Alexander M. Korsunsky

List of Publications by Citations

433 papers	7,712 citations	42 h-index	67 g-index
479 ext. papers	8,977 ext. citations	3.8 avg, IF	6.47 L-index

#	Paper	IF	Citations
433	On the hardness of coated systems. *Surface and Coatings Technology*, **1998**, 99, 171-183	4.4	468
432	Ultrafast three-dimensional imaging of lattice dynamics in individual gold nanocrystals. *Science*, **2013**, 341, 56-9	33.3	228
431	Solution of Crack Problems. *Solid Mechanics and Its Applications*, **1996**,	0.4	224
430	Residual stress evaluation at the micrometer scale: Analysis of thin coatings by FIB milling and digital image correlation. *Surface and Coatings Technology*, **2010**, 205, 2393-2403	4.4	123
429	A neutron-diffraction study of the low-cycle fatigue behaviour of an austenitic stainless steel 316. *Acta Crystallographica Section A: Foundations and Advances*, **2010**, 66, s125-s125		120
428	3D-printed PEEK-carbon fiber (CF) composites: Structure and thermal properties. *Composites Science and Technology*, **2018**, 164, 319-326	8.6	120
427	Focused ion beam ring drilling for residual stress evaluation. *Materials Letters*, **2009**, 63, 1961-1963	3.3	113
426	A Na(+) Superionic Conductor for Room-Temperature Sodium Batteries. *Scientific Reports*, **2016**, 6, 32330	4.9	110
425	Comparative assessment of dissipated energy and other fatigue criteria?. *International Journal of Fatigue*, **2007**, 29, 1990-1995	5	103
424	A review of experimental approaches to fracture toughness evaluation at the micro-scale. *Materials and Design*, **2019**, 173, 107762	8.1	99
423	On the application of the work-of-indentation approach to depth-sensing indentation experiments in coated systems. *Surface and Coatings Technology*, **2001**, 137, 217-224	4.4	93
422	Crack growth micro-mechanisms in the IN718 alloy under the combined influence of fatigue, creep and oxidation. *International Journal of Fatigue*, **2009**, 31, 1966-1977	5	91
421	Evaluation of residual stresses and strains using the Eigenstrain Reconstruction Method. *International Journal of Solids and Structures*, **2010**, 47, 1678-1686	3.1	82
420	Separating plasticity-induced closure and residual stress contributions to fatigue crack retardation following an overload. *Journal of the Mechanics and Physics of Solids*, **2017**, 98, 222-235	5	80
419	Modelling of the hardness of electroplated nickel coatings on copper substrates. *Surface and Coatings Technology*, **2000**, 127, 1-8	4.4	75
418	A review of geometrical and microstructural size effects in micro-scale deformation processing of metallic alloy components. *International Journal of Machine Tools and Manufacture*, **2016**, 109, 94-125	9.4	74
417	Variational eigenstrain analysis of residual stresses in a welded plate. *International Journal of Solids and Structures*, **2007**, 44, 4574-4591	3.1	71

416	Indentation hardness evaluation of cathodic arc deposited thin hard coatings. *Surface and Coatings Technology*, **2001**, 139, 63-74	4.4	68
415	Mapping two-dimensional state of strain using synchroton X-ray diffraction. *Scripta Materialia*, **1998**, 39, 1705-1712	5.6	64
414	Crystallochemical aspects of solid state reactions in mechanically alloyed Al□Cu□Fe quasicrystalline powders. *Acta Materialia*, **2001**, 49, 1821-1833	8.4	63
413	On the fragmentation of active material secondary particles in lithium ion battery cathodes induced by charge cycling. *Extreme Mechanics Letters*, **2016**, 9, 449-458	3.9	62
412	A nonlocal coupled damage-plasticity model for the analysis of ductile failure. *International Journal of Plasticity*, **2015**, 64, 56-75	7.6	60
411	The modelling of residual stresses due to surface peening using eigenstrain distributions. *Journal of Strain Analysis for Engineering Design*, **2005**, 40, 817-824	1.3	60
410	An analysis of macro- and micro-scale residual stresses of Type I, II and III using FIB-DIC micro-ring-core milling and crystal plasticity FE modelling. *International Journal of Plasticity*, **2017**, 98, 123-138	7.6	57
409	Nano-structural changes in Li-ion battery cathodes during cycling revealed by FIB-SEM serial sectioning tomography. *Journal of Materials Chemistry A*, **2015**, 3, 18171-18179	13	56
408	Grain refinement and fatigue strengthening mechanisms in as-extruded Mg□Zn□.5Zr and Mg□10Gd□Y□.5Zr magnesium alloys by shot peening. *International Journal of Plasticity*, **2013**, 49, 16-35	7.6	56
407	Residual stresses in Linear Friction Welding of aluminium alloys. *Materials & Design*, **2013**, 50, 360-369		54
406	A review of micro-scale focused ion beam milling and digital image correlation analysis for residual stress evaluation and error estimation. *Surface and Coatings Technology*, **2015**, 283, 373-388	4.4	53
405	Influence of heat treatment on fatigue behaviour of high-strength Mg□10Gd□Y alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 6053-6063	5.3	53
404	Three-dimensional crack observation, quantification and simulation in a quasi-brittle material. *Acta Materialia*, **2013**, 61, 6276-6289	8.4	49
403	Imaging transient melting of a nanocrystal using an X-ray laser. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 7444-8	11.5	49
402	Eigenstrain analysis of residual strains and stresses. *Journal of Strain Analysis for Engineering Design*, **2009**, 44, 29-43	1.3	49
401	Photoluminescence Segmentation within Individual Hexagonal Monolayer Tungsten Disulfide Domains Grown by Chemical Vapor Deposition. *ACS Applied Materials & Interfaces*, **2017**, 9, 15005-15014	8.5	48
400	Multi-scale mechanisms of twinning-detwinning in magnesium alloy AZ31B simulated by crystal plasticity modeling and validated via in situ synchrotron XRD and in situ SEM-EBSD. *International Journal of Plasticity*, **2019**, 119, 43-56	7.6	48
399	High Li ion conductivity in a garnet-type solid electrolyte via unusual site occupation of the doping Ca ions. *Materials and Design*, **2016**, 93, 232-237	8.1	48

398	Mechanical and microstructural characterization of 2124Al/25vol.%SiCp joints obtained by linear friction welding (LFW). *Composites Part A: Applied Science and Manufacturing*, **2010**, 41, 1028-1037	8.4	47
397	Development of an approach to constitutive modelling of concrete: Isotropic damage coupled with plasticity. *International Journal of Solids and Structures*, **2008**, 45, 5483-5501	3.1	46
396	Eigenstrain reconstruction of residual strains in an additively manufactured and shot peened nickel superalloy compressor blade. *Computer Methods in Applied Mechanics and Engineering*, **2017**, 320, 335-351	5.7	45
395	Nanoscale chemical mapping of Li-ion battery cathode material by FIB-SEM and TOF-SIMS multi-modal microscopy. *Nano Energy*, **2015**, 17, 254-260	17.1	45
394	Improvement of fatigue properties by shot peening for Mg-10Gd-3Y alloys under different conditions. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2011**, 528, 5935-5944	5.3	45
393	Crack tip deformation fields and fatigue crack growth rates in Ti-6Al-4V. *International Journal of Fatigue*, **2009**, 31, 1771-1779	5	43
392	Residual elastic strain due to laser shock peening: Modelling by eigenstrain distribution. *Journal of Strain Analysis for Engineering Design*, **2006**, 41, 195-204	1.3	42
391	Fast residual stress mapping using energy-dispersive synchrotron X-ray diffraction on station 16.3 at the SRS. *Journal of Synchrotron Radiation*, **2002**, 9, 77-81	2.4	42
390	Advances in additive manufacturing process simulation: Residual stresses and distortion predictions in complex metallic components. *Materials and Design*, **2020**, 193, 108779	8.1	40
389	The effect of eigenstrain induced by ion beam damage on the apparent strain relief in FIB-DIC residual stress evaluation. *Materials and Design*, **2016**, 92, 649-658	8.1	40
388	A critical comparison between XRD and FIB residual stress measurement techniques in thin films. *Thin Solid Films*, **2014**, 572, 224-231	2.2	40
387	Evaluation and analysis of residual stresses due to foreign object damage. *Mechanics of Materials*, **2007**, 39, 199-211	3.3	40
386	The influence of welding procedure and plate geometry on residual stresses in thick components. *International Journal of Solids and Structures*, **2016**, 80, 420-429	3.1	39
385	Composite NASICON (NaZrSiPO) Solid-State Electrolyte with Enhanced Na Ionic Conductivity: Effect of Liquid Phase Sintering. *ACS Applied Materials & Interfaces*, **2019**, 11, 40125-40133	9.5	39
384	Intergranular stresses in polycrystalline fatigue: diffraction measurement and self-consistent modelling. *Engineering Fracture Mechanics*, **2004**, 71, 805-812	4.2	38
383	Highly stretchable two-dimensional auxetic metamaterial sheets fabricated via direct-laser cutting. *International Journal of Mechanical Sciences*, **2020**, 167, 105242	5.5	38
382	Structure-morphology correlation in electrospun fibers of semicrystalline polymers by simultaneous synchrotron SAXS-WAXD. *Polymer*, **2015**, 63, 154-163	3.9	37
381	Nanoscale residual stress depth profiling by Focused Ion Beam milling and eigenstrain analysis. *Materials and Design*, **2018**, 145, 55-64	8.1	37

