

Phil Withers

List of Publications by Year in Descending Order

Source: <https://exaly.com/author-pdf/3327625/phil-withers-publications-by-year.pdf>
Version: 2024-04-09

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.
The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

690 papers	24,851 citations	72 h-index	128 g-index
739 ext. papers	28,502 ext. citations	4 avg, IF	7.54 L-index

#	Paper	IF	Citations
690	Improved thermal conductivity of graphite through infiltration with SiC and Si ₃ N ₄ inclusions. <i>Journal of the European Ceramic Society</i> , 2022 , 42, 1877-1883	6	0
689	In situ X-ray imaging of fatigue crack growth from multiple defects in additively manufactured AlSi10Mg alloy. <i>International Journal of Fatigue</i> , 2022 , 155, 106616	5	8
688	The potency of defects on fatigue of additively manufactured metals. <i>International Journal of Mechanical Sciences</i> , 2022 , 221, 107185	5.5	2
687	4D imaging of void nucleation, growth, and coalescence from large and small inclusions in steel under tensile deformation. <i>Journal of Materials Science and Technology</i> , 2022 , 123, 168-176	9.1	0
686	Recovering the second moment of the strain distribution from neutron Bragg edge data. <i>Applied Physics Letters</i> , 2022 , 120, 164102	3.4	
685	Enhanced hyperspectral tomography for bioimaging by spatio-spectral reconstruction. <i>Scientific Reports</i> , 2021 , 11, 20818	4.9	4
684	Macro-, meso- and microstructural characterization of metallic lattice structures manufactured by additive manufacturing assisted investment casting. <i>Scientific Reports</i> , 2021 , 11, 4974	4.9	8
683	Corrosion fatigue lifetime assessment of high-speed railway axle EA4T steel with artificial scratch. <i>Engineering Fracture Mechanics</i> , 2021 , 245, 107588	4.2	52
682	Size segregation of irregular granular materials captured by time-resolved 3D imaging. <i>Scientific Reports</i> , 2021 , 11, 8352	4.9	2
681	Generation of high-fidelity random fields from micro CT images and phase field-based mesoscale fracture modelling of concrete. <i>Engineering Fracture Mechanics</i> , 2021 , 249, 107762	4.2	4
680	Depth-profiling of residual stress and microstructure for austenitic stainless steel surface treated by cavitation, shot and laser peening. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 813, 141037	5.3	10
679	Compaction, nesting and image based permeability analysis of multi-layer dry preforms by computed tomography (CT). <i>Composite Structures</i> , 2021 , 263, 113676	5.3	8
678	Assessing the efficacy of tomographic reconstruction methods through physical quantification techniques. <i>Measurement Science and Technology</i> , 2021 , 32, 075404	2	2
677	In-situ synchrotron X-ray tomography investigation of damage mechanism of an extruded magnesium alloy in uniaxial low-cycle fatigue with ratchetting. <i>Acta Materialia</i> , 2021 , 211, 116881	8.4	13
676	Correction of artefacts associated with large area EBSD. <i>Ultramicroscopy</i> , 2021 , 226, 113315	3.1	3
675	Core Imaging Library - Part I: a versatile Python framework for tomographic imaging. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021 , 379, 20200192	3	9
674	Nanoscale orientation mapping made easy: a new sample preparation workflow for rapid, large-area TKD analysis. <i>Microscopy and Microanalysis</i> , 2021 , 27, 1596-1598	0.5	0

673	Core Imaging Library - Part II: multichannel reconstruction for dynamic and spectral tomography. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2021 , 379, 20200193	6
672	Friction stir welding/processing of metals and alloys: A comprehensive review on microstructural evolution. <i>Progress in Materials Science</i> , 2021 , 117, 100752	42.2 154
671	Comparing Xe pFIB and Ga FIB for TEM sample preparation of Al alloys: Minimising FIB-induced artefacts. <i>Journal of Microscopy</i> , 2021 , 282, 101-112	1.9 11
670	Tracking polycrystal evolution non-destructively in 3D by laboratory X-ray diffraction contrast tomography. <i>Materials Characterization</i> , 2021 , 172, 110814	3.9 6
669	Realization of 3D epoxy resin/Ti3C2Tx MXene aerogel composites for low-voltage electrothermal heating. <i>2D Materials</i> , 2021 , 8, 025022	5.9 4
668	Crystallographic tomography and molecular modelling of structured organic polycrystalline powders. <i>CrystEngComm</i> , 2021 , 23, 2520-2531	3.3 2
667	X-ray computed tomography. <i>Nature Reviews Methods Primers</i> , 2021 , 1,	72
666	A machine-learning fatigue life prediction approach of additively manufactured metals. <i>Engineering Fracture Mechanics</i> , 2021 , 242, 107508	4.2 47
665	Fine equiaxed zone induced softening and failure behavior of 7050 aluminum alloy hybrid laser welds. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 821, 141597	5.3 1
664	Unlocking secrets of inhalation blends through X-ray Computed Tomography and Microscopy. <i>Microscopy and Microanalysis</i> , 2021 , 27, 292-295	0.5
663	Correlative Tomography - Bridging the length-scales through correlative X-ray and Electron Imaging. <i>Microscopy and Microanalysis</i> , 2021 , 27, 932-933	0.5
662	Damage accumulation during high temperature fatigue of Ti/SiCf metal matrix composites under different stress amplitudes. <i>Acta Materialia</i> , 2021 , 213, 116976	8.4 2
661	A three-dimensional mechanistic study of the drivers of classical twin nucleation and variant selection in Mg alloys: A mesoscale modelling and experimental study. <i>International Journal of Plasticity</i> , 2021 , 143, 103027	7.6 5
660	Complementary time-lapse datasets of x-ray computed tomography and real-time strain mapping for an study of non-crimp glass fibre composites under fatigue loading. <i>Data in Brief</i> , 2021 , 37, 107157	1.2
659	Morphological variability in the mucosal attachment site of <i>Trichuris muris</i> revealed by X-ray microcomputed tomography. <i>International Journal for Parasitology</i> , 2021 , 51, 797-807	4.3 2
658	Evolution of fibre deflection leading to kink-band formation in unidirectional glass fibre/epoxy composite under axial compression. <i>Composites Science and Technology</i> , 2021 , 213, 108929	8.6 5
657	Hot dwell-fatigue behaviour of additively manufactured AlSi10Mg alloy: Relaxation, cyclic softening and fracture mechanisms. <i>International Journal of Fatigue</i> , 2021 , 151, 106408	5 7
656	The effect of defect population on the anisotropic fatigue resistance of AlSi10Mg alloy fabricated by laser powder bed fusion. <i>International Journal of Fatigue</i> , 2021 , 151, 106317	5 52

655	X-ray computed tomographic and focused ion beam/electron microscopic investigation of coating defects in niobium-coated copper superconducting radio-frequency cavities. <i>Materials Chemistry and Physics</i> , 2021 , 273, 125062	4.4	1
654	Observing the evolution of fatigue damage and associated strain fields in a correlative, multiscale 3D time-lapse study of quasi-unidirectional glass fibre composites. <i>IOP Conference Series: Materials Science and Engineering</i> , 2020 , 942, 012039	0.4	1
653	An in-situ method for protecting internal cracks/pores from ion beam damage and reducing curtaining for TEM sample preparation using FIB. <i>Ultramicroscopy</i> , 2020 , 219, 113135	3.1	4
652	Measuring the Particle Packing of L-Glutamic Acid Crystals through X-ray Computed Tomography for Understanding Powder Flow and Consolidation Behavior. <i>Crystal Growth and Design</i> , 2020 , 20, 4252-4263	2.5	9
651	A new approach to correlate the defect population with the fatigue life of selective laser melted Ti-6Al-4V alloy. <i>International Journal of Fatigue</i> , 2020 , 136, 105584	5	59
650	Defect evolution during high temperature tension-tension fatigue of SLM AISi10Mg alloy by synchrotron tomography. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 792, 139809	5.3	27
649	Environmentally induced crack (EIC) initiation, propagation, and failure: A 3D in-situ time-lapse study of AA5083 H131. <i>Corrosion Science</i> , 2020 , 174, 108834	6.8	6
648	X-ray Micro-Computed Tomography: An Emerging Technology to Analyze Vascular Calcification in Animal Models. <i>International Journal of Molecular Sciences</i> , 2020 , 21,	6.3	3
647	Role of SiC and Si3N4 reinforcing particles in the tribological performance of graphite-based composites. <i>Wear</i> , 2020 , 456-457, 203399	3.5	3
646	X-ray computed tomography in life sciences. <i>BMC Biology</i> , 2020 , 18, 21	7.3	35
645	A conformable high temperature nitride coating for Ti alloys. <i>Acta Materialia</i> , 2020 , 189, 274-283	8.4	9
644	The effect of grain size on the fatigue overload behaviour of nickel. <i>Materials and Design</i> , 2020 , 189, 108526	8.1	12
643	Additive manufacturing assisted investment casting: A low-cost method to fabricate periodic metallic cellular lattices. <i>Additive Manufacturing</i> , 2020 , 33, 101085	6.1	21
642	The influence of electrodeposited Ni-Co alloy coating microstructure on CO2 corrosion resistance on X65 steel. <i>Corrosion Science</i> , 2020 , 167, 108485	6.8	17
641	Industrial Gear Oils: Influence of Bulk Oil Temperature and Contact Pressure on Tribological Performance and Subsurface Changes. <i>Tribology Letters</i> , 2020 , 68, 1	2.8	3
640	Serial sectioning in the SEM for three dimensional materials science. <i>Current Opinion in Solid State and Materials Science</i> , 2020 , 24, 100817	12	29
639	3D characterisation of dry powder inhaler formulations: Developing X-ray micro computed tomography approaches. <i>European Journal of Pharmaceutics and Biopharmaceutics</i> , 2020 , 151, 32-44	5.7	9
638	Characterisation of cuticular inflation development and ultrastructure in <i>Trichuris muris</i> using correlative X-ray computed tomography and electron microscopy. <i>Scientific Reports</i> , 2020 , 10, 5846	4.9	9

637	Novel Methods for Recording Stress-Strain Curves in Proton Irradiated Material. <i>Scientific Reports</i> , 2020 , 10, 5353	4.9	0
636	Coupled Broad Ion Beam-Scanning Electron Microscopy (BIB-SEM) for polishing and three dimensional (3D) serial section tomography (SST). <i>Ultramicroscopy</i> , 2020 , 214, 112989	3.1	7
635	Multiscale image-based modelling of damage and fracture in carbon fibre reinforced polymer composites. <i>Composites Science and Technology</i> , 2020 , 198, 108243	8.6	7
634	The effect of anisotropic microstructure on the crack growth and fatigue overload behaviour of ultrafine-grained nickel. <i>Acta Materialia</i> , 2020 , 184, 225-240	8.4	7
633	Damage evolution in braided composite tubes under torsion studied by in-situ X-ray computed tomography. <i>Composites Science and Technology</i> , 2020 , 188, 107976	8.6	25
632	Redistribution of carbon caused by butterfly defects in bearing steels. <i>Acta Materialia</i> , 2020 , 183, 390-397	7.4	12
631	MXene Tunable Lamellae Architectures for Supercapacitor Electrodes. <i>ACS Applied Energy Materials</i> , 2020 , 3, 411-422	6.1	21
630	Following the effect of braid architecture on performance and damage of carbon fibre/epoxy composite tubes during torsional straining. <i>Composites Science and Technology</i> , 2020 , 200, 108451	8.6	8
629	Post-fatigue Investigation of SLM Ti64 Scaffolds by 3D Correlative Tomography. <i>Microscopy and Microanalysis</i> , 2020 , 26, 424-425	0.5	
628	Tracking the calcium-magnesium-alumino-silicate (CMAS) infiltration into an air-plasma spray thermal barrier coating using X-ray imaging. <i>Scripta Materialia</i> , 2020 , 176, 94-98	5.6	9
627	The effect of manufacturing defects on the fatigue life of selective laser melted Ti-6Al-4V structures. <i>Materials and Design</i> , 2020 , 192, 108708	8.1	104
626	pyCM: An open-source computational framework for residual stress analysis employing the Contour Method. <i>SoftwareX</i> , 2020 , 11, 100458	2.7	3
625	Laminography in the lab: imaging planar objects using a conventional x-ray CT scanner. <i>Measurement Science and Technology</i> , 2019 , 30, 035401	2	9
624	Evolution of kink bands in a notched unidirectional carbon fibre-epoxy composite under four-point bending. <i>Composites Science and Technology</i> , 2019 , 172, 143-152	8.6	22
623	Estimation of the plastic zone in fatigue through the thickness based on synchrotron diffraction data. <i>Procedia Structural Integrity</i> , 2019 , 17, 872-877	1	0
622	Plasma FIB Spin Milling for 3D Residual Stress Measurements. <i>Microscopy and Microanalysis</i> , 2019 , 25, 882-883	0.5	1
621	Initiation and short crack growth behaviour of environmentally induced cracks in AA5083 H131 investigated across time and length scales. <i>Corrosion Reviews</i> , 2019 , 37, 469-481	3.2	7
620	Completing the picture through correlative characterization. <i>Nature Materials</i> , 2019 , 18, 1041-1049	27	43

