase Transformation and Deformation Behavior of Feâ€“Mnâ€“Câ€“Al Twinningâ€Induced Plasticity Steel during Highâ€Pressure Torsion. Advanced Engineering Materials, 2014, 16, 927-932.	3.5	12
35	Effect of boundary conditions on the evolution of lattice strains in a polycrystalline austenitic stainless steel. Journal of Materials Science, 2017, 52, 7929-7936.	3.7	12
36	Temperature effect on strain-induced phase transformation of cobalt. Materials Letters, 2020, 281, 128812.	2.6	11

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37	In-situ neutron diffraction measurement of stress redistribution in a dissimilar joint during heat treatment. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 627, 161-170.	5.6	10
38	Modelling and neutron diffraction characterization of the interfacial bonding of spray formed dissimilar steels. Acta Materialia, 2018, 155, 318-330.	7.9	10
39	Macro- and micro-mechanical behaviour of a <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si33.svg"><mml:mrow><mml:msup><mml:mrow><mml:mi>Î³</mml:mi></mml:mrow><mml:mrow><mml:mo>â€²</mml:mo> strengthened Ni-based superalloy at cryogenic temperatures. Materials and Design, 2021, 209, 109954.	7.0	10
40	Mechanical performance and deformation mechanisms at cryogenic temperatures of 316L stainless steel processed by laser powder bed fusion: In situ neutron diffraction. Scripta Materialia, 2022, 218, 114806.	5.2	10
41	Using Variant Selection to Facilitate Accurate Fitting of Î³â€³ Peaks in Neutron Diffraction. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 5421-5432.	2.2	9
42	Characterization of the residual stresses in spray-formed steels using neutron diffraction. Scripta Materialia, 2015, 100, 82-85.	5.2	8
43	The influence of temperature on deformation-induced martensitic transformation in 301 stainless steel. Materials Science and Technology, 2018, 34, 2114-2125.	1.6	8
44	Measurement of strain evolution in overloaded roller bearings using energy dispersive X-ray diffraction. Tribology International, 2019, 140, 105893.	5.9	8
45	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
46	Revealing the residual stress distribution in laser welded Eurofer97 steel by neutron diffraction and Bragg edge imaging. Journal of Materials Science and Technology, 2022, 114, 249-260.	10.7	8
47	Visco-plasticity during in-situ cooling from solidification of a nickel-base single crystal superalloy using neutron diffraction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 681, 32-40.	5.6	7
48	Tensile secondary creep rate analysis of a dental veneering porcelain. Thin Solid Films, 2015, 596, 269-276.	1.8	6
49	Evaluation of fracture toughness and residual stress in AISI 316L electron beam welds. Fatigue and Fracture of Engineering Materials and Structures, 2021, 44, 2015-2032.	3.4	6
50	Phase composition mapping of a 17th century Japanese helmet. Journal of Analytical Atomic Spectrometry, 2015, 30, 707-712.	3.0	5
51	Characterisation of nanovoiding in dental porcelain using small angle neutron scattering and transmission electron microscopy. Dental Materials, 2017, 33, 486-497.	3.5	5
52	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
53	Large Anhysteretic Deformation of Shape Memory Alloys at Postcritical Temperatures and Stresses. Physica Status Solidi (B): Basic Research, 2018, 255, 1700273.	1.5	5
54	Compressive behaviour of nanocrystalline Mgâ€“5Al alloys. Materials Technology, 2012, 27, 85-87.	3.0	4

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55	Characterisation of Residual Stress due to Fillet Rolling on Bolts Made of a Nickel Base Superalloy. Advanced Materials Research, 0, 996, 670-675.	0.3	4
56	A novel insight into the primary creep regeneration behaviour of a polycrystalline material at high-temperature using in-situ neutron diffraction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 786, 139374.	5.6	4
57	Quantitative analysis and benchmarking of positional accuracies of neutron strain scanners. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2021, 999, 165230.	1.6	4
58	Lattice strain development in an alpha titanium alloy studied using synchrotron and neutron diffraction. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 819, 141489.	5.6	4
59	Evaluation of Residual Stresses in Steel-to-Nickel Dissimilar Joints. , 2013, , .		3
60	Modelling and control of neutron and synchrotron beamline positioning systems. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2016, 813, 123-131.	1.6	3
61	In situ neutron diffraction reveals the effect of Cu micro-alloying on low-temperature tensile properties of TWIP steels. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 845, 143211.	5.6	3
62	An Experiment Using Neutron Diffraction to Investigate Residual Strain Distribution in a Hot Isostatic Pressed (HIPPED) Target Plate. Materials Today: Proceedings, 2015, 2, S267-S273.	1.8	2
63	A Neutron Diffraction Study of Texture Evolution under Deformation in a Hot Rolled TWIP Steel. Materials Today: Proceedings, 2015, 2, S261-S266.	1.8	2
64	An in situ thermo-mechanical rig for lattice strain measurement during creep using neutron diffraction. Review of Scientific Instruments, 2018, 89, 055110.	1.3	2
65	Measurement of residual strain in tantalum-clad tungsten after hot isostatic pressing. Journal of Neutron Research, 2020, 22, 287-297.	1.1	0
66	Residual Stress in Wheels: Comparison of Neutron Diffraction and Ultrasonic Methods with Trends in RCF. , 0, , .		0