380	Development and characterization of low friction coatings for protection against fretting wear in aerospace components. *Thin Solid Films*, **2008**, 516, 5690-5699	2.2	37
379	Residual stress measurement in thin films at sub-micron scale using Focused Ion Beam milling and imaging. *Thin Solid Films*, **2012**, 520, 2073-2076	2.2	36
378	Evaluation of the overload effect on fatigue crack growth with the help of synchrotron XRD strain mapping. *Engineering Fracture Mechanics*, **2010**, 77, 3216-3226	4.2	36
377	A study of overload effect on fatigue crack propagation using EBSD, FIBDIC and FEM methods. *Engineering Fracture Mechanics*, **2016**, 167, 210-223	4.2	36
376	An eigenstrain-based finite element model and the evolution of shot peening residual stresses during fatigue of GW103 magnesium alloy. *International Journal of Fatigue*, **2012**, 42, 284-295	5	35
375	Strain tomography of polycrystalline zirconia dental prostheses by synchrotron X-ray diffraction. *Acta Materialia*, **2011**, 59, 2501-2513	8.4	34
374	Dissipated energy and fretting damage in CoCrAlY-MoS2 coatings. *Tribology International*, **2010**, 43, 676-684	4.9	34
373	The principle of strain reconstruction tomography: Determination of quench strain distribution from diffraction measurements. *Acta Materialia*, **2006**, 54, 2101-2108	8.4	34
372	Residual stresses in single particle splat of metal cold spray process Numerical simulation and direct measurement. *Materials Letters*, **2018**, 230, 152-156	3.3	33
371	Residual Strain Measurement by Synchrotron Diffraction. *Materials Science Forum*, **2002**, 404-407, 1-12	0.4	33
370	Multiple-length-scale deformation analysis in a thermoplastic polyurethane. *Nature Communications*, **2015**, 6, 6583	17.4	32
369	A state-of-the-art review of micron-scale spatially resolved residual stress analysis by FIB-DIC ring-core milling and other techniques. *Journal of Strain Analysis for Engineering Design*, **2015**, 50, 426-444	1.3	32
368	Strengthening mechanisms in an Al-Fe-Cr-Ti nano-quasicrystalline alloy and composites. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 672, 175-183	5.3	32
367	How to connect two scales of behaviour in constitutive modelling of geomaterials. *Geotechnique Letters*, **2012**, 2, 129-134	1.7	32
366	Feasibility study of neutron strain tomography. *Procedia Engineering*, **2009**, 1, 185-188		32
365	The character of dislocation structure evolution in nanocrystalline FCC Ni-Co alloys prepared by high-energy mechanical milling. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **1999**, 271, 196-205	5.3	32
364	Uncertainty quantification of residual stress evaluation by the FIBDIC ring-core method due to elastic anisotropy effects. *International Journal of Solids and Structures*, **2016**, 87, 61-69	3.1	31
363	Work of indentation approach to the analysis of hardness and modulus of thin coatings. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2006**, 423, 28-35	5.3	30

362	A constitutive modelling framework featuring two scales of behaviour: Fundamentals and applications to quasi-brittle failure. *Engineering Fracture Mechanics*, **2014**, 115, 221-240	4.2	29
361	Effect of microstructures and texture development on tensile properties of Mg□10Gd□3Y alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2011**, 528, 2250-2258	5.3	29
360	The principle of equivalent eigenstrain for inhomogeneous inclusion problems. *International Journal of Solids and Structures*, **2014**, 51, 4477-4484	3.1	28
359	Reconstruction of axisymmetric strain distributions via neutron strain tomography. *Nuclear Instruments & Methods in Physics Research B*, **2012**, 270, 28-35	1.2	28
358	Finite element modelling and diffraction measurement of elastic strains during tensile deformation of HCP polycrystals. *Computational Materials Science*, **2008**, 44, 131-137	3.2	28
357	Symbolic and numerical solution of the axisymmetric indentation problem for a multilayered elastic coating. *International Journal of Solids and Structures*, **2013**, 50, 2798-2807	3.1	27
356	Explicit formulae for the internal stress in spherical particles of active material within lithium ion battery cathodes during charging and discharging. *Materials & Design*, **2015**, 69, 247-252		27
355	Nanoscale structural damage due to focused ion beam milling of silicon with Ga ions. *Materials Letters*, **2018**, 213, 346-349	3.3	27
354	An Arrhenius equation-based model to predict the residual stress relief of post weld heat treatment of Ti-6Al-4V plate. *Journal of Manufacturing Processes*, **2018**, 32, 763-772	5	26
353	Quantifying eigenstrain distributions induced by focused ion beam damage in silicon. *Materials Letters*, **2016**, 185, 47-49	3.3	26
352	Mitigated phase transition during first cycle of a Li-rich layered cathode studied by in operando synchrotron X-ray powder diffraction. *Physical Chemistry Chemical Physics*, **2016**, 18, 4745-52	3.6	26
351	Mechanical properties of thin carbon overcoats. *Tribology International*, **1998**, 31, 547-551	4.9	26
350	On The Use Of Vector J-Integral In Crack Growth Criteria For Brittle Solids. *International Journal of Fracture*, **2005**, 133, L39-L46	2.3	26
349	Residual stresses and microstructure in Powder Bed Direct Laser Deposition (PB DLD) samples. *International Journal of Material Forming*, **2015**, 8, 245-254	2	24
348	Micro selective laser melting of NiTi shape memory alloy: Defects, microstructures and thermal/mechanical properties. *Optics and Laser Technology*, **2020**, 131, 106374	4.2	24
347	Analysis of strain error sources in micro-beam Laue diffraction. *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, **2011**, 660, 130-137	1.2	24
346	The effect of path cut on Somigliana ring dislocation elastic fields. *International Journal of Solids and Structures*, **2007**, 44, 6653-6677	3.1	24
345	On the micromechanics of micro-cantilever sensors: Property analysis and eigenstrain modeling. *Sensors and Actuators A: Physical*, **2007**, 139, 70-77	3.9	24

344	Energy calibration and full-pattern refinement for strain analysis using energy-dispersive and monochromatic X-ray diffraction. *Journal of Applied Crystallography*, **2005**, 38, 661-667	3.8	24
343	Quasicrystalline phase formation by heating a mechanically alloyed Al65Cu23Fe12 powder mixture. *Journal of Non-Crystalline Solids*, **2002**, 312-314, 522-526	3.9	24
342	Elasticity with Mathematica : An Introduction to Continuum Mechanics and Linear Elasticity **2007**,		24
341	Synchrotron X-ray quantitative evaluation of transient deformation and damage phenomena in a single nickel-rich cathode particle. *Energy and Environmental Science*, **2020**, 13, 3556-3566	35.4	24
340	Micro-scale measurement & FEM modelling of residual stresses in AA6082-T6 Al alloy generated by wire EDM cutting. *Journal of Materials Processing Technology*, **2020**, 275, 116373	5.3	23
339	An analysis of fatigue failure mechanisms in an additively manufactured and shot peened IN 718 nickel superalloy. *Materials and Design*, **2020**, 191, 108605	8.1	22
338	A simplified FEM eigenstrain residual stress reconstruction for surface treatments in arbitrary 3D geometries. *International Journal of Mechanical Sciences*, **2018**, 138-139, 457-466	5.5	22
337	Operando X-ray Absorption Spectroscopy Study of Atomic Phase Reversibility with Wavelet Transform in the Lithium-Rich Manganese Based Oxide Cathode. *Chemistry of Materials*, **2016**, 28, 4191-4203	9.6	22
336	Separating macro- (Type I) and micro- (Type II+III) residual stresses by ring-core FIB-DIC milling and eigenstrain modelling of a plastically bent titanium alloy bar. *Acta Materialia*, **2018**, 156, 43-51	8.4	22
335	Focused ion beam four-slot milling for Poisson's ratio and residual stress evaluation at the micron scale. *Surface and Coatings Technology*, **2014**, 251, 151-161	4.4	22
334	In situ X-ray scattering evaluation of heat-induced ultrastructural changes in dental tissues and synthetic hydroxyapatite. *Journal of the Royal Society Interface*, **2014**, 11, 20130928	4.1	22
333	Inverse Eigenstrain Analysis of the Effect of Non-uniform Sample Shape on the Residual Stress Due to Shot Peening. *Experimental Mechanics*, **2011**, 51, 165-174	2.6	22
332	The influence of indenter bluntness on the apparent contact stiffness of thin coatings. *Thin Solid Films*, **2009**, 517, 4835-4844	2.2	22
331	Dissipated energy and friction coefficient evolution during fretting wear of solid lubricant coatings. *Tribology International*, **2010**, 43, 861-867	4.9	22
330	The correlation between plastic strain and anisotropy strain in aluminium alloy polycrystals. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2002**, 334, 41-48	5.3	22
329	Probing the complex thermo-mechanical properties of a 3D-printed polylactide-hydroxyapatite composite using synchrotron X-ray scattering. *Journal of Advanced Research*, **2019**, 16, 113-122	13	22
328	Influence of Particle Velocity When Propelled Using N2 or N2-He Mixed Gas on the Properties of Cold-Sprayed Ti6Al4V Coatings. *Coatings*, **2018**, 8, 327	2.9	22
327	Exponential evolution law of fretting wear damage in low-friction coatings for aerospace components. *Surface and Coatings Technology*, **2008**, 202, 5838-5846	4.4	21