619	Behavior of 316L stainless steel containing corrosion pits under cyclic loading. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2019 , 70, 2009-2019	1.6	6
618	Soft body impact resistance of composite foam core sandwich panels with unidirectional corrugated and tubular reinforcements. <i>International Journal of Impact Engineering</i> , 2019 , 132, 103320	4	7
617	In situ through-thickness analysis of crack tip fields with synchrotron X-ray diffraction. <i>International Journal of Fatigue</i> , 2019 , 127, 500-508	5	6
616	In Situ Study of the Stress Relaxation During Aging of Nickel-Base Superalloy Forgings. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019 , 50, 3555-3565 ^{2,3}	2.3	6
615	The heterogenous distribution of white etching matter (WEM) around subsurface cracks in bearing steels. <i>Acta Materialia</i> , 2019 , 174, 300-309	8.4	17
614	Determination of local residual stress in an air plasma spray thermal barrier coating (APS-TBC) by microscale ring coring using a picosecond laser. <i>Scripta Materialia</i> , 2019 , 167, 126-130	5.6	10
613	CCPi-Regularisation toolkit for computed tomographic image reconstruction with proximal splitting algorithms. <i>SoftwareX</i> , 2019 , 9, 317-323	2.7	10
612	Reliability of Algorithms Interpreting Topological and Geometric Properties of Porous Media for Pore Network Modelling. <i>Transport in Porous Media</i> , 2019 , 128, 271-301	3.1	30
611	Time-lapse imaging of particle invasion and deposition in porous media using in situ X-ray radiography. <i>Journal of Petroleum Science and Engineering</i> , 2019 , 177, 384-391	4.4	6
610	Experimental steering of electron microscopy studies using prior X-ray computed tomography. <i>Ultramicroscopy</i> , 2019 , 201, 58-67	3.1	12
609	Effect of preheating on the thermal, microstructural and mechanical properties of selective electron beam melted Ti-6Al-4V components. <i>Materials and Design</i> , 2019 , 174, 107792	8.1	28
608	High temperature low cycle fatigue characterization of equiaxed MAR-M-247. <i>International Journal of Fatigue</i> , 2019 , 123, 225-237	5	1
607	Plasma FIB Spin Milling for Large Volume Serial Sectioning Tomography. <i>Microscopy and Microanalysis</i> , 2019 , 25, 350-351	0.5	4
606	On the Application of Xe+ Plasma FIB for Micro-fabrication of Small-scale Tensile Specimens. <i>Experimental Mechanics</i> , 2019 , 59, 1113-1125	2.6	4
605	Anisotropic crack propagation and deformation in dentin observed by four-dimensional X-ray nano-computed tomography. <i>Acta Biomaterialia</i> , 2019 , 96, 400-411	10.8	15
604	MAR-M-247 creep assessment through a modified theta projection model. <i>Materialia</i> , 2019 , 7, 100392	3.2	3
603	Advances in Multi-Beam and Multi-Ion FIB-SEM for 3D Correlative Microscopy. <i>Microscopy and Microanalysis</i> , 2019 , 25, 870-871	0.5	3
602	Rich multi-dimensional correlative imaging. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019 , 580, 012014	0.4	4

601	Tracking capsule activation and crack healing in a microcapsule-based self-healing polymer. <i>Scientific Reports</i> , 2019 , 9, 17773	4.9	12
600	Weld zone and residual stress development in AA7050 stationary shoulder friction stir T-joint weld. <i>Journal of Materials Processing Technology</i> , 2019 , 263, 256-265	5.3	21
599	The effect of powder oxidation on defect formation in laser additive manufacturing. <i>Acta Materialia</i> , 2019 , 166, 294-305	8.4	116
598	4D visualisation of in situ nano-compression of Li-ion cathode materials to mimic early stage calendaring. <i>Materials Horizons</i> , 2019 , 6, 612-617	14.4	17
597	Time-lapse three-dimensional imaging of crack propagation in beetle cuticle. <i>Acta Biomaterialia</i> , 2019 , 86, 109-116	10.8	11
596	Multi-modal plasma focused ion beam serial section tomography of an organic paint coating. <i>Ultramicroscopy</i> , 2019 , 197, 1-10	3.1	6
595	Quantifying fatigue overload retardation mechanisms by energy dispersive X-ray diffraction. <i>Journal of the Mechanics and Physics of Solids</i> , 2019 , 124, 392-410	5	19
594	Time-dependent in situ measurement of atmospheric corrosion rates of duplex stainless steel wires. <i>Npj Materials Degradation</i> , 2018 , 2,	5.7	22
593	X-ray micro-computed tomography (CT): an emerging opportunity in parasite imaging. <i>Parasitology</i> , 2018 , 145, 848-854	2.7	21
592	Industrial Gear Oils: Tribological Performance and Subsurface Changes. <i>Tribology Letters</i> , 2018 , 66, 65	2.8	7
591	3D characterization of porosity in an air plasma-sprayed thermal barrier coating and its effect on thermal conductivity. <i>Journal of the American Ceramic Society</i> , 2018 , 101, 2482-2492	3.8	20
590	Thermo Mechanical properties of SPS produced self-healing thermal barrier coatings containing pure and alloyed MoSi ₂ particles. <i>Journal of the European Ceramic Society</i> , 2018 , 38, 4268-4275	6	17
589	Microstructural degradation of Electron Beam-Physical Vapour Deposition Thermal Barrier Coating during thermal cycling tracked by X-ray micro-computed tomography. <i>Scripta Materialia</i> , 2018 , 152, 79-83	5.6	3
588	Effect of hydration and crack orientation on crack-tip strain, crack opening displacement and crack-tip shielding in elephant dentin. <i>Dental Materials</i> , 2018 , 34, 1041-1053	5.7	9
587	In situ X-ray imaging of defect and molten pool dynamics in laser additive manufacturing. <i>Nature Communications</i> , 2018 , 9, 1355	17.4	315
586	Joint image reconstruction method with correlative multi-channel prior for x-ray spectral computed tomography. <i>Inverse Problems</i> , 2018 , 34, 064001	2.3	26
585	Digital element simulation of aligned tows during compaction validated by computed tomography (CT). <i>International Journal of Solids and Structures</i> , 2018 , 154, 78-87	3.1	23
584	High resolution low kV EBSD of heavily deformed and nanocrystalline Aluminium by dictionary-based indexing. <i>Scientific Reports</i> , 2018 , 8, 10991	4.9	37

583	Investigation of Cracking in Additively Manufactured IN718 by Correlative Tomography. <i>Microscopy and Microanalysis</i> , 2018 , 24, 366-367	0.5	2
582	4.10 Residual Stresses in Metal Matrix Composites 2018 , 275-286		
581	TomoPhantom, a software package to generate 2D/3D analytical phantoms for CT image reconstruction algorithm benchmarks. <i>SoftwareX</i> , 2018 , 7, 150-155	2.7	17
580	Time-lapse 3D imaging of calcite precipitation in a microporous column. <i>Geochimica Et Cosmochimica Acta</i> , 2018 , 222, 156-170	5.5	13
579	Residual stress control of multipass welds using low transformation temperature fillers. <i>Materials Science and Technology</i> , 2018 , 34, 519-528	1.5	14
578	The effect of shoulder coupling on the residual stress and hardness distribution in AA7050 friction stir butt welds. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 735, 218-227	5.3	26
577	Investigation of residual stress distribution and texture evolution in AA7050 stationary shoulder friction stir welded joints. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 712, 531-538	5.3	20
576	X-ray computed tomography of polymer composites. <i>Composites Science and Technology</i> , 2018 , 156, 3058-3069	3.9	287
575	Time-Lapse Correlative 3D Imaging Applied to the Corrosion Study of AZ31 Mg Alloy in a Saline Environment 2018 , 165-177		3
574	MicroCT imaging reveals differential 3D micro-scale remodelling of the murine aorta in ageing and Marfan syndrome. <i>Theranostics</i> , 2018 , 8, 6038-6052	12.1	7
573	Time-Lapse Helical X-ray Computed Tomography (CT) Study of Tensile Fatigue Damage Formation in Composites for Wind Turbine Blades. <i>Materials</i> , 2018 , 11,	3.5	11
572	Linking microstructure and processing defects to mechanical properties of selectively laser melted AlSi10Mg alloy. <i>Theoretical and Applied Fracture Mechanics</i> , 2018 , 98, 123-133	3.7	50
571	New software protocols for enabling laboratory based temporal CT. <i>Review of Scientific Instruments</i> , 2018 , 89, 093702	1.7	17
570	Synchrotron X-ray diffraction based method for stress intensity factor evaluation in the bulk of materials. <i>Theoretical and Applied Fracture Mechanics</i> , 2018 , 98, 72-77	3.7	6
569	Quantifying fibre reorientation during axial compression of a composite through time-lapse X-ray imaging and individual fibre tracking. <i>Composites Science and Technology</i> , 2018 , 168, 47-54	8.6	28
568	Laser-matter interactions in additive manufacturing of stainless steel SS316L and 13-93 bioactive glass revealed by in situ X-ray imaging. <i>Additive Manufacturing</i> , 2018 , 24, 647-657	6.1	40
567	7.6 Computed Tomography of Composites 2018 , 101-118		2
566	On compression and damage evolution in two thermoplastics. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017 , 473, 20160495	2.4	2

565	On the compression of aluminium foam structures under shock 2017 ,		3
564	On the high-rate failure of carbon fibre composites 2017 ,		2
563	How to fragment peralkaline rhyolites: Observations on pumice using combined multi-scale 2D and 3D imaging. <i>Journal of Volcanology and Geothermal Research</i> , 2017 , 336, 179-191	2.8	19
562	A Novel Tomographic Reconstruction Method Based on the Robust Student's t Function For Suppressing Data Outliers. <i>IEEE Transactions on Computational Imaging</i> , 2017 , 3, 682-693	4.5	8
561	Time-lapse lab-based x-ray nano-CT study of corrosion damage. <i>Journal of Microscopy</i> , 2017 , 267, 98-106	1.9	14
560	Comparison of grain to grain orientation and stiffness mapping by spatially resolved acoustic spectroscopy and EBSD. <i>Journal of Microscopy</i> , 2017 , 267, 89-97	1.9	12
559	Influence of Tow Architecture on Compaction and Nesting in Textile Preforms. <i>Applied Composite Materials</i> , 2017 , 24, 337-350	2	26
558	Crystallographic effects on the corrosion of twin roll cast AZ31 Mg alloy sheet. <i>Acta Materialia</i> , 2017 , 133, 90-99	8.4	55
557	Mapping fibre failure in situ in carbon fibre reinforced polymers by fast synchrotron X-ray computed tomography. <i>Composites Science and Technology</i> , 2017 , 149, 81-89	8.6	57
556	Ablation-resistant carbide ZrTiCB for oxidizing environments up to 3,000 °C. <i>Nature Communications</i> , 2017 , 8, 15836	17.4	85
555	A multi-scale correlative investigation of ductile fracture. <i>Acta Materialia</i> , 2017 , 130, 56-68	8.4	26
554	Comparison of residual stress distributions in conventional and stationary shoulder high-strength aluminum alloy friction stir welds. <i>Journal of Materials Processing Technology</i> , 2017 , 242, 92-100	5.3	66
553	X-ray micro computed tomography characterization of cellular SiC foams for their applications in chemical engineering. <i>Materials Characterization</i> , 2017 , 123, 20-28	3.9	34
552	Broad ion beam serial section tomography. <i>Ultramicroscopy</i> , 2017 , 172, 52-64	3.1	35
551	X-ray computed tomography study of kink bands in unidirectional composites. <i>Composite Structures</i> , 2017 , 160, 917-924	5.3	53
550	Model-based iterative reconstruction using higher-order regularization of dynamic synchrotron data. <i>Measurement Science and Technology</i> , 2017 , 28, 094004	2	8
549	Developments in Large Volume 3D Analysis via P-FIB: EBSD & EDS. <i>Microscopy and Microanalysis</i> , 2017 , 23, 284-285	0.5	2
548	Correlative Tomography for Additive Manufacturing of Biomedical Implants. <i>Microscopy and Microanalysis</i> , 2017 , 23, 342-343	0.5	4

547	The quantification of impact damage distribution in composite laminates by analysis of X-ray computed tomograms. <i>Composites Science and Technology</i> , 2017 , 152, 139-148	8.6	45
546	The Influence of Porosity on Fatigue Crack Initiation in Additively Manufactured Titanium Components. <i>Scientific Reports</i> , 2017 , 7, 7308	4.9	186
545	The imaging of failure in structural materials by synchrotron radiation X-ray microtomography. <i>Engineering Fracture Mechanics</i> , 2017 , 182, 127-156	4.2	114
544	Microstructural evolution during sintering of copper particles studied by laboratory diffraction contrast tomography (LabDCT). <i>Scientific Reports</i> , 2017 , 7, 5251	4.9	40
543	Multiscale correlative tomography: an investigation of creep cavitation in 316 stainless steel. <i>Scientific Reports</i> , 2017 , 7, 7332	4.9	28
542	Degradation of metallic materials studied by correlative tomography. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017 , 219, 012001	0.4	6
541	3D elemental mapping of materials and structures by laboratory scale spectroscopic X-ray tomography. <i>Journal of Physics: Conference Series</i> , 2017 , 849, 012013	0.3	
540	X-ray microtomography as a tool for investigating the petrological context of Precambrian cellular remains. <i>Geological Society Special Publication</i> , 2017 , 448, 33-56	1.7	6
539	The effect of the weld fusion zone shape on residual stress in submerged arc welding. <i>International Journal of Advanced Manufacturing Technology</i> , 2017 , 90, 3451-3464	3.2	12
538	Crack healing behaviour of Cr 2 AlC MAX phase studied by X-ray tomography. <i>Journal of the European Ceramic Society</i> , 2017 , 37, 441-450	6	32
537	SparseBeads data: benchmarking sparsity-regularized computed tomography. <i>Measurement Science and Technology</i> , 2017 , 28, 124005	2	41
536	Automated 3D Block Preparation Procedure for Focused Ion Beam 3D Analyses. <i>Microscopy and Microanalysis</i> , 2017 , 23, 286-287	0.5	2
535	Three dimensional imaging of electrical trees in multiple stages 2017 ,		1
534	X-ray Tomography Characterisation of Lattice Structures Processed by Selective Electron Beam Melting. <i>Metals</i> , 2017 , 7, 300	2.3	9
533	Use of Particle Tracking to Determine Optimal Release Dates and Locations for Rehabilitated Neonate Sea Turtles. <i>Frontiers in Marine Science</i> , 2017 , 4,	4.5	10
532	X-ray Tomographic Imaging of Tensile Deformation Modes of Electrospun Biodegradable Polyester Fibers. <i>Frontiers in Materials</i> , 2017 , 4,	4	20
531	A study of the progression of damage in an axially loaded femur using X-ray computed tomography and digital image correlation. <i>PeerJ</i> , 2017 , 5, e3416	3.1	2
530	Strain-induced reactivation of corrosion pits in austenitic stainless steel. <i>Corrosion Science</i> , 2017 , 125, 12-19	6.8	29

