Justin S Wark

List of Publications by Citations

180 papers	7,560 citations	47 h-index	82 g-index
202 ext. papers	8,325 ext. citations	6.3 avg, IF	4.97 L-index

#	Paper	IF	Citations
180	Creation and diagnosis of a solid-density plasma with an X-ray free-electron laser. *Nature*, **2012**, 482, 59-62	50.4	343
179	Time-resolved X-Ray diffraction from coherent phonons during a laser-induced phase transition. *Physical Review Letters*, **2000**, 84, 111-4	7.4	293
178	Atomic-scale visualization of inertial dynamics. *Science*, **2005**, 308, 392-5	33.3	286
177	Efficient extreme UV harmonics generated from picosecond laser pulse interactions with solid targets. *Physical Review Letters*, **1996**, 76, 1832-1835	7.4	269
176	Direct observation of the alpha-epsilon transition in shock-compressed iron via nanosecond x-ray diffraction. *Physical Review Letters*, **2005**, 95, 075502	7.4	233
175	Ultrafast three-dimensional imaging of lattice dynamics in individual gold nanocrystals. *Science*, **2013**, 341, 56-9	33.3	228
174	Photonuclear physics when a multiterawatt laser pulse interacts with solid targets. *Physical Review Letters*, **2000**, 84, 899-902	7.4	200
173	Direct measurements of the ionization potential depression in a dense plasma. *Physical Review Letters*, **2012**, 109, 065002	7.4	198
172	Shock deformation of face-centred-cubic metals on subnanosecond timescales. *Nature Materials*, **2006**, 5, 805-9	27	197
171	Clocking femtosecond X rays. *Physical Review Letters*, **2005**, 94, 114801	7.4	196
170	Effect of the plasma density scale length on the direction of fast electrons in relativistic laser-solid interactions. *Physical Review Letters*, **2000**, 84, 1459-62	7.4	185
169	Observation of a highly directional □ray beam from ultrashort, ultraintense laser pulse interactions with solids. *Physics of Plasmas*, **1999**, 6, 2150-2156	2.1	175
168	Anomalous elastic response of silicon to uniaxial shock compression on nanosecond time scales. *Physical Review Letters*, **2001**, 86, 2349-52	7.4	161
167	Femtosecond visualization of lattice dynamics in shock-compressed matter. *Science*, **2013**, 342, 220-3	33.3	150
166	Probing impulsive strain propagation with X-ray pulses. *Physical Review Letters*, **2001**, 86, 3072-5	7.4	136
165	Finite temperature dense matter studies on next-generation light sources. *Journal of the Optical Society of America B: Optical Physics*, **2003**, 20, 770	1.7	130
164	A Saturated X-ray Laser Beam at 7 Nanometers. *Science*, **1997**, 276, 1097-1100	33.3	128