326	Fundamental formulation for frictional contact problems of coated systems. *International Journal of Solids and Structures*, **2004**, 41, 2837-2854	3.1	21
325	The thermal expansion coefficient of mechanically alloyed Al-Cu-Fe quasicrystalline powders. *Scripta Materialia*, **2001**, 44, 217-222	5.6	21
324	The Solution of Crack Problems by Using Distributed Strain Nuclei. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **1996**, 210, 23-31	1.3	21
323	Imaging of grain-level orientation and strain in thicker metallic polycrystals by high energy transmission micro-beam Laue (HETL) diffraction techniques. *International Journal of Materials Research*, **2012**, 103, 192-199	0.5	21
322	Neutron Strain Tomography using the Radon Transform. *Materials Today: Proceedings*, **2015**, 2, S414-S423	3.4	20
321	Strain softening of nano-scale fuzzy interfaces causes Mullins effect in thermoplastic polyurethane. *Scientific Reports*, **2017**, 7, 916	4.9	20
320	Probing intra-granular deformation by micro-beam Laue diffraction. *Procedia Engineering*, **2009**, 1, 193-196		20
319	Residual strains in AA2024/AlSiCp composite linear friction welds. *Materials & Design*, **2010**, 31, S117-S120		20
318	Direct evidence of initial pitting corrosion. *Electrochemistry Communications*, **2008**, 10, 1000-1004	5.1	20
317	Generalised residual stress depth profiling at the nanoscale using focused ion beam milling. *Journal of the Mechanics and Physics of Solids*, **2019**, 125, 488-501	5	20
316	On the identification of eigenstrain sources of welding residual stress in bead-on-plate inconel 740H specimens. *International Journal of Mechanical Sciences*, **2018**, 145, 231-245	5.5	19
315	Diametrical growth in the forward flow forming process: simulation, validation, and prediction. *International Journal of Advanced Manufacturing Technology*, **2014**, 71, 207-217	3.2	19
314	X-ray scattering evaluation of ultrastructural changes in human dental tissues with thermal treatment. *Journal of Forensic Sciences*, **2014**, 59, 769-74	1.8	19
313	Multiscale modelling and diffraction-based characterization of elastic behaviour of human dentine. *Acta Biomaterialia*, **2013**, 9, 7937-47	10.8	19
312	Analysis of the spray field development on a vertical surface during water spray-quenching using a flat spray nozzle. *Applied Thermal Engineering*, **2009**, 29, 1406-1416	5.8	19
311	The use of coupled nonlocal damage-plasticity to predict crack growth in ductile metal plates. *Engineering Fracture Mechanics*, **2010**, 77, 1721-1729	4.2	19
310	Fundamental eigenstrain solutions for axisymmetric crack problems. *Journal of the Mechanics and Physics of Solids*, **1995**, 43, 1221-1241	5	19
309	In operando X-ray absorption spectroscopy study of charge rate effects on the atomic environment in graphene-coated Li-rich mixed oxide cathode. *Materials and Design*, **2016**, 98, 231-242	8.1	18

308	Laue-DIC: a new method for improved stress field measurements at the micrometer scale. *Journal of Synchrotron Radiation*, **2015**, 22, 980-94	2.4	18
307	Dislocation-based plasticity model and micro-beam Laue diffraction analysis of polycrystalline Ni foil: A forward prediction. *Philosophical Magazine*, **2010**, 90, 3999-4011	1.6	18
306	High energy transmission micro-beam Laue synchrotron X-ray diffraction. *Materials Letters*, **2010**, 64, 1302-1305	3.3	18
305	Determination of essential work of necking and tearing from a single tensile test. *International Journal of Fracture*, **2005**, 132, 37-44	2.3	18
304	Preparation and Analysis of Quasicrystalline Phases by High Energy Ball Milling and X-Ray Diffraction. *Materials Science Forum*, **2000**, 321-324, 676-681	0.4	18
303	An experimental and numerical analysis of residual stresses in a TIG weldment of a single crystal nickel-base superalloy. *Journal of Manufacturing Processes*, **2020**, 53, 190-200	5	17
302	High-tech composites to ancient metals. *Materials Today*, **2009**, 12, 78-84	21.8	17
301	Residual elastic strain due to laser shock peening: Synchrotron diffraction measurement. *Journal of Strain Analysis for Engineering Design*, **2006**, 41, 113-120	1.3	16
300	Residual Elastic Strains in Autofrettaged Tubes: Elastic Ideally Plastic Model Analysis. *Journal of Engineering Materials and Technology, Transactions of the ASME*, **2007**, 129, 77-81	1.8	16
299	Full in-plane strain tensor analysis using the microscale ring-core FIB milling and DIC approach. *Journal of the Mechanics and Physics of Solids*, **2016**, 94, 47-67	5	16
298	Transverse fatigue behaviour and residual stress analyses of double sided FSW aluminium alloy joints. *Fatigue and Fracture of Engineering Materials and Structures*, **2019**, 42, 1980-1990	3	15
297	Elucidating the Mechanism of Fatigue Crack Acceleration Following the Occurrence of an Underload . *Advanced Engineering Materials*, **2016**, 18, 2076-2087	3.5	15
296	Understanding nature's residual strain engineering at the human dentine-enamel junction interface. *Acta Biomaterialia*, **2016**, 32, 256-263	10.8	15
295	Triaxial residual strains in a railway rail measured by neutron diffraction. *Journal of Strain Analysis for Engineering Design*, **2009**, 44, 563-568	1.3	15
294	Residual stress measurement in thin films using the semi-destructive ring-core drilling method using Focused Ion Beam. *Procedia Engineering*, **2011**, 10, 2190-2195		15
293	Effects of imposed displacement and initial coating thickness on fretting behaviour of a thermally sprayed coating. *Wear*, **2011**, 271, 1080-1085	3.5	15
292	Variational eigenstrain analysis of synchrotron diffraction measurements of residual elastic strain in a bent titanium alloy bar. *Journal of Mechanics of Materials and Structures*, **2006**, 1, 259-277	1.2	15
291	The Somigliana ring dislocation revisited. *Journal of Elasticity*, **1996**, 44, 97-114	1.5	15

290	Fast Mass-Production of Medical Safety Shields under COVID-19 Quarantine: Optimizing the Use of University Fabrication Facilities and Volunteer Labor. *International Journal of Environmental Research and Public Health*, **2020**, 17,	4.6	14
289	Effect of Substrate Surface Roughness on Microstructure and Mechanical Properties of Cold-Sprayed Ti6Al4V Coatings on Ti6Al4V Substrates. *Journal of Thermal Spray Technology*, **2019**, 28, 1959-1973	2.5	14
288	Hierarchical modelling of in situ elastic deformation of human enamel based on photoelastic and diffraction analysis of stresses and strains. *Acta Biomaterialia*, **2014**, 10, 343-54	10.8	14
287	Mapping the dislocation sub-structure of deformed polycrystalline Ni by scanning microbeam diffraction topography. *Scripta Materialia*, **2011**, 64, 884-887	5.6	14
286	Inverse eigenstrain analysis of residual stresses in friction stir welds. *Procedia Engineering*, **2009**, 1, 213-216		14
285	Microstructure, residual strain, and eigenstrain analysis of dissimilar friction stir welds. *Materials & Design*, **2010**, 31, S121-S125		14
284	Analysis of Essential Work of Rupture using Non-local Damage-plasticity Modelling. *International Journal of Fracture*, **2005**, 135, L19-L26	2.3	14
283	On the use of interpolative quadratures for hypersingular integrals in fracture mechanics. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2002**, 458, 2721-2733	2.4	14
282	The effect of surface damage and residual stresses on the fatigue life of nickel superalloys at high temperature. *International Journal of Fatigue*, **2019**, 119, 34-42	5	14
281	On the analysis of post weld heat treatment residual stress relaxation in Inconel alloy 740H by combining the principles of artificial intelligence with the eigenstrain theory. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 752, 180-191	5.3	13
280	Design and mechanical properties of 3D-printed auxetic honeycomb structure. *Materials Today Communications*, **2020**, 24, 101173	2.5	13
279	Influence of size effect and plastic strain gradient on the springback behaviour of metallic materials in microbending process. *International Journal of Mechanical Sciences*, **2018**, 146-147, 105-115	5.5	13
278	High-energy transmission Laue micro-beam X-ray diffraction: a probe for intra-granular lattice orientation and elastic strain in thicker samples. *Journal of Synchrotron Radiation*, **2012**, 19, 307-18	2.4	13
277	Hierarchical modelling of elastic behaviour of human enamel based on synchrotron diffraction characterisation. *Journal of Structural Biology*, **2013**, 184, 136-46	3.4	13
276	Calculations of single crystal elastic constants for yttria partially stabilised zirconia from powder diffraction data. *Journal of Applied Physics*, **2014**, 116, 053509	2.5	13
275	Structure-mechanical function relations at nano-scale in heat-affected human dental tissue. *Journal of the Mechanical Behavior of Biomedical Materials*, **2014**, 32, 113-124	4.1	13
274	Analysis of residual strain and stress states due to heat treatment and thermal processing. *Journal of Strain Analysis for Engineering Design*, **2009**, 44, 71-91	1.3	13
273	Polycrystal deformation analysis by high energy synchrotron X-ray diffraction on the I12 JEEP beamline at Diamond Light Source. *Materials Letters*, **2010**, 64, 1724-1727	3.3	13