529	Evolution of damage during the fatigue of 3D woven glass-fibre reinforced composites subjected to tension-tension loading observed by time-lapse X-ray tomography. <i>Composites Part A: Applied Science and Manufacturing</i> , 2016 , 82, 279-290	8.4	71
528	Investigation of strain-rate effect on the compressive behaviour of closed-cell aluminium foam by 3D image-based modelling. <i>Materials and Design</i> , 2016 , 89, 215-224	8.1	60
527	Generation of micro-scale finite element models from synchrotron X-ray CT images for multidirectional carbon fibre reinforced composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2016 , 91, 85-95	8.4	55
526	An evaluation of diffraction peak profile analysis (DPPA) methods to study plastically deformed metals. <i>Materials and Design</i> , 2016 , 111, 331-343	8.1	14
525	Correlative Microscopy Application in Spinal Cord Injury Research. <i>Microscopy and Microanalysis</i> , 2016 , 22, 204-205	0.5	
524	Characterisation of overloads in fatigue by 2D strain mapping at the surface and in the bulk. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2016 , 39, 1040-1048	3	23
523	Post-processing techniques for making reliable measurements from curve-skeletons. <i>Computers in Biology and Medicine</i> , 2016 , 72, 120-31	7	6
522	Determination of the constitutive relation and critical condition for the shock compression of cellular solids. <i>Mechanics of Materials</i> , 2016 , 99, 26-36	3.3	27
521	Porosity regrowth during heat treatment of hot isostatically pressed additively manufactured titanium components. <i>Scripta Materialia</i> , 2016 , 122, 72-76	5.6	148
520	Synchrotron analysis of toughness anomalies in nanostructured bainite. <i>Acta Materialia</i> , 2016 , 105, 52-58	8.4	14
519	Micro-mechanics based damage mechanics for 3D orthogonal woven composites: Experiment and numerical modelling. <i>Composite Structures</i> , 2016 , 156, 115-124	5.3	27
518	X-ray Computed Tomographic Investigation of the Porosity and Morphology of Plasma Electrolytic Oxidation Coatings. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 8801-10	9.5	31
517	The variation in elastic modulus throughout the compression of foam materials. <i>Acta Materialia</i> , 2016 , 110, 161-174	8.4	47
516	3D imaging by serial block face scanning electron microscopy for materials science using ultramicrotomy. <i>Ultramicroscopy</i> , 2016 , 163, 6-18	3.1	31
515	Quantifying the metallurgical response of a nuclear steel to welding thermal cycles. <i>Materials Science and Technology</i> , 2016 , 32, 1517-1532	1.5	6
514	The application of 3D imaging techniques, simulation and diffusion experiments to explore transport properties in porous oxygen transport membrane support materials. <i>Solid State Ionics</i> , 2016 , 288, 315-321	3.3	20
513	Determination of the high temperature elastic properties and diffraction elastic constants of Ni-base superalloys. <i>Materials and Design</i> , 2016 , 89, 856-863	8.1	48
512	Large volume serial section tomography by Xe Plasma FIB dual beam microscopy. <i>Ultramicroscopy</i> , 2016 , 161, 119-129	3.1	173

511	Comparative Analysis of Shot-Peened Residual Stresses Using Micro-Hole Drilling, Micro-Slot Cutting, X-ray Diffraction Methods and Finite-Element Modelling. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016 , 215-223	0.3	4
510	Modelling the Residual Stress Field Ahead of the Notch Root in Shot Peened V-Notched Samples. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016 , 249-261	0.3	1
509	Elastic and Thermoelastic Properties of Brittle Matrix Composites 2016 ,		
508	Utilising correlative 3D imaging to understand creep cavitation in stainless steel 2016 , 17-18		
507	4-D imaging of sub-second dynamics in pore-scale processes using real-time synchrotron X-ray tomography. <i>Solid Earth</i> , 2016 , 7, 1059-1073	3.3	24
506	An in situ Method for Preserving Buried Voids and Cracks During TEM Sample Preparation using FIB. <i>Microscopy and Microanalysis</i> , 2016 , 22, 186-187	0.5	
505	Temporal sparsity exploiting nonlocal regularization for 4D computed tomography reconstruction. <i>Journal of X-Ray Science and Technology</i> , 2016 , 24, 207-19	2.1	13
504	4D imaging of sub-second dynamics in pore-scale processes using real time synchrotron x-ray tomography 2016 ,		2
503	Characterisation of an Advanced Nickel Based Superalloy Post Cold Work by Swaging. <i>Metals</i> , 2016 , 6, 54	2.3	6
502	Laboratory diffraction contrast tomography - applications and future directions 2016 , 37-38		
501	A Xe + Plasma FIB Milling and Lift-out Approach for Site-specific Preparation of Large Volume Blocks for 3D-EBSD. <i>Microscopy and Microanalysis</i> , 2016 , 22, 838-839	0.5	2
500	High Spatial Resolution Evaluation of Residual Stresses in Shot Peened Specimens Containing Sharp and Blunt Notches by Micro-hole Drilling, Micro-slot Cutting and Micro-X-ray Diffraction Methods. <i>Experimental Mechanics</i> , 2016 , 56, 1449-1463	2.6	20
499	Sparsity seeking total generalized variation for undersampled tomographic reconstruction 2016 ,		3
498	Predicting the Influence of Porosity on the Fatigue Performance of Titanium Components Manufactured by Selective Electron Beam Melting 2016 , 1447-1452		2
497	Response and representation of ductile damage under varying shock loading conditions in tantalum. <i>Journal of Applied Physics</i> , 2016 , 119, 085103	2.5	28
496	Repeated crack healing in MAX-phase ceramics revealed by 4D in situ synchrotron X-ray tomographic microscopy. <i>Scientific Reports</i> , 2016 , 6, 23040	4.9	65
495	A comparison of different approaches for imaging cracks in composites by X-ray microtomography. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016 , 374, 20160037		29
494	Correlative multiscale tomography of biological materials. <i>MRS Bulletin</i> , 2016 , 41, 549-556	3.2	14

493	Xe+ Plasma FIB: 3D Microstructures from Nanometers to Hundreds of Micrometers. <i>Microscopy Today</i> , 2016 , 24, 32-39	0.4	11
492	Residual stress of as-deposited and rolled wire+arc additive manufacturing Ti6Al4V components. <i>Materials Science and Technology</i> , 2016 , 32, 1439-1448	1.5	91
491	The Effectiveness of Hot Isostatic Pressing for Closing Porosity in Titanium Parts Manufactured by Selective Electron Beam Melting. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016 , 47, 1939-1946	2.3	153
490	Residual Stress: Measurement by Diffraction 2016 ,		
489	Towards in-process x-ray CT for dimensional metrology. <i>Measurement Science and Technology</i> , 2016 , 27, 035401	2	31
488	The effect of defects on the mechanical response of Ti-6Al-4V cubic lattice structures fabricated by electron beam melting. <i>Acta Materialia</i> , 2016 , 108, 279-292	8.4	90
487	Obtaining the J-integral by diffraction-based crack-field strain mapping. <i>Procedia Structural Integrity</i> , 2016 , 2, 2519-2526	1	9
486	Influence of embedded MoSi2 particles on the high temperature thermal conductivity of SPS produced yttria-stabilised zirconia model thermal barrier coatings. <i>Surface and Coatings Technology</i> , 2016 , 308, 31-39	4.4	15
485	Fatigue damage assessment of uni-directional non-crimp fabric reinforced polyester composite using X-ray computed tomography. <i>Composites Science and Technology</i> , 2016 , 136, 94-103	8.6	50
484	Application of a Quasi In Situ Experimental Approach to Estimate 3-D Pitting Corrosion Kinetics in Stainless Steel. <i>Journal of the Electrochemical Society</i> , 2016 , 163, C745-C751	3.9	16
483	Dynamic damage in carbon-fibre composites. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2016 , 374, 20160018	3	3
482	In Situ Laboratory-Based Transmission X-Ray Microscopy and Tomography of Material Deformation at the Nanoscale. <i>Experimental Mechanics</i> , 2016 , 56, 1585-1597	2.6	35
481	The effect of density and feature size on mechanical properties of isostructural metallic foams produced by additive manufacturing. <i>Acta Materialia</i> , 2015 , 85, 387-395	8.4	67
480	Microstructural analysis of TRISO particles using multi-scale X-ray computed tomography. <i>Journal of Nuclear Materials</i> , 2015 , 461, 29-36	3.3	23
479	Novel implementations of relaxation methods for measuring residual stresses at the micron scale. <i>Journal of Strain Analysis for Engineering Design</i> , 2015 , 50, 412-425	1.3	12
478	Morphological Characterisation of Unstained and Intact Tissue Micro-architecture by X-ray Computed Micro- and Nano-Tomography. <i>Scientific Reports</i> , 2015 , 5, 10074	4.9	72
477	Characterisation and modelling of defect formation in direct-chill cast AZ80 alloy. <i>Materials Characterization</i> , 2015 , 104, 116-123	3.9	11
476	Full-field energy-dispersive powder diffraction imaging using laboratory X-rays. <i>Journal of Applied Crystallography</i> , 2015 , 48, 269-272	3.8	6

475	Laser Shock Peening on Zr-based Bulk Metallic Glass and Its Effect on Plasticity: Experiment and Modeling. <i>Scientific Reports</i> , 2015 , 5, 10789	4.9	46
474	Assessment of surface integrity of Ni superalloy after electrical-discharge, laser and mechanical micro-drilling processes. <i>International Journal of Advanced Manufacturing Technology</i> , 2015 , 79, 1303-1311	3.2	32
473	Comparison and combination of imaging techniques for three dimensional analysis of electrical trees. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2015 , 22, 709-719	2.3	26
472	On the deformation twinning of Mg AZ31B: A three-dimensional synchrotron X-ray diffraction experiment and crystal plasticity finite element model. <i>International Journal of Plasticity</i> , 2015 , 70, 77-97	7.6	88
471	Diffraction tomography of strain. <i>Inverse Problems</i> , 2015 , 31, 045005	2.3	34
470	Nonintrusive estimation of anisotropic stiffness maps of heterogeneous steel welds for the improvement of ultrasonic array inspection. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2015 , 62, 1530-43	3.2	23
469	Late-stage fatigue damage in a 3D orthogonal non-crimp woven composite: An experimental and numerical study. <i>Composites Part A: Applied Science and Manufacturing</i> , 2015 , 79, 155-163	8.4	20
468	X-ray microscopy for in situ characterization of 3D nanostructural evolution in the laboratory 2015 ,		1
467	Fatigue Behavior of Shot Peened Notched Specimens: Effect of the Residual Stress Field Ahead of the Notch Root. <i>Procedia Engineering</i> , 2015 , 109, 80-88		13
466	2D and 3D imaging of fatigue failure mechanisms of 3D woven composites. <i>Composites Part A: Applied Science and Manufacturing</i> , 2015 , 77, 37-49	8.4	89
465	Revisiting the blocking force test on ferroelectric ceramics using high energy x-ray diffraction. <i>Journal of Applied Physics</i> , 2015 , 117, 174104	2.5	16
464	Comparison and combination of imaging techniques for three dimensional analysis of electrical trees. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2015 , 22, 709-719	2.3	1
463	The role of crack branching in stress corrosion cracking of aluminium alloys. <i>Corrosion Reviews</i> , 2015 , 33, 443-454	3.2	18
462	Three-dimensional characterization of electrodeposited lithium microstructures using synchrotron X-ray phase contrast imaging. <i>Chemical Communications</i> , 2015 , 51, 266-8	5.8	108
461	Multiscale 3D analysis of creep cavities in AISI type 316 stainless steel. <i>Materials Science and Technology</i> , 2015 , 31, 522-534	1.5	17
460	Measuring overload effects during fatigue crack growth in bainitic steel by synchrotron X-ray diffraction. <i>International Journal of Fatigue</i> , 2015 , 71, 11-16	5	42
459	Effect of sugar on bread dough aeration during mixing. <i>Journal of Food Engineering</i> , 2015 , 150, 9-18	6	7
458	Evolution of a laser shock peened residual stress field locally with foreign object damage and subsequent fatigue crack growth. <i>Acta Materialia</i> , 2015 , 83, 216-226	8.4	72

457	Strain-rate sensitivity of foam materials: A numerical study using 3D image-based finite element model. <i>EPJ Web of Conferences</i> , 2015 , 94, 04022	0.3	
456	Non-destructive mapping of grain orientations in 3D by laboratory X-ray microscopy. <i>Scientific Reports</i> , 2015 , 5, 14665	4.9	86
455	3D chemical imaging in the laboratory by hyperspectral X-ray computed tomography. <i>Scientific Reports</i> , 2015 , 5, 15979	4.9	54
454	Effects of Grain and Pore Size on Salt Precipitation During Evaporation from Porous Media. <i>Transport in Porous Media</i> , 2015 , 110, 281-294	3.1	29
453	Geochemical Evidence of the Seasonality, Affinity and Pigmentation of <i>Solenopora jurassica</i> . <i>PLoS ONE</i> , 2015 , 10, e0138305	3.7	5
452	Large volume 3D characterization by plasma FIB DualBeam microscopy. <i>Microscopy and Microanalysis</i> , 2015 , 21, 2003-2004	0.5	3
451	Fracture mechanics by three-dimensional crack-tip synchrotron X-ray microscopy. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2015 , 373,	3	61
450	Evaluation of the interfacial shear strength and residual stress of TiAlN coating on ZIRLO fuel cladding using a modified shear-lag model approach. <i>Journal of Nuclear Materials</i> , 2015 , 466, 718-727	3.3	24
449	Employing temporal self-similarity across the entire time domain in computed tomography reconstruction. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2015 , 373,	3	15
448	Influence of processing conditions on strut structure and compressive properties of cellular lattice structures fabricated by selective laser melting. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 628, 188-197	5.3	218
447	Residual stresses due to foreign object damage in laser-shock peened aerofoils: Simulation and measurement. <i>Mechanics of Materials</i> , 2015 , 82, 78-90	3.3	28
446	Two-dimensional X-ray CT image based meso-scale fracture modelling of concrete. <i>Engineering Fracture Mechanics</i> , 2015 , 133, 24-39	4.2	206
445	Congestive Heart Failure Leads to Prolongation of the PR Interval and Atrioventricular Junction Enlargement and Ion Channel Remodelling in the Rabbit. <i>PLoS ONE</i> , 2015 , 10, e0141452	3.7	18
444	Damage evolution in freeze cast metal/ceramic composites exhibiting lamellar microstructures. <i>Frattura Ed Integrita Strutturale</i> , 2015 , 9, 134-142	0.9	5
443	2D mapping of plane stress crack-tip fields following an overload. <i>Frattura Ed Integrita Strutturale</i> , 2015 , 9, 151-158	0.9	7
442	4D-CT reconstruction with unified spatial-temporal patch-based regularization. <i>Inverse Problems and Imaging</i> , 2015 , 9, 447-467	2.1	27
441	Interpreting pathologies in extant and extinct archosaurs using micro-CT. <i>PeerJ</i> , 2015 , 3, e1130	3.1	23
440	Lithiation-Induced Dilation Mapping in a Lithium-Ion Battery Electrode by 3D X-Ray Microscopy and Digital Volume Correlation. <i>Advanced Energy Materials</i> , 2014 , 4, 1300506	21.8	72

439	Peak broadening anisotropy in deformed face-centred cubic and hexagonal close-packed alloys. <i>Journal of Applied Crystallography</i> , 2014 , 47, 1535-1551	3.8	10
438	A new method of performance verification for x-ray computed tomography measurements. <i>Measurement Science and Technology</i> , 2014 , 25, 065401	2	19
437	Quantitative X-ray tomography. <i>International Materials Reviews</i> , 2014 , 59, 1-43	16.1	767
436	A novel technique to incorporate structural prior information into multi-modal tomographic reconstruction. <i>Inverse Problems</i> , 2014 , 30, 065004	2.3	18
435	The influence of the laser scan strategy on grain structure and cracking behaviour in SLM powder-bed fabricated nickel superalloy. <i>Journal of Alloys and Compounds</i> , 2014 , 615, 338-347	5.7	401
434	Multimodal Image Reconstruction Using Supplementary Structural Information in Total Variation Regularization. <i>Sensing and Imaging</i> , 2014 , 15, 97	1.4	7
433	A new method for quantifying anisotropic martensitic transformation strains accumulated during constrained cooling. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 611, 354-361	5.3	3
432	The application of phase contrast X-ray techniques for imaging Li-ion battery electrodes. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2014 , 324, 118-123	1.2	63
431	Oxygen transport through supported Ba _{0.5} Sr _{0.5} Co _{0.8} Fe _{0.2} O _{3-δ} membranes. <i>Separation and Purification Technology</i> , 2014 , 121, 60-67	8.3	44
430	Modelling the effect of elastic and plastic anisotropies on stresses at grain boundaries. <i>International Journal of Plasticity</i> , 2014 , 61, 49-63	7.6	42
429	A multiscale model for reversible ferroelectric behaviour of polycrystalline ceramics. <i>Mechanics of Materials</i> , 2014 , 71, 85-100	3.3	20
428	Image based modelling of microstructural heterogeneity in LiFePO ₄ electrodes for Li-ion batteries. <i>Journal of Power Sources</i> , 2014 , 247, 1033-1039	8.9	125
427	Characterising the Integrity of Machined Surfaces in a Powder Nickel Alloy used in Aircraft Engines. <i>Procedia CIRP</i> , 2014 , 13, 411-416	1.8	19
426	Influence of Surface Anomalies Following Hole Making Operations on the Fatigue Performance for a Nickel-Based Superalloy. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2014 , 136,	3.3	33
425	Micro-CT evaluation of the effectiveness of the combined use of rotary and hand instrumentation in removal of Resilon. <i>Dental Materials Journal</i> , 2014 , 33, 1-6	2.5	14
424	X-ray microtomography study of the spallation response in Ta-W. <i>Journal of Physics: Conference Series</i> , 2014 , 500, 112045	0.3	4
423	The influence of shock-loading path on the spallation response of Ta. <i>Journal of Physics: Conference Series</i> , 2014 , 500, 112031	0.3	11
422	Correlative tomography. <i>Scientific Reports</i> , 2014 , 4, 4711	4.9	97

421	The effect of minimum dwell cycles on the environmental and fatigue response of RR1000. <i>MATEC Web of Conferences</i> , 2014 , 14, 04003	0.3	3
420	Optimal iodine staining of cardiac tissue for X-ray computed tomography. <i>PLoS ONE</i> , 2014 , 9, e105552	3.7	8
419	Back Stress Work Hardening Confirmed by Bauschinger Effect in a TRIP Steel Using Bending Tests. <i>ISIJ International</i> , 2014 , 54, 1715-1718	1.7	9
418	A multiscale modelling analysis of the contribution of crystalline elastic anisotropy to intergranular stresses in ferroelectric materials. <i>Journal Physics D: Applied Physics</i> , 2014 , 47, 325303	3	4
417	The production and characterization of topologically and mechanically gradient open-cell thermoplastic foams. <i>Smart Materials and Structures</i> , 2014 , 23, 055016	3.4	11
416	. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2014 , 21, 53-63	2.3	18
415	Investigation of the elastic/crystallographic anisotropy of welds for improved ultrasonic inspections. <i>Materials Characterization</i> , 2014 , 98, 47-53	3.9	10
414	High Pressure Interpass Rolling of Wire + Arc Additively Manufactured Titanium Components. <i>Advanced Materials Research</i> , 2014 , 996, 694-700	0.5	37
413	Three-dimensional characterisation and simulation of deformation and damage during Taylor impact in PTFE. <i>Journal of Physics: Conference Series</i> , 2014 , 500, 182035	0.3	
412	Three dimensional imaging of electrical trees in micro and nano-filled epoxy resin 2014 ,		3
411	Phase transition modeling of polytetrafluoroethylene during Taylor impact. <i>Journal of Applied Physics</i> , 2014 , 116, 223502	2.5	12
410	Identification of crystalline elastic anisotropy in PZT ceramics from in-situ blocking stress measurements. <i>Journal of Applied Physics</i> , 2014 , 115, 174102	2.5	9
409	On the Stress Development in SA508 Autogenous Weld. <i>Materials Science Forum</i> , 2014 , 783-786, 2123-2128	1.2	2
408	The anatomy and grain pattern in forks of hazel (<i>Corylus avellana</i> L.) and other tree species. <i>Trees - Structure and Function</i> , 2014 , 28, 1437-1448	2.6	21
407	In Situ Synchrotron Studies of Reversible and Irreversible Non-elastic Strain in a Two-Phase TiAl Alloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 607-618	2.3	3
406	Comparison of tool wear mechanisms and surface integrity for dry and wet micro-drilling of nickel-base superalloys. <i>International Journal of Machine Tools and Manufacture</i> , 2014 , 76, 49-60	9.4	73
405	Combining X-ray microtomography and three-dimensional digital volume correlation to track microstructure evolution during sintering of copper powder. <i>Journal of Strain Analysis for Engineering Design</i> , 2014 , 49, 257-269	1.3	11
404	Imaging and analysis techniques for electrical trees using X-ray computed tomography. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2014 , 21, 53-63	2.3	28

403	In Situ Investigation and Image-Based Modelling of Aluminium Foam Compression Using Micro X-Ray Computed Tomography. <i>Augmented Vision and Reality</i> , 2014 , 189-197		2
402	Overload effects on fatigue crack-tip fields under plane stress conditions: surface and bulk analysis. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2013 , 36, 75-84	3	39
401	Piezomorphic Materials. <i>Macromolecular Materials and Engineering</i> , 2013 , 298, 318-327	3.9	22
400	Eigenstrain modelling of residual stress generated by arrays of laser shock peening shots and determination of the complete stress field using limited strain measurements. <i>Surface and Coatings Technology</i> , 2013 , 216, 68-77	4.4	32
399	Hole-Drilling Residual Stress Measurement with Artifact Correction Using Full-Field DIC. <i>Experimental Mechanics</i> , 2013 , 53, 255-265	2.6	40
398	Effects of Cooling Rates on Glass Formation and Magnetic Behavior for the Fe _{73.0} Co _{7.0} Si _{3.3} B _{5.0} P _{8.7} Mo _{3.0} Bulk Metallic Glass. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2013 , 44, 2004-2009	2.3	7
397	Three-dimensional observation and image-based modelling of thermal strains in polycrystalline alumina. <i>Acta Materialia</i> , 2013 , 61, 7521-7533	8.4	14
396	Bread dough aeration dynamics during pressure step-change mixing: Studies by X-ray tomography, dough density and population balance modelling. <i>Chemical Engineering Science</i> , 2013 , 101, 470-477	4.4	32
395	A Graphical Processing Unit-Based Parallel Implementation of Multiplicative Algebraic Reconstruction Technique Algorithm for Limited View Tomography. <i>Research in Nondestructive Evaluation</i> , 2013 , 24, 211-222	0.9	13
394	Synchrotron X-ray Diffraction 2013 , 163-194		11
393	Damage development in open-hole composite specimens in fatigue. Part 1: Experimental investigation. <i>Composite Structures</i> , 2013 , 106, 882-889	5.3	71
392	Revealing the three dimensional internal structure of aluminium alloys. <i>Surface and Interface Analysis</i> , 2013 , 45, 1536-1542	1.5	17
391	On the three-dimensional structure of WC grains in cemented carbides. <i>Acta Materialia</i> , 2013 , 61, 4726-4733	4.3	33
390	Influence of wall roughness and packing density on stagnant zone formation during funnel flow discharge from a silo: An X-ray imaging study. <i>Chemical Engineering Science</i> , 2013 , 97, 210-224	4.4	32
389	A novel architecture for pore network modelling with applications to permeability of porous media. <i>Journal of Hydrology</i> , 2013 , 486, 246-258	6	56
388	. <i>IEEE Transactions on Dielectrics and Electrical Insulation</i> , 2013 , 20, 10-18	2.3	14
387	The effect of phase on microstructure and texture evolution during thermomechanical processing of Ti alloy. <i>Acta Materialia</i> , 2013 , 61, 3200-3213	8.4	59
386	Application of micro-computed tomography with iodine staining to cardiac imaging, segmentation, and computational model development. <i>IEEE Transactions on Medical Imaging</i> , 2013 , 32, 8-17	11.7	80

385	Analysis of a prehistoric Egyptian iron bead with implications for the use and perception of meteorite iron in ancient Egypt. <i>Meteoritics and Planetary Science</i> , 2013 , 48, 997-1006	2.8	25
384	Mechanical failure: Imaging cracks in hostile regimes. <i>Nature Materials</i> , 2013 , 12, 7-9	27	7
383	An anisotropic enhanced thermal conductivity approach for modelling laser melt pools for Ni-base super alloys. <i>Applied Mathematical Modelling</i> , 2013 , 37, 1187-1195	4.5	45
382	Residual stresses caused by head-on and 45° foreign object damage for a laser shock peened Ti6Al4V alloy aerofoil. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013 , 560, 518-527	5.3	29
381	Effect of overload on crack closure in thick and thin specimens via digital image correlation. <i>International Journal of Fatigue</i> , 2013 , 56, 17-24	5	47
380	Saurichthys (Pisces, Actinopterygii) teeth from the Lower Triassic of Spitsbergen, with comments on their stable isotope composition ($\delta^{13}\text{C}$ and $\delta^{18}\text{O}$) and X-ray microtomography. <i>Polish Polar Research</i> , 2013 , 34, 23-38		6
379	Metamorphosis revealed: time-lapse three-dimensional imaging inside a living chrysalis. <i>Journal of the Royal Society Interface</i> , 2013 , 10, 20130304	4.1	65
378	Three dimensional characterisation of electrical trees 2013 ,		5
377	Study of overload effects in bainitic steel by synchrotron X-ray diffraction. <i>Frattura Ed Integrità Strutturale</i> , 2013 , 7, 153-160	0.9	1
376	Elastic and plastic strain effects on eddy current response of aluminium alloys. <i>Nondestructive Testing and Evaluation</i> , 2013 , 28, 300-312	2	10
375	Comparison of the Mechanical Behaviour of Standard and Auxetic Foams by X-ray Computed Tomography and Digital Volume Correlation. <i>Strain</i> , 2013 , 49, 467-482	1.7	34
374	The role of cross-sectional geometry, curvature, and limb posture in maintaining equal safety factors: a computed tomography study. <i>Anatomical Record</i> , 2013 , 296, 395-413	2.1	16
373	Finite element modelling versus classic beam theory: comparing methods for stress estimation in a morphologically diverse sample of vertebrate long bones. <i>Journal of the Royal Society Interface</i> , 2013 , 10, 20120823	4.1	31
372	Surface Decoration for Improving the Accuracy of Displacement Measurements by Digital Image Correlation in SEM. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2013 , 217-224	0.3	0
371	Micron-scale Residual Stress Measurement using Micro-hole Drilling and Digital Image Correlation. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2013 , 189-198	0.3	
370	Characterizing the effects of elevated temperature on the air void pore structure of advanced gas-cooled reactor pressure vessel concrete using x-ray computed tomography. <i>EPJ Web of Conferences</i> , 2013 , 56, 04003	0.3	1
369	Hole-Drilling Residual Stress Measurement with Artifact Correction Using Full-Field DIC. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2013 , 403-414	0.3	1
368	Effects of stop/start features on residual stresses in a multipass austenitic stainless steel weld. <i>International Journal of Pressure Vessels and Piping</i> , 2012 , 89, 9-18	2.4	10