272	Experimental/Modelling Study of Residual Stress in Al/SiCp Bent Bars by Synchrotron XRD and Slitting Eigenstrain Methods. *Materials Science Forum*, **2008**, 571-572, 277-282	0.4	13
271	Residual stresses in rolled and machined nickel alloy plates: Synchrotron X-ray diffraction measurement and three-dimensional eigenstrain analysis. *Journal of Strain Analysis for Engineering Design*, **2007**, 42, 1-12	1.3	13
270	The analysis of deformation size effects using multiple gauge length extensometry and the essential work of rupture concept. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2006**, 423, 192-198	5.3	13
269	The influence of punch blunting on the elastic indentation response. *Journal of Strain Analysis for Engineering Design*, **2001**, 36, 391-400	1.3	13
268	A New Mechanochemical Method for Metal Coating. *Materials Science Forum*, **2002**, 386-388, 251-256	0.4	13
267	Gauss-Chebyshev quadrature formulae for strongly singular integrals. *Quarterly of Applied Mathematics*, **1998**, 56, 461-472	0.7	13
266	Probing the deformation and fracture properties of Cu/W nano-multilayers by in situ SEM and synchrotron XRD strain microscopy. *Surface and Coatings Technology*, **2017**, 320, 158-167	4.4	12
265	Nano-scale mapping of lattice strain and orientation inside carbon core SiC fibres by synchrotron X-ray diffraction. *Carbon*, **2014**, 79, 85-92	10.4	12
264	A feasibility study of dynamic stress analysis inside a running internal combustion engine using synchrotron X-ray beams. *Journal of Synchrotron Radiation*, **2013**, 20, 316-23	2.4	12
263	A synchrotron tomographic energy-dispersive diffraction imaging study of the aerospace alloy Ti 6246. *Journal of Applied Crystallography*, **2011**, 44, 150-157	3.8	12
262	Crystal plasticity and hardening: A dislocation dynamics study. *Procedia Engineering*, **2009**, 1, 241-244		12
261	Measurement of Residual Elastic Strains in a Titanium Alloy Using High Energy Synchrotron X-Ray Diffraction. *Experimental Mechanics*, **2006**, 46, 519-529	2.6	12
260	The Application of Plasticity Principles to Friction. *Journal of Strain Analysis for Engineering Design*, **2006**, 41, 323-328	1.3	12
259	A note on the Gauss-Jacobi quadrature formulae for singular integral equations of the second kind. *International Journal of Fracture*, **2004**, 126, 399-405	2.3	12
258	The Evolution of Crystalline Precursors During the Formation of Al-Cu-Fe Quasicrystalline Intermetallics in Mechanically Alloyed Powders. *Materials Science Forum*, **2001**, 360-362, 137-142	0.4	12
257	The solution of plane crack problems by dislocation dipole procedures. *Journal of Strain Analysis for Engineering Design*, **1995**, 30, 21-27	1.3	12
256	The Somigliana ring dislocation revisited. *Journal of Elasticity*, **1996**, 44, 115-129	1.5	12
255	Evolution of thermal and mechanical properties of Nitinol wire as a function of ageing treatment conditions. *Journal of Alloys and Compounds*, **2020**, 819, 153024	5.7	12

254	Experimental and modelling characterisation of residual stresses in cylindrical samples of rapidly cooled bulk metallic glass. *Materials and Design*, **2016**, 104, 235-241	8.1	12
253	In situ neutron diffraction investigation of texture-dependent Shape Memory Effect in a near equiatomic NiTi alloy. *Acta Materialia*, **2021**, 202, 135-148	8.4	12
252	Investigation of Martensite Transformation in 316L Stainless Steel. *Materials Today: Proceedings*, **2015**, 2, S251-S260	1.4	11
251	Multiscale analysis of bamboo deformation mechanisms following NaOH treatment using X-ray and correlative microscopy. *Acta Biomaterialia*, **2018**, 72, 329-341	10.8	11
250	Fine-scale tribological performance of zeolitic imidazolate framework (ZIF-8) based polymer nanocomposite membranes. *APL Materials*, **2014**, 2, 124101	5.7	11
249	Combining Laue Microdiffraction and Digital Image Correlation for Improved Measurements of the Elastic Strain Field with Micrometer Spatial Resolution. *Procedia IUTAM*, **2012**, 4, 133-143		11
248	Diffraction post-processing of 3D dislocation dynamics simulations for direct comparison with micro-beam Laue experiments. *Materials Letters*, **2012**, 89, 66-69	3.3	11
247	Neutron strain tomography using Bragg-edge transmission. *International Journal of Materials Research*, **2012**, 103, 234-241	0.5	11
246	Analysis of the internal structure and lattice (mis)orientation in individual grains of deformed CP nickel polycrystals by synchrotron X-ray micro-diffraction and microscopy. *International Journal of Fatigue*, **2012**, 42, 1-13	5	11
245	Tilting during island growth of In2O3 on Y-stabilized ZrO2(001) revealed by high-resolution x-ray diffraction. *Physical Review B*, **2010**, 82,	3.3	11
244	Fully Two-Dimensional Discrete Inverse Eigenstrain Analysis of Residual Stresses in a Railway Rail Head. *Journal of Applied Mechanics, Transactions ASME*, **2011**, 78,	2.7	11
243	Residual stress characterization in 12%-Cr steel friction stir welds by neutron diffraction. *Journal of Strain Analysis for Engineering Design*, **2012**, 47, 203-213	1.3	11
242	A One-Dimensional Nonlocal Damage-Plasticity Model for Ductile Materials. *International Journal of Fracture*, **2007**, 144, 53-60	2.3	11
241	The edge dislocation in a three-quarter plane. Part I: Influence functions. *European Journal of Mechanics, A/Solids*, **2006**, 25, 42-50	3.7	11
240	Nano-scale residual stress depth profiling in Cu/W nano-multilayers as a function of magnetron sputtering pressure. *Surface and Coatings Technology*, **2020**, 381, 125142	4.4	11
239	Non-singular antiplane fracture theory within nonlocal anisotropic elasticity. *Materials and Design*, **2015**, 88, 854-861	8.1	10
238	Plane deformation of circular inhomogeneous inclusion problems with non-uniform symmetrical dilatational eigenstrain. *Materials and Design*, **2015**, 86, 809-817	8.1	10
237	On the origins of strain inhomogeneity in amorphous materials. *Scientific Reports*, **2018**, 8, 1574	4.9	10

236	In situ monitoring and analysis of enamel demineralisation using synchrotron X-ray scattering. *Acta Biomaterialia*, **2018**, 77, 333-341	10.8	10
235	Nanoscale Depth Profiling of Residual Stresses Due to Fine Surface Finishing. *Advanced Materials Interfaces*, **2019**, 6, 1900947	4.6	10
234	Digital image correlation and finite element analysis of inter- and intra-granular deformation. *Procedia Engineering*, **2009**, 1, 197-200		10
233	A New Methodology For In-Situ Residual Stress Measurement In MEMS Structures **2010**,		10
232	Vector J-Integral Analysis of Crack Interaction With Pre-existing Singularities. *Journal of Applied Mechanics, Transactions ASME*, **2006**, 73, 876-883	2.7	10
231	Eigenstrain Analysis of Synchrotron X-Ray Diffraction Measurement of Residual Strains in Machined Nickel Alloy Plates. *Journal of Strain Analysis for Engineering Design*, **2006**, 41, 381-395	1.3	10
230	Residual stresses in a welded superalloy disc: Characterization using synchrotron diffraction and numerical process modeling. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2002**, 33, 2921-2931	2.3	10
229	Debonding of a Weak Interface in Front of a Through-Thickness Crack. *International Journal of Fracture*, **2001**, 109, 35-40	2.3	10
228	Fatigue and Fracture behaviour of AZ31b Mg alloy plastically deformed by Constrained Groove Pressing in the Presence of Overloads. *Procedia Structural Integrity*, **2016**, 2, 3772-3781	1	10
227	Acid-induced demineralisation of human enamel as a function of time and pH observed using X-ray and polarised light imaging. *Acta Biomaterialia*, **2021**, 120, 240-248	10.8	10
226	On the Dependence of Precipitate Size in a Nickel-Based Superalloy on the Cooling Rate from Super-Solvus Temperature Heat Treatment. *Materials*, **2018**, 11,	3.5	10
225	Nature neat nanostructuration: The fascinating frustules of diatom algae. *Materials Today*, **2019**, 22, 159-160	21.8	9
224	Editorial note On the aims & scope and priority areas in Materials & Design. *Materials and Design*, **2015**, 88, 1377-1380	8.1	9
223	Coupled Eulerian-Lagrangian (CEL) simulation of multiple particle impact during Metal Cold Spray process for coating porosity prediction. *Surface and Coatings Technology*, **2020**, 385, 125433	4.4	9
222	Porous Open-cell UHMWPE: Experimental Study of Structure and Mechanical Properties. *Materials*, **2019**, 12,	3.5	9
221	A damage function formulation for nonlocal coupled damage-plasticity model of ductile metal alloys. *European Journal of Mechanics, A/Solids*, **2012**, 34, 63-77	3.7	9
220	Deep reactive ion etching of silicon moulds for the fabrication of diamond x-ray focusing lenses. *Journal of Micromechanics and Microengineering*, **2013**, 23, 125018	2	9
219	The evolution of electrochemical, microstructural, and mechanical properties of aluminium alloy 2024-T4 (D16AT) during fatigue cycling. *Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering*, **2010**, 224, 339-353	0.9	9