367	Macro and intergranular stress responses of austenitic stainless steel to 90° strain path changes. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012 , 546, 263-271	5.3	21
366	Exploring microstructural changes associated with oxidation in Ni-YSZ SOFC electrodes using high resolution X-ray computed tomography. <i>Solid State Ionics</i> , 2012 , 216, 69-72	3.3	57
365	An evaluation of the evolution of workpiece surface integrity in hole making operations for a nickel-based superalloy. <i>Journal of Materials Processing Technology</i> , 2012 , 212, 1723-1730	5.3	32
364	Assessment of machining performance using the wear map approach in micro-drilling. <i>International Journal of Advanced Manufacturing Technology</i> , 2012 , 59, 119-126	3.2	21
363	Fatigue and Damage in Structural Materials Studied by X-Ray Tomography. <i>Annual Review of Materials Research</i> , 2012 , 42, 81-103	12.8	117
362	Residual stress fields after FOD impact on flat and aerofoil-shaped leading edges. <i>Mechanics of Materials</i> , 2012 , 55, 130-145	3.3	32
361	Dependence of dielectric behavior in BiFeO ₃ ceramics on intrinsic defects. <i>Journal of Alloys and Compounds</i> , 2012 , 541, 94-98	5.7	16
360	A novel approach for imaging of electrical trees 2012 ,		4
359	The Oldest Fossil Pirate Spider (Araneae: Mimetidae), in Uppermost Eocene Indian Amber, Imaged Using X-ray Computed Tomography. <i>Arachnology</i> , 2012 , 15, 299-302		6
358	2012 ,		5
357	Multi Length Scale Microstructural Investigations of a Commercially Available Li-Ion Battery Electrode. <i>Journal of the Electrochemical Society</i> , 2012 , 159, A1023-A1027	3.9	102
356	Investigation of interfacial properties of atmospheric plasma sprayed thermal barrier coatings with four-point bending and computed tomography technique. <i>Surface and Coatings Technology</i> , 2012 , 206, 4922-4929	4.4	44
355	X-ray damage characterisation in self-healing fibre reinforced polymers. <i>Composites Part A: Applied Science and Manufacturing</i> , 2012 , 43, 613-620	8.4	62
354	Fourier basis for the engineering assessment of cracks in residual stress fields. <i>Engineering Fracture Mechanics</i> , 2012 , 91, 37-50	4.2	8
353	A new species of Craspedisia (Araneae: Theridiidae) in Miocene Dominican amber, imaged using X-ray computed tomography. <i>Paleontological Journal</i> , 2012 , 46, 583-588	0.6	5
352	Work hardening induced by martensite during transformation-induced plasticity in plain carbon steel. <i>Acta Materialia</i> , 2012 , 60, 6931-6939	8.4	24
351	MRI measurements of vessel calibre in tumour xenografts: comparison with vascular corrosion casting. <i>Microvascular Research</i> , 2012 , 84, 323-9	3.7	13
350	Stress Residual 2012 , 1		1

349	Surface Decoration for Improving the Accuracy of Displacement Measurements by Digital Image Correlation in SEM. <i>Experimental Mechanics</i> , 2012 , 52, 793-804	2.6	51
348	Micron-Scale Residual Stress Measurement by Micro-Hole Drilling and Digital Image Correlation. <i>Experimental Mechanics</i> , 2012 , 52, 417-428	2.6	40
347	Friction Stir Welding of HSLA-65 Steel: Part II. The Influence of Weld Speed and Tool Material on the Residual Stress Distribution and Tool Wear. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012 , 43, 2356-2365	2.3	35
346	Friction Stir Welding in HSLA-65 Steel: Part I. Influence of Weld Speed and Tool Material on Microstructural Development. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012 , 43, 2342-2355	2.3	41
345	Fibre bridging during high temperature fatigue crack growth in Ti/SiC composites. <i>Acta Materialia</i> , 2012 , 60, 958-971	8.4	14
344	Submicron-scale depth profiling of residual stress in amorphous materials by incremental focused ion beam slotting. <i>Acta Materialia</i> , 2012 , 60, 2337-2349	8.4	23
343	On the evolution of local material properties and residual stress in a three-pass SA508 steel weld. <i>Acta Materialia</i> , 2012 , 60, 3268-3278	8.4	55
342	Evolution of crack-bridging and crack-tip driving force during the growth of a fatigue crack in a Ti/SiC composite. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2012 , 468, 2722-2743	2.4	24
341	A minute fossil phoretic mite recovered by phase-contrast X-ray computed tomography. <i>Biology Letters</i> , 2012 , 8, 457-60	3.6	37
340	Fibre bundles in the human extensor carpi ulnaris tendon are arranged in a spiral. <i>Journal of Hand Surgery: European Volume</i> , 2012 , 37, 550-4	1.4	25
339	Spallation response of Ti-6Al-4V: Rear surface velocimetry and X-ray tomography 2012 ,		4
338	Characterization of Cement Microstructure for the Immobilization of Nuclear Waste Using Advanced Imaging Methods. <i>Materials Research Society Symposia Proceedings</i> , 2012 , 1475, 521		
337	Microstructure of In Situ Mg Metal Matrix Composites Based on Silica Nanoparticles. <i>Solid State Phenomena</i> , 2012 , 191, 189-198	0.4	4
336	Three-dimensional imaging of inhomogeneous lithologies using X-ray computed tomography: characterization of drill core from the Borrowdale Volcanic Group. <i>Mineralogical Magazine</i> , 2012 , 76, 2931-2938	1.7	1
335	Tomographic reconstruction of neopterous carboniferous insect nymphs. <i>PLoS ONE</i> , 2012 , 7, e45779	3.7	26
334	Ancient Ephemeroptera-Collembola symbiosis fossilized in amber predicts contemporary phoretic associations. <i>PLoS ONE</i> , 2012 , 7, e47651	3.7	17
333	In-situ X-ray microtomography study of the movement of a granular material within a die. <i>International Journal of Materials Research</i> , 2012 , 103, 162-169	0.5	13
332	Assessment of the Deformation of Low Density Polymeric Auxetic Foams by X-Ray Tomography and Digital Volume Correlation. <i>Applied Mechanics and Materials</i> , 2011 , 70, 93-98	0.3	8

331	A new species of anapid spider (Araneae: Araneoidea, Anapidae) in Eocene Baltic amber, imaged using phase contrast X-ray computed micro-tomography. <i>Zootaxa</i> , 2011 , 2742, 60	0.5	17
330	Modelling and Measurement of Plastic Deformation and Grain Rotation at the Grain-to-Grain Level 2011 , 107-112		1
329	Porting the AVS/Express scientific visualization software to Cray XT4. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2011 , 369, 3398-412	3	2
328	Assessment of Thread-Cutting Strategies to Enable Damage-Tolerant Surfaces on an Advanced Ni-Based Aerospace Superalloy. <i>Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture</i> , 2011 , 225, 12-24	2.4	3
327	Region-of-interest tomography using filtered backprojection: assessing the practical limits. <i>Journal of Microscopy</i> , 2011 , 241, 69-82	1.9	68
326	A method for the 3-D quantification of bridging ligaments during crack propagation. <i>Scripta Materialia</i> , 2011 , 65, 131-134	5.6	12
325	Cranial anatomy of <i>Thalassiodracon hawkinsii</i> (Reptilia, Plesiosauria) from the Early Jurassic of Somerset, United Kingdom. <i>Journal of Vertebrate Paleontology</i> , 2011 , 31, 562-574	1.7	31
324	Computed tomography recovers data from historical amber: an example from huntsman spiders. <i>Die Naturwissenschaften</i> , 2011 , 98, 519-27	2	24
323	Evaluation of surface integrity in micro drilling process for nickel-based superalloy. <i>International Journal of Advanced Manufacturing Technology</i> , 2011 , 55, 465-476	3.2	53
322	Residual stresses in laser direct metal deposited Waspaloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011 , 528, 2288-2298	5.3	116
321	Thermal Relaxation of Residual Stresses in Nickel-Based Superalloy Inertia Friction Welds. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011 , 42, 2301-2311	2.3	18
320	A Comparison of Residual Stress Development in Inertia Friction Welded Fine Grain and Coarse Grain Nickel-Base Superalloy. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2011 , 42, 4056-4063	2.3	13
319	Suppression of ring artefacts when tomographing anisotropically attenuating samples. <i>Journal of Synchrotron Radiation</i> , 2011 , 18, 427-35	2.4	17
318	In situ 3D X-ray microtomography study comparing auxetic and non-auxetic polymeric foams under tension. <i>Physica Status Solidi (B): Basic Research</i> , 2011 , 248, 45-51	1.3	51
317	3D Crack-tip Microscopy: Illuminating Micro-Scale Effects on Crack-Tip Behavior. <i>Advanced Engineering Materials</i> , 2011 , 13, 1096-1100	3.5	15
316	Depth and Lateral Variation of Machining-Induced Residual Stress for a Nickel Base Superalloy. <i>Materials Science Forum</i> , 2011 , 681, 332-339	0.4	5
315	Microstructure and properties of hot isostatically pressed powder and extruded Ti25V15Cr2Al0.2C. <i>Materials Science and Technology</i> , 2011 , 27, 1241-1248	1.5	10
314	Comparison of methods to determine variations in unstrained unit cell parameter across welds. <i>Journal of Strain Analysis for Engineering Design</i> , 2011 , 46, 651-662	1.3	7

313	A combined approach to microstructure mapping of an Al ₃ Si AA2199 friction stir weld. <i>Acta Materialia</i> , 2011 , 59, 3002-3011	8.4	93
312	Measurement of Residual Stresses in Surface Treated Stainless Steel Groove Welds. <i>Materials Science Forum</i> , 2011 , 681, 49-54	0.4	2
311	Modelling the effects of phase transformations on welding stress and distortion 2011 , 78-100		
310	In-Situ Observation and Modelling of Intergranular Cracking in Polycrystalline Alumina. <i>Key Engineering Materials</i> , 2011 , 465, 560-563	0.4	1
309	Mapping Residual-Stress Distributions in a Laser-Peened Vit-105 Bulk-Metallic Glass Using the Focused-Ion-Beam Micro-Slitting Method. <i>Materials Research Society Symposia Proceedings</i> , 2011 , 1300, 1		3
308	Design of weld fillers for mitigation of residual stresses in ferritic and austenitic steel welds. <i>Science and Technology of Welding and Joining</i> , 2011 , 16, 279-284	3.7	40
307	Modelling the Interpass Temperature Effect on Residual Stress in Low Transformation Temperature Stainless Steel Welds 2011 ,		6
306	Using Synchrotron X-Ray Nano-CT to Characterize SOFC Electrode Microstructures in Three-Dimensions at Operating Temperature. <i>Electrochemical and Solid-State Letters</i> , 2011 , 14, B117		71
305	Microstructural Characterization of SOFC Electrodes: Observations and Simulations. <i>ECS Transactions</i> , 2011 , 35, 1367-1377	1	1
304	X-Ray Microtomography for 3D Microstructure Characterization of Magnesium Matrix Composite Reinforced with Glassy Carbon Particles. <i>Solid State Phenomena</i> , 2011 , 176, 119-126	0.4	1
303	An examination of phase retrieval algorithms as applied to phase contrast tomography using laboratory sources 2010 ,		3
302	The Use of Diffraction to Study Fatigue Crack Tip Mechanics. <i>Materials Science Forum</i> , 2010 , 652, 216-221.	0.4	6
301	The Deformation of Face-Centred-Cubic Metals Measured by Diffraction Peak Profile Analysis. <i>Materials Science Forum</i> , 2010 , 652, 139-142	0.4	
300	Synchrotron Strain Mapping of the Residual Strain Distribution around Foreign Object Damage in Laser Shock Peened Ti-6AL-4V Alloy. <i>Materials Science Forum</i> , 2010 , 652, 19-24	0.4	7
299	Noncontact evaluation of the dependency of electrical conductivity on stress for various Al alloys as a function of plastic deformation and annealing. <i>Journal of Applied Physics</i> , 2010 , 108, 024909	2.5	27
298	Comparison of the X-ray performance of small pixel CdTe and CZT detectors 2010 ,		4
297	Predicting the onset of rafting of γ' precipitates by channel deformation in a Ni superalloy. <i>Philosophical Magazine</i> , 2010 , 90, 585-597	1.6	4
296	Non-contact characterization of hybrid aluminium/carbon-fibre-reinforced plastic sheets using multi-frequency eddy-current sensors. <i>Measurement Science and Technology</i> , 2010 , 21, 105708	2	7

295	Efficacy of active cooling for controlling residual stresses in friction stir welds. <i>Science and Technology of Welding and Joining</i> , 2010 , 15, 156-165	3.7	45
294	Imaging fossilised spiders in amber using lab-based phase contrast x-ray tomography 2010 ,		3
293	Investigation of Transformation Induced Plasticity and Residual Stress Analysis in Stainless Steel Welds 2010 ,		1
292	Regularization methods for inverse problems in x-ray tomography 2010 ,		12
291	Prediction of residual stress distributions for single weld beads deposited on to SA508 steel including phase transformation effects. <i>Materials Science and Technology</i> , 2010 , 26, 940-949	1.5	28
290	Process-microstructure-property correlations in AlSi AA2199 friction stir welds. <i>Science and Technology of Welding and Joining</i> , 2010 , 15, 522-527	3.7	13
289	Mapping Residual Stress Profiles at the Micron Scale Using FIB Micro-Hole Drilling. <i>Applied Mechanics and Materials</i> , 2010 , 24-25, 267-272	0.3	24
288	Engineering the residual stress state and microstructure of stainless steel with mechanical surface treatments. <i>Applied Physics A: Materials Science and Processing</i> , 2010 , 99, 549-556	2.6	60
287	Interfacial shear strength behaviour of Ti/SiC metal matrix composites at room and elevated temperature. <i>Acta Materialia</i> , 2010 , 58, 6090-6103	8.4	13
286	Mapping Residual Stress Distributions at the Micron Scale in Amorphous Materials. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2010 , 41, 1743-1751	2.3	34
285	Nanotomography for understanding materials degradation. <i>Scripta Materialia</i> , 2010 , 63, 835-838	5.6	39
284	Application of anisotropic inclusion theory to the deformation of Ni based single crystal superalloys: Stress-strain curves determination. <i>Mechanics of Materials</i> , 2010 , 42, 237-247	3.3	2
283	Deformation twinning in Ti-6Al-4V during low strain rate deformation to moderate strains at room temperature. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010 , 527, 5734-5744	5.3	77
282	The pulsed eddy current response to applied loading of various aluminium alloys. <i>NDT and E International</i> , 2010 , 43, 493-500	4.1	43
281	The evolution of crack-tip stresses during a fatigue overload event. <i>Acta Materialia</i> , 2010 , 58, 4039-4052	28.4	72
280	Effects of superimposed electric field and porosity on the hydrostatic pressure-induced rhombohedral to orthorhombic martensitic phase transformation in PZT 95/5 ceramics. <i>Acta Materialia</i> , 2010 , 58, 6584-6591	8.4	24
279	An analytical formula for ring artefact suppression in X-ray tomography. <i>Applied Mathematics Letters</i> , 2010 , 23, 1489-1495	3.5	30
278	A priori information in a regularized sinogram-based method for removing ring artefacts in tomography. <i>Journal of Synchrotron Radiation</i> , 2010 , 17, 540-9	2.4	31

277	Improved tomographic reconstructions using adaptive time-dependent intensity normalization. <i>Journal of Synchrotron Radiation</i> , 2010 , 17, 689-99	2.4	34
276	Simulation of Rotational Welding Operations 2010 , 432-442		1
275	Spatially Resolved Materials Property Data From a Uniaxial Cross-Weld Tensile Test. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2009 , 131,	1.2	18
274	Non-contact characterisation of Carbon Fibre Reinforced Plastics in hybrid aluminium / CFRP sheets using multi-frequency eddy current sensors 2009 ,		2
273	Bainite orientation in plastically deformed austenite. <i>International Journal of Materials Research</i> , 2009 , 100, 40-45	0.5	30
272	The Effects of Filler Metal Transformation Temperature on Residual Stresses in a High Strength Steel Weld. <i>Journal of Pressure Vessel Technology, Transactions of the ASME</i> , 2009 , 131,	1.2	48
271	Stainless steel weld metal designed to mitigate residual stresses. <i>Science and Technology of Welding and Joining</i> , 2009 , 14, 559-565	3.7	41
270	A ring artifact suppression algorithm based on a priori information. <i>Applied Physics Letters</i> , 2009 , 95, 071113	3.4	20
269	Inertia friction welds between nickel superalloy components: Analysis of residual stress by eigenstrain distributions. <i>Journal of Strain Analysis for Engineering Design</i> , 2009 , 44, 159-170	1.3	8
268	In situ three-dimensional X-ray microtomography of an auxetic foam under tension. <i>Scripta Materialia</i> , 2009 , 60, 232-235	5.6	55
267	Noncontact Characterization of Carbon-Fiber-Reinforced Plastics Using Multifrequency Eddy Current Sensors. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2009 , 58, 738-743	5.2	60
266	Biomechanics of dromaeosaurid dinosaur claws: application of X-ray microtomography, nanoindentation, and finite element analysis. <i>Anatomical Record</i> , 2009 , 292, 1397-405	2.1	37
265	Shear cracking in an Al powder compact studied by X-ray microtomography. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 508, 64-70	5.3	11
264	Prediction of hardness minimum locations during natural aging in an aluminum alloy 6061-T6 friction stir weld. <i>Journal of Materials Science</i> , 2009 , 44, 6302-6309	4.3	25
263	Study of a Crack at a Fastener Hole by Digital Image Correlation. <i>Experimental Mechanics</i> , 2009 , 49, 551-559	5.5	37
262	Some experimental observations on crack closure and crack-tip plasticity. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2009 , 32, 418-429	3	51
261	Application of anisotropic inclusion theory to the energy evaluation for the matrix channel deformation and rafting geometry of γ -Ni superalloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 505, 41-47	5.3	8
260	Finite element process modelling of inertia friction welding advanced nickel-based superalloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2009 , 513-514, 366-375	5.3	48

259	Image stitching strategies for tomographic imaging of large objects at high resolution at synchrotron sources. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2009 , 607, 677-684	1.2	40
258	Minor cutting edge-workpiece interactions in drilling of an advanced nickel-based superalloy. <i>International Journal of Machine Tools and Manufacture</i> , 2009 , 49, 645-658	9.4	37
257	The sensitivity of Ni-based superalloy to hole making operations: Influence of process parameters on subsurface damage and residual stress. <i>Journal of Materials Processing Technology</i> , 2009 , 209, 3968-3977	5.7	69
256	Residual stresses in face finish turning of high strength nickel-based superalloy. <i>Journal of Materials Processing Technology</i> , 2009 , 209, 4896-4902	5.3	52
255	Fatigue crack growth and load redistribution in Ti/SiC composites observed in situ. <i>Acta Materialia</i> , 2009 , 57, 590-599	8.4	27
254	Crystallographic texture and microstructure of pulsed diode laser-deposited Waspaloy. <i>Acta Materialia</i> , 2009 , 57, 1220-1229	8.4	60
253	Characterization of microplasticity in TiAl-based alloys. <i>Acta Materialia</i> , 2009 , 57, 1357-1366	8.4	21
252	Measured residual stress distributions for low and high heat input single weld beads deposited on to SA508 steel. <i>Materials Science and Technology</i> , 2009 , 25, 325-334	1.5	35
251	Comparison of residual stresses in Ti-6Al-4V and Ti-6Al-2Sn-2Zr-2Mo linear friction welds. <i>Materials Science and Technology</i> , 2009 , 25, 640-650	1.5	67
250	High-temperature strain field measurement using digital image correlation. <i>Journal of Strain Analysis for Engineering Design</i> , 2009 , 44, 263-271	1.3	148
249	Real-time acquisition of fatigue crack images for monitoring crack-tip stress intensity variations within fatigue cycles. <i>Journal of Strain Analysis for Engineering Design</i> , 2009 , 44, 149-158	1.3	19
248	Residual stress engineering in friction stir welds by roller tensioning. <i>Science and Technology of Welding and Joining</i> , 2009 , 14, 185-192	3.7	79
247	Friction stir welding of aluminium alloys. <i>International Materials Reviews</i> , 2009 , 54, 49-93	16.1	782
246	The extent of relaxation of weld residual stresses on cutting out cross-weld test-pieces. <i>Powder Diffraction</i> , 2009 , 24, S31-S36	1.8	19
245	Strain Measurement by Digital Image Correlation. <i>Strain</i> , 2008 , 44, 421-422	1.7	19
244	The stress intensity of mixed mode cracks determined by digital image correlation. <i>Journal of Strain Analysis for Engineering Design</i> , 2008 , 43, 769-780	1.3	91
243	Using augmented reality to promote an understanding of materials science to school children 2008 ,		10
242	Fatigue Crack Monitoring Using Image Correlation. <i>Key Engineering Materials</i> , 2008 , 385-387, 341-344	0.4	

241	Residual Stress Measurements in Autogenous SA508 Steel Welds 2008 ,		1
240	Comparison using neutron diffraction of martensitic transformation in FeMnSi shape memory alloys with and without VN precipitates. <i>Materials Science and Technology</i> , 2008 , 24, 902-907	1.5	6
239	Domain switching in rhombohedral PZT ceramics under electrical and mechanical loading. <i>Materials Science and Technology</i> , 2008 , 24, 927-933	1.5	9
238	Focus on martensitic transformations. <i>Materials Science and Technology</i> , 2008 , 24, 883-883	1.5	2
237	In Situ Monitoring of Weld Transformations to Control Weld Residual Stresses. <i>Materials Science Forum</i> , 2008 , 571-572, 393-398	0.4	21
236	Synchrotron X-ray studies of austenite and bainitic ferrite. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2008 , 464, 1009-1027	2.4	82
235	Shakedown of deep cold rolling residual stresses in titanium alloys. <i>Journal Physics D: Applied Physics</i> , 2008 , 41, 174005	3	13
234	Application of a micromechanics model to the overall properties of heterogeneous graphite. <i>Journal of Nuclear Materials</i> , 2008 , 381, 124-128	3.3	9
233	The effect of tensioning and sectioning on residual stresses in aluminium AA7749 friction stir welds. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 488, 16-24	5.3	58
232	Global mechanical tensioning for the management of residual stresses in welds. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 489, 351-362	5.3	73
231	Importance of crystal orientation in linear friction joining of single crystal to polycrystalline nickel-based superalloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 491, 446-453	5.3	77
230	Recent advances in residual stress measurement. <i>International Journal of Pressure Vessels and Piping</i> , 2008 , 85, 118-127	2.4	170
229	Characterizing Phase Transformations and Their Effects on Ferritic Weld Residual Stresses with X-Rays and Neutrons. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2008 , 39, 3070-3078	2.3	98
228	Mechanical Tensioning of High-Strength Aluminum Alloy Friction Stir Welds. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2008 , 39, 3246-3259	2.3	28
227	Residual strains and microstructure development in single and sequential double sided friction stir welds in RQT-701 steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2008 , 492, 35-44	5.3	34
226	Residual stress driven creep cracking in AISI Type 316 stainless steel. <i>Acta Materialia</i> , 2008 , 56, 3598-3612	2.4	89
225	A plasticity model for powder compaction processes incorporating particle deformation and rearrangement. <i>International Journal of Solids and Structures</i> , 2008 , 45, 2056-2076	3.1	20
224	Micromechanics of domain switching in rhombohedral PZT ceramics. <i>Ceramics International</i> , 2008 , 34, 679-683	5.1	15

223	Robotic sample manipulation for stress and texture determination on neutron and synchrotron X-ray diffractometers. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2008 , 584, 428-435	1.2	5
222	High-resolution, in-situ, tomographic observations of stress corrosion cracking 2008 , 439-447		7
221	Welding residual stresses in ferritic power plant steels. <i>Materials Science and Technology</i> , 2007 , 23, 1009-1020	14.9	
220	Residual stress and its role in failure. <i>Reports on Progress in Physics</i> , 2007 , 70, 2211-2264	14.4	456
219	An anisotropic enhanced thermal conductivity approach for modelling laser melt pools 2007 ,		4
218	Stress distributions in multilayer laser deposited Waspaloy parts measured using neutron diffraction 2007 ,		4
217	A verified model of laser direct metal deposition using an analytical enthalpy balance method 2007 ,		7
216	Mapping residual and internal stress in materials by neutron diffraction. <i>Comptes Rendus Physique</i> , 2007 , 8, 806-820	1.4	59
215	The variation of the unstrained lattice parameter in an AA7010 friction stir weld. <i>Acta Materialia</i> , 2007 , 55, 4111-4120	8.4	33
214	Texture development in Ti6Al4V linear friction welds. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007 , 459, 182-191	5.3	110
213	Methods for obtaining the strain-free lattice parameter when using diffraction to determine residual stress. <i>Journal of Applied Crystallography</i> , 2007 , 40, 891-904	3.8	156
212	Process inspections and the OECD GLP Principles. <i>Quality Assurance Journal</i> , 2007 , 11, 105-107		
211	The shock response, simulation and microstructural determination of a model composite material. <i>Journal of Materials Science</i> , 2007 , 42, 9671-9678	4.3	4
210	Residual stresses in and around electromagnetically installed rivets measured using synchrotron and neutron diffraction. <i>Journal of Neutron Research</i> , 2007 , 15, 215-223	0.5	3
209	Transformation Temperatures and Welding Residual Stresses in Ferritic Steels 2007 , 949		13
208	Non-Contact Characterisation of Carbon-Fibre-Reinforced Plastics (CFRP) Using Multi-frequency Eddy Current Sensors. <i>Conference Record - IEEE Instrumentation and Measurement Technology Conference</i> , 2007 ,		3
207	In-situ neutron diffraction study of the rhombohedral to orthorhombic phase transformation in lead zirconate titanate ceramics produced by uniaxial compression. <i>Philosophical Magazine Letters</i> , 2007 , 87, 41-52	1	11
206	Characterization of laser peening residual stresses in Al 7075 by synchrotron diffraction and the contour method. <i>Journal of Neutron Research</i> , 2007 , 15, 147-154	0.5	17

205	X-ray nanotomography. <i>Materials Today</i> , 2007 , 10, 26-34	21.8	186
204	FE Modelling of Mechanical Tensioning for Controlling Residual Stresses in Friction Stir Welds. <i>Materials Science Forum</i> , 2007 , 539-543, 4025-4030	0.4	4
203	Coplanar waveguide scanning microwave profiler 2007 ,		3
202	Synchrotron X-ray measurement and finite element analysis of residual strain in tungsten inert gas welded aluminum alloy 2024. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2006 , 37, 3629-3637	2.3	5
201	Dissimilar friction stir welds in AA5083-AA6082. Part I: Process parameter effects on thermal history and weld properties. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2006 , 37, 2183-2193	2.3	118
200	Dissimilar friction stir welds in AA5083-AA6082. Part II: Process parameter effects on microstructure. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2006 , 37, 2195-2206	2.3	63
199	Particle movement during the deep penetration of a granular material studied by X-ray microtomography. <i>Scripta Materialia</i> , 2006 , 54, 191-196	5.6	32
198	Mapping the evolution of density in 3D of thermally oxidised graphite for nuclear applications. <i>Scripta Materialia</i> , 2006 , 54, 829-834	5.6	17
197	Measurement and Prediction of the Residual Stress Field Generated by Side-Punching. <i>Journal of Engineering Materials and Technology, Transactions of the ASME</i> , 2006 , 128, 451-459	1.8	15
196	Crack opening displacements during fatigue crack growth in TiB ₂ /C fibre metal matrix composites by X-ray tomography. <i>Materials Science and Technology</i> , 2006 , 22, 1052-1058	1.5	26
195	SALSA: Advances in Residual Stress Measurement at ILL. <i>Materials Science Forum</i> , 2006 , 524-525, 217-222	0.4	13
194	Characterisation of Residual Stresses in Machined Surfaces of a High Strength Nickel-Base Superalloy. <i>Materials Science Forum</i> , 2006 , 524-525, 587-592	0.4	5
193	Measuring and Predicting the Effects of Residual Stresses on Crack Propagation. <i>Materials Science Forum</i> , 2006 , 524-525, 77-82	0.4	4
192	Residual Stress Analysis Around Foreign Object Damage Using Synchrotron Diffraction. <i>Materials Science Forum</i> , 2006 , 524-525, 291-296	0.4	1
191	A Comparison of Strain Measurements on an Inertia Friction Weld Using the ENGIN-X and SALSA Neutron Strain Mapping Instruments. <i>Materials Science Forum</i> , 2006 , 524-525, 393-398	0.4	1
190	Dynamic Analysis of Residual Stress Introduced by Laser Peening. <i>Materials Science Forum</i> , 2006 , 524-525, 135-140	0.4	2
189	Relaxation of Residual Stresses in and around Mechanical Fasteners Due to Fatigue Loading. <i>Materials Science Forum</i> , 2006 , 524-525, 153-158	0.4	4
188	Identification of Weld Residual Stress Length Scales for Fracture Assessment 2006 , 1327-1328		