218	A method for the in situ measurement of evolving elliptical cross-sections in initially cylindrical Taylor impact specimens. *Journal of Strain Analysis for Engineering Design*, **2010**, 45, 429-437	1.3	9
217	Synchrotron XRD study of residual stress in a shot peened Al/SiCp composite. *Procedia Engineering*, **2009**, 1, 221-224		9
216	Anti-plane interaction of a crack and reinforced elliptic hole in an infinite matrix. *Theoretical and Applied Fracture Mechanics*, **2010**, 53, 205-210	3.7	9
215	The inclusion of short-transverse displacements in the eigenstrain reconstruction of residual stress and distortion in in740h weldments. *Journal of Manufacturing Processes*, **2018**, 36, 601-612	5	9
214	Evaluation of macro- and microscopic residual stresses in laser shock-peened titanium alloy by FIB-DIC ring-core milling with different core diameters. *Surface and Coatings Technology*, **2018**, 349, 719-724	4.4	9
213	The height Digital Image Correlation (hDIC) technique for the identification of triaxial surface deformations. *International Journal of Mechanical Sciences*, **2019**, 159, 417-423	5.5	8
212	A comparative transmission electron microscopy, energy dispersive x-ray spectroscopy and spatially resolved micropillar compression study of the yttria partially stabilised zirconia - porcelain interface in dental prosthesis. *Thin Solid Films*, **2015**, 596, 222-232	2.2	8
211	Ripples in amorphous chalcogenide films under homogeneous laser illumination. *Materials Letters*, **2016**, 183, 156-160	3.3	8
210	Structure-Function Correlative Microscopy of Peritubular and Intertubular Dentine. *Materials*, **2018**, 11,	3.5	8
209	Intragranular Residual Stress Evaluation Using the Semi-Destructive FIB-DIC Ring-Core Drilling Method. *Advanced Materials Research*, **2014**, 996, 8-13	0.5	8
208	RICH TOMOGRAPHY TECHNIQUES FOR THE ANALYSIS OF MICROSTRUCTURE AND DEFORMATION. *International Journal of Computational Methods*, **2014**, 11, 1343006	1.1	8
207	Inertia friction welds between nickel superalloy components: Analysis of residual stress by eigenstrain distributions. *Journal of Strain Analysis for Engineering Design*, **2009**, 44, 159-170	1.3	8
206	Synchrotron based reciprocal space mapping and dislocation substructure analysis. *Materials Letters*, **2009**, 63, 1077-1081	3.3	8
205	Plastic bending of a residually stressed beam. *International Journal of Solids and Structures*, **1997**, 34, 1985-2002	3.1	8
204	Residual Elastic Strains in Autofrettaged Tubes: Variational Analysis by the Eigenstrain Finite Element Method. *Journal of Applied Mechanics, Transactions ASME*, **2007**, 74, 717-722	2.7	8
203	The relationship between the Dang Van criterion and the traditional bulk fatigue criteria. *Journal of Strain Analysis for Engineering Design*, **2003**, 38, 201-206	1.3	8
202	Solution of axisymmetric crack problems using distributed dislocation ring dipoles. *Journal of Strain Analysis for Engineering Design*, **2000**, 35, 373-382	1.3	8
201	Collapse of polymer and composite liners constrained within tubular conduits. *Plastics, Rubber and Composites*, **2000**, 29, 566-572	1.5	8

200	High Energy Synchrotron X-Ray Measurements of 2D Residual Stress States in Metal Matrix Composites. *Materials Science Forum*, **2000**, 321-324, 218-223	0.4	8
199	On the application of principles of artificial intelligence for eigenstrain reconstruction of volumetric residual stresses in non-uniform Inconel alloy 740H weldments. *Finite Elements in Analysis and Design*, **2019**, 155, 43-51	2.2	8
198	Investigations into the interface failure of yttria partially stabilised zirconia - porcelain dental prostheses through microscale residual stress and phase quantification. *Dental Materials*, **2019**, 35, 1576-1593	5.7	7
197	Nano-Scale Residual Stress Profiling in Thin Multilayer Films with Non-Equibiaxial Stress State. *Nanomaterials*, **2020**, 10,	5.4	7
196	Multi-scale Characterisation of the 3D Microstructure of a Thermally-Shocked Bulk Metallic Glass Matrix Composite. *Scientific Reports*, **2016**, 6, 18545	4.9	7
195	Residual Stress Measurement **2017**, 93-107		7
194	INTRAGRANULAR LATTICE MISORIENTATION MAPPING BY SYNCHROTRON X-RAY MICRO-BEAMS: LAUE VS ENERGY-RESOLVED LAUE VS MONOCHROMATIC RECIPROCAL SPACE ANALYSIS. *International Journal of Modern Physics B*, **2010**, 24, 279-287	1.1	7
193	Residual strain analysis in polycrystalline aggregates using diffraction measurement and finite element modelling. *Journal of Strain Analysis for Engineering Design*, **2009**, 44, 55-70	1.3	7
192	Eigenstrain reconstruction method in linear friction welded aluminium alloy and MMC plates. *International Journal for Numerical Methods in Engineering*, **2010**, 84, 989-1008	2.4	7
191	High-energy synchrotron X-ray analysis of residual plastic strains induced in shot-peened steel plates. *Journal of Strain Analysis for Engineering Design*, **2008**, 43, 229-241	1.3	7
190	A Study of Residual Stresses in Al/SiCp Linear Friction Weldment by Energy-Dispersive Neutron Diffraction. *Key Engineering Materials*, **2008**, 385-387, 517-520	0.4	7
189	Surface dislocation nucleation from frictional sliding contacts. *International Journal of Solids and Structures*, **2008**, 45, 5936-5945	3.1	7
188	An analysis of defect size evolution. *International Journal of Fracture*, **2004**, 128, 139-145	2.3	7
187	Achieving Triply Periodic Minimal Surface Thin-Walled Structures by Micro Laser Powder Bed Fusion Process. *Micromachines*, **2021**, 12,	3.3	7
186	Operando observation of the Taylor cone during electrospinning by multiple synchrotron X-ray techniques. *Materials and Design*, **2016**, 110, 933-934	8.1	7
185	Analysis of in vitro demineralised human enamel using multi-scale correlative optical and scanning electron microscopy, and high-resolution synchrotron wide-angle X-ray scattering. *Materials and Design*, **2021**, 206, 109739	8.1	7
184	Characterisation of handling and service surface damage on Nickel alloys caused by low velocity impacts of blunt hard objects. *Mechanics of Materials*, **2017**, 107, 45-55	3.3	6
183	Tensile secondary creep rate analysis of a dental veneering porcelain. *Thin Solid Films*, **2015**, 596, 269-276	2.2	6

182	The fabrication and characterization of bioengineered ultra-high molecular weight polyethylene-collagen-hap hybrid bone-cartilage patch. *Materials Today Communications*, **2020**, 24, 101052	2.5	6
181	Neutron strain scanning for experimental validation of the artificial intelligence based eigenstrain contour method. *Mechanics of Materials*, **2020**, 143, 103316	3.3	6
180	Formation of Nanoporous Silicon on a Silicon Wafer via the Magnesiothermic Reduction Reaction (MRR) of Diatomaceous Earth. *Nanomaterials*, **2020**, 10,	5.4	6
179	Digital Image Correlation of 2D X-ray Powder Diffraction Data for Lattice Strain Evaluation. *Materials*, **2018**, 11,	3.5	6
178	Evaluation of single crystal elastic stiffness coefficients of a nickel-based superalloy by electron backscatter diffraction and nanoindentation. *Journal of the Mechanics and Physics of Solids*, **2019**, 131, 303-312	5	6
177	Fundamental Formulation for Transformation Toughening in Anisotropic Solids. *Journal of Applied Mechanics, Transactions ASME*, **2013**, 80,	2.7	6
176	Fretting Damage of Ni□MoS2 Coatings: Friction Coefficient and Accumulated Dissipated Energy Evolutions. *Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology*, **2010**, 224, 1173-1180	1.4	6
175	Consistent tangent stiffness for local-nonlocal damage modelling of metals. *Procedia Engineering*, **2009**, 1, 177-180		6
174	A beam-bending eigenstrain analysis of residual elastic strains in multi-scan laser-formed steel samples. *Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science*, **2008**, 222, 1635-1645	1.3	6
173	Microstructure evolution in a severely cold-worked NiTi wire during ageing treatment: An in situ neutron diffraction study. *Materials Letters*, **2020**, 281, 128676	3.3	6
172	Correlation between the macroscopic adhesion strength of cold spray coating and the microscopic single-particle bonding behaviour: Simulation, experiment and prediction. *Applied Surface Science*, **2021**, 547, 149165	6.7	6
171	Shape memory polymer blends and composites for 3D and 4D printing applications **2020**, 161-189		6
170	Finite Element Modelling and Experimental Validation of the Enamel Demineralisation Process at the Rod Level. *Journal of Advanced Research*, **2021**, 29, 167-177	13	6
169	Characterisation of nanovoiding in dental porcelain using small angle neutron scattering and transmission electron microscopy. *Dental Materials*, **2017**, 33, 486-497	5.7	5
168	X-ray Study of Human Dental Tissues Affected by Erythroblastosis Fetalis. *Journal of Dental Research*, **2015**, 94, 1004-10	8.1	5
167	Photoacoustic and fluorescence lifetime imaging of diatoms. *Photoacoustics*, **2020**, 18, 100171	9	5
166	Depth-dependent stress□train relation for friction prediction. *International Journal of Mechanical Sciences*, **2014**, 86, 46-53	5.5	5
165	Probing deformation substructure by synchrotron X-ray diffraction and dislocation dynamics modelling. *Journal of Nanoscience and Nanotechnology*, **2010**, 10, 5935-50	1.3	5