187	X-ray microtomographic observation of intergranular stress corrosion cracking in sensitised austenitic stainless steel. <i>Materials Science and Technology</i> , 2006 , 22, 1068-1075	1.5	78
186	Residual Stress Measurements in Single and Multi-Pass Groove Weld Specimens Using Neutron Diffraction and the Contour Method. <i>Materials Science Forum</i> , 2006 , 524-525, 671-676	0.4	22
185	Mixed Mode (I+II) Stress Intensity Factor Measurement Using Image Correlation 2006 , 427-428		1
184	Geometry Effects when Controlling Residual Stresses in Friction Stir Welds by Mechanical Tensioning. <i>Materials Science Forum</i> , 2006 , 524-525, 71-76	0.4	7
183	Scientific Review: First Impressions of SALSA: The New Engineering Instrument at ILL. <i>Neutron News</i> , 2006 , 17, 28-32	0.4	21
182	Diode laser metal deposition: The effect of pulsed beam parameters on superalloy microstructure and deposit morphology 2006 ,		1
181	Shakedown During Fatigue of Residual Stresses Introduced by Different Mechanical Surface Treatments 2006 , 203		
180	Residual Stress Measurement Within a Single Pass Groove Weld Specimen Utilising Neutron Diffraction and the Contour Method 2006 , 907		
179	A deconvolution method for the reconstruction of underlying profiles measured using large sampling volumes. <i>Journal of Applied Crystallography</i> , 2006 , 39, 410-424	3.8	15
178	Characterization of the three-dimensional structure of a metallic foam during compressive deformation. <i>Journal of Microscopy</i> , 2006 , 223, 150-8	1.9	30
177	Analysis of elastic strain and crystallographic texture in poled rhombohedral PZT ceramics. <i>Acta Materialia</i> , 2006 , 54, 3075-3083	8.4	67
176	Microstructure mapping in friction stir welds of 7449 aluminium alloy using SAXS. <i>Acta Materialia</i> , 2006 , 54, 4793-4801	8.4	90
175	Evolution of intergranular stresses during in situ straining of IF steel with different grain sizes. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 437, 26-32	5.3	41
174	SALSA – a new instrument for strain imaging in engineering materials and components. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 437, 139-144	5.3	113
173	Effects of fatigue and fretting on residual stresses introduced by laser shock peening. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 435-436, 12-18	5.3	58
172	Dissimilar friction stir welds in AA5083/AA6082: The effect of process parameters on residual stress. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 441, 187-196	5.3	138
171	Three dimensional observations and modelling of intergranular stress corrosion cracking in austenitic stainless steel. <i>Journal of Nuclear Materials</i> , 2006 , 352, 62-74	3.3	96
170	A comparison of inertia friction welds in three nickel base superalloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006 , 437, 38-45	5.3	73

169	In situ analysis of cracks in structural materials using synchrotron X-ray tomography and diffraction. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2006 , 246, 217-225	1.2	44
168	Turning of advanced Ni based alloys obtained via powder metallurgy route. <i>CIRP Annals - Manufacturing Technology</i> , 2006 , 55, 117-120	4.9	50
167	Collaborative Virtual Research Environment To Support Integration & Steering of Multi-site Experiments 2006 , 120-125		
166	An evaluation of recurrent neural network modelling for the prediction of damage evolution during forming. <i>Journal of Materials Processing Technology</i> , 2005 , 170, 551-562	5.3	5
165	Micromechanics of residual stress and texture development due to poling in polycrystalline ferroelectric ceramics. <i>Journal of the Mechanics and Physics of Solids</i> , 2005 , 53, 249-260	5	51
164	Relaxation of residual stress in shot peened Udimet 720Li under high temperature isothermal fatigue. <i>International Journal of Fatigue</i> , 2005 , 27, 1530-1534	5	66
163	Texture of poled tetragonal PZT detected by synchrotron X-ray diffraction and micromechanics analysis. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2005 , 409, 206-210	5.3	25
162	High-resolution strain mapping in bulk samples using full-profile analysis of energy dispersive synchrotron X-ray diffraction data. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2005 , 238, 200-204	1.2	29
161	The effect of thermal oxidation on polycrystalline graphite studied by X-ray tomography. <i>Carbon</i> , 2005 , 43, 765-774	10.4	46
160	Full-field strain mapping by optical correlation of micrographs acquired during deformation. <i>Journal of Microscopy</i> , 2005 , 218, 9-21	1.9	127
159	Orientation dependence of martensite variants during loading of FePd shape memory alloy. <i>Scripta Materialia</i> , 2005 , 53, 609-612	5.6	9
158	Stress relaxation of shot-peened UDIMET 720Li under solely elevated-temperature exposure and under isothermal fatigue. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2005 , 36, 3041-3053	2.3	26
157	Energy-input-based finite-element process modeling of inertia welding. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2005 , 36, 513-523	2.5	42
156	The effect of process parameters on residual stresses within an inconel 718 part produced by the direct laser deposition process 2005 ,		2
155	Imaging and strain mapping fibre by fibre in the vicinity of a fatigue crack in a Ti/SiC fibre composite. <i>Materials Science and Technology</i> , 2005 , 21, 27-34	1.5	14
154	Neutron Diffraction Study of Extruded Magnesium during Cyclic and Elevated Temperature Loading. <i>Materials Science Forum</i> , 2005 , 490-491, 257-262	0.4	21
153	Effects of Texture and Anisotropy on Intergranular Stress Development in Zirconium. <i>Materials Science Forum</i> , 2005 , 495-497, 1553-1558	0.4	7
152	The Effect of Fatigue on Residual Peening Stresses in Aerospace Components. <i>Materials Science Forum</i> , 2005 , 490-491, 340-345	0.4	10

151	Residual Stress Mapping in Railway Rails. <i>Materials Science Forum</i> , 2005 , 490-491, 165-170	0.4	5
150	Using pulsed neutron transmission for crystalline phase imaging and analysis. <i>Journal of Applied Physics</i> , 2005 , 97, 074903	2.5	52
149	Residual Stress Measurements Revealing Weld Bead Start and Stop Effects in Single and Multi-Pass Weld-Runs 2005 , 853		4
148	Intergranular Stress Evolution in Titanium Studied by Neutron Diffraction and Self-consistent Modelling. <i>Journal of Neutron Research</i> , 2004 , 12, 33-37	0.5	15
147	Mixed Mode (KI+KII) Stress Intensity Factor Measurement by Electronic Speckle Pattern Interferometry and Image Correlation. <i>Applied Mechanics and Materials</i> , 2004 , 1-2, 107-112	0.3	13
146	Mechanical Property Mapping Using Image Correlation and Electronic Speckle Interferometry. <i>Applied Mechanics and Materials</i> , 2004 , 1-2, 147-152	0.3	2
145	Study of Residual Stresses Introduced by Laser Shock Peening in Wide Chord Fan Blades by Neutron and Synchrotron Diffraction. <i>Journal of Neutron Research</i> , 2004 , 12, 207-211	0.5	5
144	Synchrotron Micro-tomography and Strain Mapping on a Fatigue Cracked Ti/SiC Fibre Composite. <i>Journal of Neutron Research</i> , 2004 , 12, 195-199	0.5	
143	An Analysis of Lattice Strain due to Disclination Dipole Walls in Fe-Pd Martensite. <i>Journal of Neutron Research</i> , 2004 , 12, 39-44	0.5	3
142	Residual Stress Prediction for the Inertia Welding Process. <i>Journal of Neutron Research</i> , 2004 , 12, 21-25	0.5	5
141	Residual Stress Driven Creep Cracking in Type 316 Stainless Steel. <i>Journal of Neutron Research</i> , 2004 , 12, 45-49	0.5	11
140	The Appropriateness of Residual Stress Length Scales in Structural Integrity. <i>Journal of Neutron Research</i> , 2004 , 12, 81-91	0.5	18
139	Elastic strains around cracked cold-expanded fastener holes measured using the synchrotron X-ray diffraction technique. <i>Journal of Strain Analysis for Engineering Design</i> , 2004 , 39, 459-469	1.3	17
138	Residual Stresses in Linear Friction Welded IMI550. <i>Journal of Neutron Research</i> , 2004 , 12, 165-173	0.5	21
137	Implications of interface friction for crack growth in fibre-reinforced metal matrix composites by three-dimensional finite element modelling. <i>International Journal of Fracture</i> , 2004 , 125, 281-305	2.3	5
136	Depth capabilities of neutron and synchrotron diffraction strain measurement instruments. I. The maximum feasible path length. <i>Journal of Applied Crystallography</i> , 2004 , 37, 596-606	3.8	34
135	Depth capabilities of neutron and synchrotron diffraction strain measurement instruments. II. Practical implications. <i>Journal of Applied Crystallography</i> , 2004 , 37, 607-612	3.8	27
134	High-resolution strain mapping in bulk samples using full-profile analysis of energy-dispersive synchrotron X-ray diffraction data. <i>Journal of Applied Crystallography</i> , 2004 , 37, 883-889	3.8	58

133	Neutron diffraction study of stress-induced martensitic transformation and variant change in FeBd shape memory alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 378, 328-332	5.3	5
132	High resolution X-ray tomography of short fatigue crack nucleation in austempered ductile cast iron. <i>International Journal of Fatigue</i> , 2004 , 26, 717-725	5	82
131	Micromechanics of stress-induced martensitic transformation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004 , 378, 479-483	5.3	4
130	Pattern decomposition and quantitative-phase analysis in pulsed neutron transmission. <i>Physica B: Condensed Matter</i> , 2004 , 350, 159-161	2.8	15
129	Quantification of creep cavitation damage around a crack in a stainless steel pressure vessel. <i>Acta Materialia</i> , 2004 , 52, 23-34	8.4	56
128	The effect of fibre fractures in the bridging zone of fatigue cracked TiBAl ₄ V/SiC fibre composites. <i>Acta Materialia</i> , 2004 , 52, 1423-1438	8.4	39
127	Interphase and intergranular stress generation in carbon steels. <i>Acta Materialia</i> , 2004 , 52, 1937-1951	8.4	142
126	Physically-based constitutive modelling of residual stress development in welding of aluminium alloy 2024. <i>Acta Materialia</i> , 2004 , 52, 4973-4983	8.4	37
125	A high energy synchrotron x-ray study of crystallographic texture and lattice strain in soft lead zirconate titanate ceramics. <i>Journal of Applied Physics</i> , 2004 , 96, 4245-4252	2.5	122
124	The role of surface condition, residual stress and microstructure on pre-yield cracking in Ti44Al8Nb1B. <i>Intermetallics</i> , 2004 , 12, 281-287	3.5	19
123	Characterisation of y' across inertia friction welded Alloy 720Li 2004 ,		9
122	The Measurement of Residual Stress in Railway Rails by Diffraction and other Methods *. <i>Journal of Neutron Research</i> , 2003 , 11, 187-193	0.5	53
121	Finite element modelling of tungsten inert gas welding of aluminium alloy 2024. <i>Science and Technology of Welding and Joining</i> , 2003 , 8, 10-18	3.7	40
120	Elevated temperature tensile properties and failure of a copper-chromium in situ composite. <i>Journal of Materials Science</i> , 2003 , 38, 3437-3447	4.3	5
119	Neural network modeling for the prediction of texture evolution of hot deformed aluminum alloys. <i>Journal of Materials Engineering and Performance</i> , 2003 , 12, 623-628	1.6	1
118	Residual stress relief in MAG welded joints of dissimilar steels. <i>International Journal of Pressure Vessels and Piping</i> , 2003 , 80, 705-713	2.4	46
117	Mechanical energy criterion for stress-induced martensitic transformation. <i>Scripta Materialia</i> , 2003 , 49, 1013-1019	5.6	5
116	Neutron diffraction study of stress-induced martensitic transformation and variant change in FeBd. <i>Acta Materialia</i> , 2003 , 51, 6453-6464	8.4	34

115	Observation and quantitative analysis of damage caused by creep in an A1 A359/SiC P composite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 342, 201-206	5.3	4
114	Neutron and synchrotron measurements of residual strain in TiG welded aluminium alloy 2024. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 346, 159-167	5.3	77
113	Neutron diffraction study of the deformation behaviour of deformation processed copper/nickel composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 348, 208-216	5.3	9
112	Effects of tooling on the residual stress distribution in an inertia weld. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2003 , 356, 405-413	5.3	25
111	Measurements of fibre bridging during fatigue crack growth in Ti/SiC fibre metal matrix composites. <i>Acta Materialia</i> , 2003 , 51, 1045-1057	8.4	27
110	Microstructure, mechanical properties and residual stresses as a function of welding speed in aluminium AA5083 friction stir welds. <i>Acta Materialia</i> , 2003 , 51, 4791-4801	8.4	549
109	X-ray tomographic imaging of Ti/SiC composites. <i>Journal of Microscopy</i> , 2003 , 209, 102-112	1.9	26
108	In situ determination of stresses from time-of-flight neutron transmission spectra. <i>Journal of Applied Crystallography</i> , 2003 , 36, 1159-1168	3.8	34
107	Near Surface Residual Stress Determination of Laser Shock Peening by Neutron Diffraction. <i>Journal of Neutron Research</i> , 2003 , 11, 229-233	0.5	5
106	SALSA: Strain Analyser for Large and Small Scale Engineering Applications. <i>Journal of Neutron Research</i> , 2003 , 11, 235-239	0.5	9
105	The Engineering Body Scanner Concept. <i>Journal of Neutron Research</i> , 2003 , 11, 247-253	0.5	6
104	Measurement and Prediction of Residual Stresses in Aluminium Friction Stir Welds. <i>Journal of Neutron Research</i> , 2003 , 11, 267-272	0.5	2
103	The 3-dimensional anatomy of the North-Western Marsupial Mole (<i>Notoryctes caurinus</i> Thomas 1920) using computed tomography, X-ray and magnetic resonance imaging. <i>Records of the Western Australian Museum</i> , 2003 , 22, 1	3	2
102	Inertia welding nickel-based superalloy: Part I. Metallurgical characterization. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2002 , 33, 3215-3225	2.3	74
101	Inertia welding nickel-based superalloy: Part II. Residual stress characterization. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2002 , 33, 3227-3234	2.3	44
100	Engineering applications of Bragg-edge neutron transmission. <i>Applied Physics A: Materials Science and Processing</i> , 2002 , 74, s1433-s1436	2.6	77
99	The expected uncertainty of diffraction-peak location. <i>Applied Physics A: Materials Science and Processing</i> , 2002 , 74, s112-s114	2.6	3
98	Neutron-diffraction study of stress-induced martensitic transformation in TRIP steel. <i>Applied Physics A: Materials Science and Processing</i> , 2002 , 74, s1143-s1145	2.6	56

97	Measurement and modelling of residual stresses in a TiG weld. <i>Applied Physics A: Materials Science and Processing</i> , 2002 , 74, s1421-s1423	2.6	23
96	A neutron diffraction study of creep and damage occurrence in an A359/SiC composite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2002 , 333, 232-238	5.3	9
95	Creep of a composite with a diffusional creeping matrix. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2002 , 335, 320-323	5.3	1
94	Changes in the misfit stresses in an Al/SiCp metal matrix composite under plastic strain. <i>Acta Materialia</i> , 2002 , 50, 1031-1040	8.4	51
93	Micromechanical analysis of internal stress development during single-fibre fragmentation testing of Ti/SiCf. <i>Acta Materialia</i> , 2002 , 50, 2477-2490	8.4	12
92	SiC single fibre full-fragmentation during straining in a Ti ₆ Al ₄ V matrix studied by synchrotron X-rays. <i>Acta Materialia</i> , 2002 , 50, 3177-3192	8.4	36
91	Mapping of unstressed lattice parameters using pulsed neutron transmission diffraction. <i>Journal of Applied Crystallography</i> , 2002 , 35, 497-504	3.8	17
90	Fatigue crack nuclei in austempered ductile cast iron. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2002 , 25, 635-648	3	16
89	Strain imaging by Bragg edge neutron transmission. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 2002 , 481, 765-768 ^{1,2}		99
88	Computational assessment of the influence of load ratio on fatigue crack growth in fibre-reinforced metal matrix composites. <i>International Journal of Fatigue</i> , 2002 , 24, 1205-1211	5	5
87	Multi-scale finite-element modelling of fatigue-crack growth in TiAl intermetallic matrix TiNb and Nb platelet composites. <i>Acta Materialia</i> , 2002 , 50, 1453-1466	8.4	6
86	Stress Induced Martensitic Transformation Studied by Neutron Diffraction. <i>Materials Science Forum</i> , 2002 , 404-407, 489-494	0.4	8
85	Neutron scattering. The case for neutron sources. <i>Science</i> , 2002 , 298, 543	33.3	1
84	Image Processing Issues in Digital Strain Mapping 2002 ,		16
83	A look ahead in residual stress analysis: the strain imager at the ILL 2002 , 4785, 64		4
82	Synchrotron X-ray study of micromechanics of Ti/SiCf composites with fibres containing defects introduced by laser drilling. <i>Materials Science and Technology</i> , 2002 , 18, 1497-1503	1.5	6
81	Residual Strain Measurement by Synchrotron Diffraction. <i>Materials Science Forum</i> , 2002 , 404-407, 1-12	0.4	33
80	Interfacial shear strength of Ti/SiC fibre composites measured by synchrotron strain measurement. <i>Composites Part A: Applied Science and Manufacturing</i> , 2002 , 33, 1381-1385	8.4	19

79	Finite element modelling of frictional bridging during fatigue crack growth in fibre-reinforced metal matrix composites. <i>Computational Materials Science</i> , 2002 , 25, 166-173	3.2	14
78	Steady-state creep of a composite. <i>Mechanics of Materials</i> , 2001 , 33, 493-498	3.3	10
77	Time-of-flight neutron transmission diffraction. <i>Journal of Applied Crystallography</i> , 2001 , 34, 289-297	3.8	115
76	The precision of diffraction peak location. <i>Journal of Applied Crystallography</i> , 2001 , 34, 737-743	3.8	29
75	A synchrotron X-ray study of a Ti/SiCf composite during in situ straining. <i>Acta Materialia</i> , 2001 , 49, 153-163	4	45
74	Bragg Edge Determination for Accurate Lattice Parameter and Elastic Strain Measurement. <i>Physica Status Solidi A</i> , 2001 , 185, 221-230		31
73	Neutron and Synchrotron X-ray Strain Scanning. <i>Strain</i> , 2001 , 37, 19-33	1.7	66
72	Monitoring elastic strain and damage by neutron and synchrotron X-ray beams. <i>Materials Science and Technology</i> , 2001 , 17, 759-765	1.5	6
71	Synchrotron X-ray residual strain scanning of a friction stir weld. <i>Journal of Strain Analysis for Engineering Design</i> , 2001 , 36, 61-70	1.3	50
70	Residual stress. Part 2 [Nature and origins. <i>Materials Science and Technology</i> , 2001 , 17, 366-375	1.5	580
69	Residual stress. Part 1 [Measurement techniques. <i>Materials Science and Technology</i> , 2001 , 17, 355-365	1.5	972
68	Composites, Physical Properties of 2001 , 1402-1411		
67	Measurement and prediction of residual stresses in a titanium metal matrix composite ring. <i>Journal of Neutron Research</i> , 2001 , 9, 373-379	0.5	7
66	The sin ² ψ method in pulsed neutron transmission. <i>Journal of Neutron Research</i> , 2001 , 9, 289-294	0.5	2
65	Residual Stresses in Microelectronics 2001 , 8142-8148		1
64	Neutron strain scanning using a radially collimated diffracted beam. <i>Physica B: Condensed Matter</i> , 2000 , 292, 273-285	2.8	46
63	Model-neutron diffraction strain measurement comparisons for steady state creep of metal matrix composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2000 , 285, 408-411	5.3	2
62	An investigation of the isothermal creep response of Al-based composites by neutron diffraction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2000 , 284, 103-113	5.3	35

61	The determination of the residual strains and stresses in a tungsten inert gas welded sheet of IN718 superalloy using neutron diffraction. <i>Journal of Strain Analysis for Engineering Design</i> , 2000 , 35, 247-259	1.3	22
60	Accelerated learning using Gaussian process models to predict static recrystallization in an Al-Mg alloy. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2000 , 8, 687-706	2	10
59	Residual Stress Field in a Friction Stir Welded Aluminium Extrusion. <i>Materials Science Forum</i> , 2000 , 347-349, 678-683	0.4	14
58	Elastic and Thermoelastic Properties of Brittle Matrix Composites 2000 , 25-45		1
57	Diagnosing Engineering Problems with Neutrons. <i>MRS Bulletin</i> , 1999 , 24, 17-23	3.2	9
56	Separation of measured fatigue crack stress fields in a metal matrix composite material. <i>Acta Materialia</i> , 1999 , 47, 585-593	8.4	15
55	Comparison of three different techniques for measuring the residual stresses in an electron beam-welded plate of WSPALOY. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1999 , 30, 1797-1808	2.3	38
54	Damage mechanisms of coated systems under thermomechanical fatigue. <i>Materials Science and Technology</i> , 1999 , 15, 1031-1036	1.5	34
53	Ultrafine grain structures formed by thermomechanical processing of spray cast Al ₃ Si alloys. <i>Materials Science and Technology</i> , 1999 , 15, 605-615	1.5	6
52	Mapping two-dimensional state of strain using synchrotron X-ray diffraction. <i>Scripta Materialia</i> , 1998 , 39, 1705-1712	5.6	64
51	Prediction of damage evolution in forged aluminium metal matrix composites using a neural network approach. <i>Journal of Materials Processing Technology</i> , 1998 , 80-81, 507-512	5.3	22
50	A neutron diffraction study of load partitioning in continuous Ti/SiC composites. <i>Acta Materialia</i> , 1998 , 46, 6585-6598	8.4	60
49	Microstructural development in Pt-aluminide coating on CMSX-4 superalloy during TMF. <i>Surface and Coatings Technology</i> , 1998 , 107, 76-83	4.4	46
48	A recurrent neural network for modelling dynamical systems. <i>Network: Computation in Neural Systems</i> , 1998 , 9, 531-547	0.7	24
47	A recurrent neural network for modelling dynamical systems. <i>Network: Computation in Neural Systems</i> , 1998 , 9, 531-47	0.7	1
46	Micromechanics of failure of aluminide coated single crystal Ni superalloy under thermomechanical fatigue. <i>Scripta Materialia</i> , 1997 , 37, 815-820	5.6	18
45	In Situ Monitoring of Thermally Cycled Metal Matrix Composites by Neutron Diffraction and Laser Extensometry. <i>Applied Composite Materials</i> , 1997 , 4, 375-393	2	3
44	In situ monitoring of thermally cycled metal matrix composites by neutron diffraction and laser extensometry. <i>Applied Composite Materials</i> , 1997 , 4, 375-392	2	14

43	Separation of macroscopic, elastic mismatch and thermal expansion misfit stresses in metal matrix composite quenched plates from neutron diffraction measurements. <i>Acta Materialia</i> , 1997 , 45, 4867-4876	8.4	92
42	In situ phase strain monitoring during isothermal creep of metal matrix composites. <i>Physica B: Condensed Matter</i> , 1997 , 234-236, 972-973	2.8	3
41	Measurement of cavitation damage in isothermally crept Al/SiCp composites using small-angle neutron scattering. <i>Physica B: Condensed Matter</i> , 1997 , 234-236, 1022-1023	2.8	3
40	ENGINE A new instrument for engineers. <i>Physica B: Condensed Matter</i> , 1997 , 234-236, 1141-1143	2.8	43
39	Frictional behaviour of Al359/SiC/20p composite under isothermal and non-isothermal hot-working conditions as a function of surface roughness. <i>Journal of Materials Processing Technology</i> , 1997 , 72, 195-200	5.3	4
38	Plastic bending of a residually stressed beam. <i>International Journal of Solids and Structures</i> , 1997 , 34, 1985-2002	3.1	8
37	A new stroboscopic neutron diffraction method for monitoring materials subjected to cyclic loads: Thermal cycling of metal matrix composites. <i>Scripta Materialia</i> , 1996 , 35, 717-720	5.6	28
36	A synchrotron radiation study of transient internal strain changes during the early stages of thermal cycling in an Al / SiCw MMC. <i>Scripta Materialia</i> , 1996 , 35, 1229-1234	5.6	43
35	Numerical prediction of the development of particle stress in the forging of aluminium metal matrix composites. <i>Journal of Materials Processing Technology</i> , 1996 , 60, 711-718	5.3	8
34	The effect of particle distribution on damage formation in particulate reinforced metal matrix composites deformed in compression. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1996 , 220, 41-56	5.3	79
33	Investigation of Residual Stress Induced Crack Closure and its Effects on Fatigue in Metal Matrix Composites. <i>Key Engineering Materials</i> , 1996 , 127-131, 1183-1190	0.4	3
32	The Effect of Clustering on Damage Formation in Particulate Reinforced MMCs Deformed in Compression. <i>Key Engineering Materials</i> , 1996 , 127-131, 937-944	0.4	6
31	An examination of the mean stress contribution to the Bauschinger effect by neutron diffraction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1995 , 197, 215-221	5.3	22
30	Effect of thermal residual stresses on fatigue crack opening and propagation behavior in an Al/SiCp metal matrix composite. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 1995 , 26, 3191-3198	2.3	9
29	Neutron Strain Measurement of Internal Strain in Metal and Ceramic Matrix Composites. <i>Key Engineering Materials</i> , 1995 , 108-110, 291-314	0.4	12
28	Weibull modelling of particle cracking in metal matrix composites. <i>Acta Metallurgica Et Materialia</i> , 1995 , 43, 3685-3699		87
27	The influence of temperature on microstructural damage during uniaxial compression of aluminium matrix composites. <i>Scripta Metallurgica Et Materialia</i> , 1995 , 33, 323-329		21
26	Examination of tensile/compressive loading asymmetries in aluminium based metal matrix composites using finite element method. <i>Materials Science and Technology</i> , 1995 , 11, 228-235	1.5	11

25	The determination of the profile of macrostress and thermal mismatch stress through an Al/SiCp composite plate from the average residual strains measured in each phase. <i>Physica B: Condensed Matter</i> , 1995 , 213-214, 790-792	2.8	13
24	Forging of \square Sections from aluminium metal matrix composite bars, modelled using the finite element method. <i>Journal of Materials Processing Technology</i> , 1994 , 45, 421-428	5.3	4
23	The deformation of discontinuously reinforced MMCs \square . The elastic response. <i>Acta Metallurgica Et Materialia</i> , 1994 , 42, 3437-3442		24
22	The deformation of discontinuously reinforced MMCs \square The initial yielding behaviour. <i>Acta Metallurgica Et Materialia</i> , 1994 , 42, 3425-3436		59
21	Reinforcement phase stability during ageing of an aluminium alloy/yttria-stabilised zirconia composite. <i>Scripta Metallurgica Et Materialia</i> , 1993 , 29, 1189-1194		
20	Plastic deformation 1993 , 71-116		2
19	Internal stress induced debonding in a zirconia-reinforced 6061 aluminium alloy composite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1993 , 171, 1-11	5.3	13
18	An Introduction to Metal Matrix Composites 1993 ,		625
17	Iterative estimates of internal stresses in short-fibre metal matrix composites. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1992 , 65, 1217-1233		17
16	The analysis of internal strains measured by neutron diffraction in Al/SiC metal matrix composites. <i>Acta Metallurgica Et Materialia</i> , 1992 , 40, 2361-2373		96
15	Considerations in the use of yield asymmetries for the analysis of internal stresses in metal matrix composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1992 , 159, 51-63	5.3	21
14	Theory and Modelling of Composites 1992 , 421-437		
13	Use of the frozen-stress photoelastic method to explore load partitioning in short-fibre composites. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1991 , 135, 173-178	5.3	8
12	The application of the eshelby method of internal stress determination to short fibre metal matrix composites. <i>Acta Metallurgica</i> , 1989 , 37, 3061-3084		336
11	Comments on \square The strength differential and bauschinger effects in SiC-Al composites \square <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 1989 , 108, 281-284	5.3	11
10	The determination of the elastic field of an ellipsoidal inclusion in a transversely isotropic medium, and its relevance to composite materials. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1989 , 59, 759-781		92
9	Various TEM methods for the study of metal matrix composites. <i>Journal of Microscopy</i> , 1988 , 151, 159-169		13
8	Introduction to the Characterization of Residual Stress by Neutron Diffraction		322

7	Determination of residual stress at weld interruptions by neutron diffraction		6
6	FE Modelling of Mechanical Tensioning for Controlling Residual Stresses in Friction Stir Welds. <i>Materials Science Forum</i> ,4025-4030	0.4	2
5	A recurrent neural network for modelling dynamical systems		9
4	Thermal Property Characterization for a Steel Fibre Reinforced Aluminum Metal Matrix Composite (ALMMC)1045-1052		
3	On the Three-Dimensional Microstructure of Martensite in Carbon Steels19-24		
2	Crystalline phase discriminating neutron tomography using advanced reconstruction methods. <i>Journal Physics D: Applied Physics</i> ,	3	4
1	Exploiting Confinement to Study the Crystallization Pathway of Calcium Sulfate. <i>Advanced Functional Materials</i> ,2107312	15.6	3