164	An Axisymmetric Inclusion in One of Two Perfectly Bonded Dissimilar Elastic Half-Spaces. *Journal of Applied Mechanics, Transactions ASME*, **1997**, 64, 697-700	2.7	5
163	Analytical Solution for Sliding Rounded-Edge Contact. *Journal of Elasticity*, **2006**, 82, 9-30	1.5	5
162	Hard X-ray ptychography for optics characterization using a partially coherent synchrotron source. *Journal of Synchrotron Radiation*, **2020**, 27, 1688-1695	2.4	5
161	2D auxetic metamaterials with tuneable micro-/nanoscale apertures. *Applied Materials Today*, **2020**, 20, 100780	6.6	5
160	On the electrospinning of nanostructured collagen-PVA fiber mats. *Materials Today: Proceedings*, **2020**, 33, 2013-2019	1.4	5
159	Increased connectivity of hiPSC-derived neural networks in multiphase granular hydrogel scaffolds. *Bioactive Materials*, **2022**, 9, 358-372	16.7	5
158	Investigation of microstructure within metal welds by energy resolved neutron imaging. *Journal of Physics: Conference Series*, **2016**, 746, 012040	0.3	5
157	Multiscale synchrotron scattering studies of the temperature-dependent changes in the structure and deformation response of a thermoplastic polyurethane elastomer. *Materials Today Advances*, **2019**, 4, 100024	7.4	5
156	Why is local stress statistics normal, and strain lognormal?. *Materials and Design*, **2021**, 198, 109319	8.1	5
155	Complex variable formulation for a rigid line inclusion interacting with a generalized singularity. *Archive of Applied Mechanics*, **2018**, 88, 613-627	2.2	5
154	Metal-Based 3D-Printed Micro Parts & Structures **2022**, 448-461		5
153	Analysis of increasing torque with recurrent slip in interference-fits. *Engineering Failure Analysis*, **2016**, 62, 58-74	3.2	4
152	Nanoscale Origins of the Size Effect in the Compression Response of Single Crystal Ni-Base Superalloy Micro-Pillars. *Materials*, **2018**, 11,	3.5	4
151	Complex variable formulation for non-slipping plane strain contact of two elastic solids in the presence of interface mismatch eigenstrain. *International Journal of Solids and Structures*, **2012**, 49, 1177-1188	3.1	4
150	Stress evaluation in thin films: Micro-focus synchrotron X-ray diffraction combined with focused ion beam patterning for do evaluation. *Thin Solid Films*, **2013**, 549, 245-250	2.2	4
149	Surface dislocation nucleation by wedge indenter contacts. *Materials Science and Technology*, **2012**, 28, 1167-1172	1.5	4
148	Texture analysis in cubic phase polycrystals by single exposure synchrotron X-ray diffraction. *Journal of Applied Physics*, **2013**, 114, 163502	2.5	4
147	ON THE MEASUREMENT AND INTERPRETATION OF RESIDUAL STRESS AT THE MICRO-SCALE. *International Journal of Modern Physics B*, **2010**, 24, 1-9	1.1	4

146	Mapping of domain structure in Barium Titanate single crystals by synchrotron x-ray topography **2010**,		4
145	Eigenstrain analysis of non-uniformly shaped shot-peened samples. *Procedia Engineering*, **2009**, 1, 151-154		4
144	Investigation of changes in crystalline and amorphous structure during deformation of nano-reinforced semi-crystalline polymers by space-resolved synchrotron SAXS and WAXS. *Procedia Engineering*, **2009**, 1, 159-162		4
143	Development and characterization of low-friction coatings for protection against fretting wear in aerospace components. *Metal Finishing*, **2009**, 107, 45-52		4
142	Dislocation model of localized plastic deformation initiated with a flat punch. *International Journal of Solids and Structures*, **2010**, 47, 1082-1089	3.1	4
141	Synchrotron Energy-Dispersive X-Ray Diffraction Analysis of Residual Strains around Friction Welds between Dissimilar Aluminium and Nickel Alloys. *Materials Science Forum*, **2008**, 571-572, 407-412	0.4	4
140	Residual Stress in Laser Bent Steel Components. *Materials Science Forum*, **2006**, 524-525, 299-304	0.4	4
139	Damage-Plasticity Modelling of Concrete: Calibration of Parameters using Separation of Fracture Energy. *International Journal of Fracture*, **2006**, 139, 325-332	2.3	4
138	An efficient numerical method for the solution of sliding contact problems. *International Journal for Numerical Methods in Engineering*, **2005**, 64, 1236-1255	2.4	4
137	Size and Scale Effects in Fretting Fatigue Thresholds. *International Journal of Fracture*, **2005**, 135, L11-L18	2.3	4
136	Variational Determination of the Crack Trajectory in Inhomogeneous Media. *International Journal of Fracture*, **2001**, 111, 29-34	2.3	4
135	Design for Hardness of Electroplated Ni Coatings. *Transactions of the Institute of Metal Finishing*, **2000**, 78, 105-109	1.3	4
134	Synchrotron X-ray Scattering Analysis of Nylon-12 Crystallisation Variation Depending on 3D Printing Conditions. *Polymers*, **2020**, 12,	4.5	4
133	Synchrotron X-Ray Tomographic Investigation of Internal Structure of Individual Flax Fibres. *IFMBE Proceedings*, **2010**, 1151-1154	0.2	4
132	Mechanical properties of thermally grown submicron oxide layers on a nickel-based superalloy. *Corrosion Science*, **2020**, 165, 108388	6.8	4
131	Multi-Scale Digital Image Correlation Analysis of In Situ Deformation of Open-Cell Porous Ultra-High Molecular Weight Polyethylene Foam. *Polymers*, **2020**, 12,	4.5	4
130	Ovine Bone Morphology and Deformation Analysis Using Synchrotron X-ray Imaging and Scattering. *Quantum Beam Science*, **2020**, 4, 29	1.6	4
129	Residual strain mapping through pair distribution function analysis of the porcelain veneer within a yttria partially stabilised zirconia dental prosthesis. *Dental Materials*, **2019**, 35, 257-269	5.7	4

128	Stress-Assisted Thermal Diffusion Barrier Breakdown in Ion Beam Deposited Cu/W Nano-Multilayers on Si Substrate Observed by GISAXS and Transmission EDX. *ACS Applied Materials & Interfaces*, **2021**, 13, 6795-6804	9.5	4
127	In Situ Diagnostics of Damage Accumulation in Ni-Based Superalloys Using High-Temperature Computed Tomography. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2018**, 49, 4274-4289	2.3	3
126	High resolution imaging and analysis of residual elastic strain in an additively manufactured turbine blade. *International Journal of Nanotechnology*, **2017**, 14, 166	1.5	3
125	Smooth and notched fatigue performance of aging treated and shot peened ZK60 magnesium alloy. *Journal of Materials Research*, **2010**, 25, 1375-1387	2.5	3
124	A Study on Similar and Dissimilar Linear Friction Welds of 2024 Al Alloy and 2124Al/SiCP Composite. *Advanced Materials Research*, **2010**, 89-91, 461-466	0.5	3
123	Synchrotron X-ray analysis of microstructure and microdeformation in a recast AA6063 aluminium alloy. *Journal of Strain Analysis for Engineering Design*, **2010**, 45, 351-364	1.3	3
122	Analysis of residual stresses around welds in a combustion casing. *Procedia Engineering*, **2009**, 1, 189-192		3
121	Investigation of the structure of human dental tissue at multiple length scales using high energy synchrotron X-ray SAXS/WAXS **2011**,		3
120	Influence of Quenchant Hydrodynamics and Boiling Phase Incipient Temperature Shifts on Residual Stress Formation. *Heat Transfer Engineering*, **2009**, 30, 564-573	1.7	3
119	Comparison of X-ray diffraction measurement of residual elastic strains: Monochromatic beam and image plate versus white beam energy-dispersive analysis. *Journal of Strain Analysis for Engineering Design*, **2007**, 42, 23-37	1.3	3
118	Multi-scan laser forming: Synchrotron strain scanning and microstructure evolution. *Journal of Strain Analysis for Engineering Design*, **2007**, 42, 497-504	1.3	3
117	Vector J -integral analysis of crack initiation at the edge of complete sliding contact. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2006**, 462, 1805-1820	2.4	3
116	Contact of Coated Systems Under Sliding Conditions. *Journal of Tribology*, **2006**, 128, 886-890	1.8	3
115	The application of asymptotic analysis for modes I and III semi-infinite wedge solutions to a circumferentially notched shaft. *Journal of Strain Analysis for Engineering Design*, **2005**, 40, 255-262	1.3	3
114	Analysis of plastic deformation and residual elastic strain in a titanium alloy using synchrotron x-ray diffraction. *Journal Physics D: Applied Physics*, **2005**, 38, A195-A199	3	3
113	The Development of Strain Anisotropy during Plastic Deformation of an Aluminium Polycrystal. *Materials Science Forum*, **2000**, 347-349, 492-497	0.4	3
112	Investigation of Residual Stress Induced Crack Closure and its Effects on Fatigue in Metal Matrix Composites. *Key Engineering Materials*, **1996**, 127-131, 1183-1190	0.4	3
111	An investigation into the stress-field singularity at the mouth of a surface-breaking crack. *International Journal of Solids and Structures*, **1992**, 29, 271-277	3.1	3

110	Polar transformation of 2D X-ray diffraction patterns and the experimental validation of the hDIC technique. *Measurement: Journal of the International Measurement Confederation*, **2020**, 151, 107193	4.6	3
109	Siliceous diatom frustules A smart nanotechnology platform. *Materials Today: Proceedings*, **2020**, 33, 2032-2040	1.4	3
108	Aberration characterization of x-ray optics using multi-modal ptychography and a partially coherent source. *Applied Physics Letters*, **2021**, 118, 104104	3.4	3
107	Evolution of stress fields during crack growth and arrest in a brittle-ductile CrN-Cr clamped-cantilever analysed by X-ray nanodiffraction and modelling. *Materials and Design*, **2021**, 198, 109365	8.1	3
106	In Situ SEM Study of the Micro-Mechanical Behaviour of 3D-Printed Aluminium Alloy. *Technologies*, **2021**, 9, 21	2.4	3
105	Combination of Metal Oxide and Polytriarylamine: A Design Principle to Improve the Stability of Perovskite Solar Cells. *Energies*, **2021**, 14, 5115	3.1	3
104	Datasets for multi-scale diffraction analysis (synchrotron XRD and EBSD) of twinning-detwinning during tensile-compressive deformation of AZ31B magnesium alloy samples. *Data in Brief*, **2019**, 26, 104423	1.2	2
103	Eigenstrain boundary layer modelling of the yttria-partially stabilised zirconia porcelain interface in dental prostheses. *International Journal of Engineering Science*, **2020**, 153, 103315	5.7	2
102	The use of eigenstrain theory and fuzzy techniques for intelligent modeling of residual stress and creep relaxation in welded superalloys. *Materials Today: Proceedings*, **2020**, 33, 1880-1883	1.4	2
101	Fundamental solutions for singularities within a layered solid. *European Journal of Mechanics, A/Solids*, **2012**, 35, 37-46	3.7	2
100	Microscale resolution fracture toughness profiling at the zirconia-porcelain interface in dental prostheses **2015**,		2
99	Analysis of Preferred Orientations in Linear Friction Welded (LFW) Aluminium Alloy Specimens using One-shot Multi-element Energy Dispersive Synchrotron X-ray Diffraction. *Powder Diffraction*, **2013**, 28, S327-S332	1.8	2
98	Numerical and Experimental Study of Residual Stresses in a Linear Friction Welded Al-SiCp Composite. *Advanced Materials Research*, **2010**, 89-91, 268-274	0.5	2
97	A Critical Discussion of the sin2 Stress Measurement Technique. *Materials Science Forum*, **2008**, 571-572, 219-224	0.4	2
96	Residual Stress Analysis in Shot Peened and Fretting Fatigued Samples by the Eigenstrain Method. *Materials Science Forum*, **2006**, 524-525, 343-348	0.4	2
95	Residual stress analysis of welded joints by the variational eigenstrain approach **2005**,		2
94	Residual stresses in induction-hardened gear teeth mapped by neutron diffraction. *Journal of Strain Analysis for Engineering Design*, **2002**, 37, 337-344	1.3	2
93	Advanced Strain Analysis by High Energy Synchrotron X-Ray Diffraction. *Materials Science Forum*, **2002**, 404-407, 329-334	0.4	2

92	A New Mechanochemical Method for Metal Coating. *Journal of Metastable and Nanocrystalline Materials*, **2002**, 13, 251-256	0.2	2
91	A Comparative Study of Diffraction Methods for Strain Measurement in a Particulate MMC. *Materials Science Forum*, **2000**, 347-349, 504-509	0.4	2
90	On modelling of defect interaction. *International Journal of Fracture*, **1995**, 71, R79-R83	2.3	2
89	Controlling Thermal Diffusivity, Residual Stress and Texture in W/Cu Nano-Multilayers by Magnetron Chamber Pressure Variation. *SSRN Electronic Journal*,	1	2
88	Residual Stress Measurement on Shot Peened Samples Using FIB-DIC. *Conference Proceedings of the Society for Experimental Mechanics*, **2016**, 275-283	0.3	2
87	Mode I fracture toughness determination in Cu/W nano-multilayers on polymer substrate by SEM - Digital Image Correlation. *Journal of the Mechanics and Physics of Solids*, **2020**, 145, 104145	5	2
86	On the application of digital optical microscopy in the study of materials structure and deformation. *Materials Today: Proceedings*, **2020**, 33, 1917-1923	1.4	2
85	On the Structural Peculiarities of Self-Reinforced Composite Materials Based on UHMWPE Fibers. *Polymers*, **2021**, 13,	4.5	2
84	3D analysis of enamel demineralisation in human dental caries using high-resolution, large field of view synchrotron X-ray micro-computed tomography. *Materials Today Communications*, **2021**, 27, 102418	2.5	2
83	The Analysis of Micro-Scale Deformation and Fracture of Carbonized Elastomer-Based Composites by In Situ SEM. *Molecules*, **2021**, 26,	4.8	2
82	On the Grain Microstructure–Mechanical Properties Relationships in Aluminium Alloy Parts Fabricated by Laser Powder Bed Fusion. *Metals*, **2021**, 11, 1175	2.3	2
81	Effect of Graphene Oxide and Nanosilica Modifications on Electrospun Core-Shell PVA-PEG-SiO@PVA-GO Fiber Mats.. *Nanomaterials*, **2022**, 12,	5.4	2
80	Wear Characteristics of Medical Hearing-Aid Components and Friction Reduction Mechanisms. *Journal of Tribology*, **2017**, 139,	1.8	1
79	Probing the nano-scale architecture of diamond-patterned electrospun fibre mats by synchrotron small angle X-ray scattering. *RSC Advances*, **2017**, 7, 8200-8204	3.7	1
78	Grain Rotation during Twin-Detwin Deformation of Mg AZ31 Alloy Using In Situ XRD and EBSD. *Key Engineering Materials*, **2019**, 793, 17-22	0.4	1
77	The structure and phase composition of nano-silicon as a function of calcination conditions of diatomaceous earth. *Materials Today: Proceedings*, **2020**, 33, 1884-1892	1.4	1
76	The characterization of PVA/PHY hydrogels for 3D printing fabrication of organ phantoms. *Materials Today: Proceedings*, **2020**, 33, 1874-1879	1.4	1
75	Crack surface morphology and grain misorientation in fatigued aluminium alloy AA7050 samples after interrupted ageing and retrogression-reageing treatments. *Procedia Structural Integrity*, **2016**, 2, 3697-3704	1	1

74	Discussion on Interfacial Residual Stress Analysis of Thermal Spray Coatings by Miniature Ring-Core Cutting Combined with DIC Method by J.G. Zhu et al., Experimental Mechanics DOI:10.1007/s11340-012-9640-2. *Experimental Mechanics*, **2014**, 54, 1305-1306	2.6	1
73	Coupled Damage-Plasticity Modelling of Ductile Failure in an Aluminium Alloy. *Applied Mechanics and Materials*, **2015**, 784, 266-273	0.3	1
72	Dislocations **2017**, 79-92		1
71	High resolution ultrastructure imaging of fractures in human dental tissues. *Theoretical and Applied Mechanics Letters*, **2014**, 4, 041007	1.8	1
70	The application of geometry corrections for Diffraction Strain Tomography (DST) analysis of a Ni-base superalloy blade. *Powder Diffraction*, **2013**, 28, S436-S447	1.8	1
69	Residual stress measurement on the I12 JEEP beamline at Diamond Light Source. *Diamond Light Source Proceedings*, **2010**, 1,		1
68	A Study of Residual Elastic Strain Distribution in an AZ91 Mg Alloy Bar Loaded in Four Point Bending. *Materials Science Forum*, **2008**, 571-572, 113-118	0.4	1
67	Neutron Diffraction Analysis of Stresses in an In-Plane Biaxially-Fatigued Stainless Steel Sample of Cruciform Geometry. *Materials Science Forum*, **2008**, 571-572, 131-136	0.4	1
66	Neutron Diffraction Measurement and Finite Element Modelling of Residual Strains Due to Bath and Spray Quenching of AISI 316L Stainless Steel Cylinders. *Materials Science Forum*, **2008**, 571-572, 137-142	0.4	1
65	Inter-Granular Residual Stresses in Polycrystalline Aggregates: Finite Element Modelling and Diffraction Post-Processing. *Materials Science Forum*, **2008**, 571-572, 271-276	0.4	1
64	High energy white beam x-ray diffraction studies of residual strains in engineering components. *AIP Conference Proceedings*, **2008**,	0	1
63	Oxford HEXameter: Laboratory High Energy X-Ray Diffractometer for Bulk Residual Stress Analysis. *Materials Science Forum*, **2006**, 524-525, 743-748	0.4	1
62	Diffraction Post-Processor for Polycrystalline Plasticity Modelling. *Materials Science Forum*, **2006**, 524-525, 427-432	0.4	1
61	Effect of Friction on Edge Singularities in Slip Bands. *International Journal of Fracture*, **2003**, 123, L143-L150	2.5	1
60	The Evolution of Crystalline Precursors During the Formation of Al-Cu-Fe Quasicrystalline Intermetallics in Mechanically Alloyed Powders. *Journal of Metastable and Nanocrystalline Materials* , **2001**, 10, 137-142	0.2	1
59	Impact fracture thresholds in brittle solids. *Wear*, **1995**, 186-187, 99-104	3.5	1
58	Improving ultra-fast charging performance and durability of all solid state thin film Li-NMC battery-on-chip systems by in situ TEM lamella analysis. *Applied Materials Today*, **2022**, 26, 101282	6.6	1
57	Effect of Temperature on Shape Memory Materials **2022**, 239-253		1

56	Pyrite Poste restante Intra-diatom framboids. *Materials Today*, **2020**, 32, 293-294	21.8	1
55	FEM exploration of the potential of silica diatom frustules for vibrational MEMS applications. *Sensors and Actuators A: Physical*, **2020**, 315, 112270	3.9	1
54	A Mini-Atlas of diatom frustule electron microscopy images at different magnifications. *Materials Today: Proceedings*, **2020**, 33, 1924-1933	1.4	1
53	Crack Tip Stress Field Analysis of Crack Surface Contact and Opening during In Situ Wedge Loading of Human Enamel. *Key Engineering Materials*, **2019**, 827, 85-91	0.4	1
52	On the diatomite-based nanostructure-preserving material synthesis for energy applications.. *RSC Advances*, **2021**, 11, 31884-31922	3.7	1
51	Multiscale stress and strain statistics in the deformation of polycrystalline alloys. *International Journal of Plasticity*, **2022**, 152, 103260	7.6	1
50	Comparative Multi-Modal, Multi-Scale Residual Stress Evaluation in SLM 3D-Printed Al-Si-Mg Alloy (RS-300) Parts. *Metals*, **2021**, 11, 2064	2.3	1
49	FIB-SEM Investigation of Laser-Induced Periodic Surface Structures and Conical Surface Microstructures on D16T (AA2024-T4) Alloy. *Metals*, **2020**, 10, 144	2.3	0
48	Plastic Yielding of Cylinders **2017**, 53-65		0
47	STRAIN GRADIENT POLYCRYSTAL PLASTICITY ANALYSIS: FE MODELING AND SYNCHROTRON X-RAY DIFFRACTION. *International Journal of Modern Physics B*, **2010**, 24, 10-17	1.1	0
46	Analysis of Residual Stresses Around Dimpled Cold-Expanded Holes in Aluminium Alloy Plates. *Materials Science Forum*, **2008**, 571-572, 295-300	0.4	0
45	Empirical Implementation of the Steinmetz Equation to Compute Eddy Current Loss in Soft Magnetic Composite Components. *IEEE Access*, **2022**, 10, 14610-14623	3.5	0
44	The Use of Surface Topography for the Identification of Discontinuous Displacements Due to Cracks. *Metals*, **2020**, 10, 1037	2.3	0
43	The Fundamental Formulation for Inhomogeneous Inclusion Problems with the Equivalent Eigenstrain Principle. *Metals*, **2022**, 12, 582	2.3	0
42	Ultra-fast quantification of polycrystalline texture via single shot synchrotron X-ray or neutron diffraction. *Materials Characterization*, **2022**, 186, 111827	3.9	0
41	Hierarchical Modeling of Elastic Behavior of Human Dental Tissue Based on Synchrotron Diff raction Characterization **2014**, 237-268		
40	Simple Residual Stress Systems **2017**, 21-40		
39	Inelastic Bending of Beams **2017**, 41-51		

38	Microscale Methods of Residual Stress Evaluation **2017**, 109-156	
37	The Inverse Eigenstrain Method of Residual Stress Reconstruction **2017**, 157-165	
36	Eigenstrain Methods in Structural Integrity Analysis **2017**, 167-172	
35	In Situ X-Ray Diffraction Measurements of the Apparent Modulus of Human Dental Tissue in the Vicinity of the Dentine-Enamel Junction (DEJ). *Applied Mechanics and Materials*, **2015**, 798, 339-343	0.3
34	High-Energy Transmission Laue (HETL) Micro-Beam Diffraction **2014**, 82-124	
33	Probing mesoscopic lattice misorientation by strain gradient crystal plasticity modelling and micro-beam Laue diffraction experiments. *International Journal of Theoretical and Applied Multiscale Mechanics*, **2011**, 2, 12	0
32	Fatigue Crack Growth Rate Analysis in a Titanium Alloy. *Key Engineering Materials*, **2008**, 385-387, 5-8	0.4
31	Neutron diffraction investigation of an in-plane biaxial fatigued stainless steel sample of cruciform geometry. *Journal of Physics Condensed Matter*, **2008**, 20, 104257	1.8
30	Modeling Crack Initiation and Propagation in Nickel Base Superalloys. *Key Engineering Materials*, **2007**, 348-349, 53-56	0.4
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19	Residual Stress Reconstruction by Variational Eigenstrain Procedures. *Materials Science Forum*, **2006**, 524-525, 241-246	0.4
18	Analysis of Cohesive Zones in Cracks and Slip Bands Using Hypersingular Interpolative Quadratures. *International Journal of Fracture*, **2000**, 104, 37-42	2.3
17	New Approach for Fast Residual Strain Estimation Through Rational 2D Diffraction Pattern Processing. *Communications in Computer and Information Science*, **2020**, 282-288	0.3
16	Engineering Materials Science Using Synchrotron Radiation **2020**, 1777-1802	
15	On the reinforced polymer composites with optimised strength and fire resistance - In Memory of Arthur Geoffrey Gibson. *Materials and Design*, **2021**, 212, 110244	8.1
14	Challenges and Progress in Residual Stress Evaluation and Analysis at the Nanoscale. *Structural Integrity*, **2019**, 319-321	0.2
13	Engineering Materials Science Using Synchrotron Radiation **2019**, 1-26	
12	Bonding Strength Improvement Through Numerical Simulation of Particle Impact Process During Metal Cold Spray. *Lecture Notes in Mechanical Engineering*, **2020**, 144-152	0.4
11	Features of formation of colonial settlements of marine benthic diatoms on the surface of synthetic polymer. *Marine Biological Journal*, **2020**, 5, 88-104	0.6
10	Elastic Behavior of Materials: Continuum Aspects **2016**,	
9	Determination of Hardness and Modulus of Thin Films **2010**, 35-65	
8	Determination of Hardness and Modulus of Thin Films **2010**, 35-65	
7	The use of profilometry techniques and eigenstrain theory for the analysis of creep behavior in nickel superalloy welds. *Materials Today: Proceedings*, **2020**, 33, 2041-2058	1.4
6	Photonic tools for evaluating the growth of diatom colonies during long-term batch cultivation. *Journal of Physics: Conference Series*, **2022**, 2172, 012011	0.3
5	Comparative analysis of the effectiveness of modern methods of sterilization of instruments and the place of gas-dynamic treatment with carbon dioxide. *Economy of Region*, **2022**, 15, 12	0.1
4	Recovering the second moment of the strain distribution from neutron Bragg edge data. *Applied Physics Letters*, **2022**, 120, 164102	3.4
3	Carbon dioxide sterilization in critical/subcritical condition as an alternative to modern methods of eradication of bacteria, fungi and viruses on medical items (literature review). *Stomatology for All / International Dental Review*, **2022**, 12-20	0.2

2	Carbon dioxide sterilization in critical/subcritical condition as an alternative to modern methods of eradication of bacteria, fungi and viruses on medical items (literature review). *Stomatology for All / International Dental Review*, **2022**, 12-20	0.2
1	Interface mismatch eigenstrain of non-slipping contacts between dissimilar elastic solids. *International Journal of Solids and Structures*, **2022**, 111760	3.1