163	Shock waves in polycrystalline iron. *Physical Review Letters*, **2007**, 98, 135701	7.4	122
162	Fourier-transform inelastic X-ray scattering from time- and momentum-dependent phonon–phonon correlations. *Nature Physics*, **2013**, 9, 790-794	16.2	118
161	Role of the plasma scale length in the harmonic generation from solid targets. *Physical Review E*, **1998**, 58, R5253-R5256	2.4	117
160	Short-wavelength free-electron laser sources and science: a review. *Reports on Progress in Physics*, **2017**, 80, 115901	14.4	111
159	High-order harmonics of 248.6-nm KrF laser from helium and neon ions. *Physical Review A*, **1996**, 53, R3134–R3134	2.8	100
158	Subnanosecond x-ray diffraction from laser-shocked crystals. *Physical Review B*, **1989**, 40, 5705-5714	3.3	97
157	Analysis of the x-ray diffraction signal for the α–ε transition in shock-compressed iron: Simulation and experiment. *Physical Review B*, **2006**, 74,	3.3	94
156	Demonstration of Saturation in a Ni-like Ag X-Ray Laser at 14 nm. *Physical Review Letters*, **1997**, 78, 3856–3859	7.4	87
155	In situ X-ray diffraction measurement of shock-wave-driven twinning and lattice dynamics. *Nature*, **2017**, 550, 496-499	50.4	76
154	Density functional theory calculations of continuum lowering in strongly coupled plasmas. *Nature Communications*, **2014**, 5, 3533	17.4	74
153	Materials science under extreme conditions of pressure and strain rate. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2004**, 35, 2587-2607	2.3	74
152	Molecular dynamics simulations of shock-induced plasticity in tantalum. *High Energy Density Physics*, **2014**, 10, 9-15	1.2	64
151	In situ x-ray diffraction measurements of the c/a ratio in the high-pressure ω phase of shock-compressed polycrystalline iron. *Physical Review B*, **2011**, 83,	3.3	64
150	Measurements of continuum lowering in solid-density plasmas created from elements and compounds. *Nature Communications*, **2016**, 7, 11713	17.4	64
149	Investigation of femtosecond collisional ionization rates in a solid-density aluminium plasma. *Nature Communications*, **2015**, 6, 6397	17.4	62
148	Imaging Shock Waves in Diamond with Both High Temporal and Spatial Resolution at an XFEL. *Scientific Reports*, **2015**, 5, 11089	4.9	62
147	The strength of single crystal copper under uniaxial shock compression at 100 GPa. *Journal of Physics Condensed Matter*, **2010**, 22, 065404	1.8	60
146	Measurements of the hole boring velocity from Doppler shifted harmonic emission from solid targets. *Physics of Plasmas*, **1996**, 3, 3242-3244	2.1	58

145	Strength of shock-loaded single-crystal tantalum [100] determined using in situ broadband x-ray Laue diffraction. *Physical Review Letters*, **2013**, 110, 115501	7.4	57
144	Solid-state experiments at high pressure and strain rate. *Physics of Plasmas*, **2000**, 7, 1999-2006	2.1	57
143	Shock launching in silicon studied with use of pulsed x-ray diffraction. *Physical Review B*, **1987**, 35, 9391-9394	3.3	57
142	Ultrafast x-ray diffraction using a streak-camera detector in averaging mode. *Optics Letters*, **1997**, 22, 1012-4	3	56
141	The effects of ionization potential depression on the spectra emitted by hot dense aluminium plasmas. *High Energy Density Physics*, **2013**, 9, 258-263	1.2	54
140	Resonant K□spectroscopy of solid-density aluminum plasmas. *Physical Review Letters*, **2012**, 109, 245003	7.4	54
139	Direct Observation of Melting in Shock-Compressed Bismuth With Femtosecond X-ray Diffraction. *Physical Review Letters*, **2015**, 115, 095701	7.4	53
138	Electronic structure of an XUV photogenerated solid-density aluminum plasma. *Physical Review Letters*, **2010**, 104, 225001	7.4	52
137	Saturated output of a Ge. *Physical Review A*, **1996**, 54, R4653-R4656	2.6	52
136	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
135	Observation of structural anisotropy and the onset of liquidlike motion during the nonthermal melting of InSb. *Physical Review Letters*, **2005**, 95, 125701	7.4	49
134	Shock waves in polycrystalline iron: Plasticity and phase transitions. *Physical Review B*, **2014**, 89,	3.3	47
133	Plasma Temperature in Optical Field Ionization of Gases by Intense Ultrashort Pulses of Ultraviolet Radiation. *Physical Review Letters*, **1995**, 74, 554-557	7.4	47
132	Phase transition lowering in dynamically compressed silicon. *Nature Physics*, **2019**, 15, 89-94	16.2	45
131	Ultrafast X-Ray Diffraction Studies of the Phase Transitions and Equation of State of Scandium Shock Compressed to 82□GPa. *Physical Review Letters*, **2017**, 118, 025501	7.4	44
130	Molecular dynamics simulations of shock-induced deformation twinning of a body-centered-cubic metal. *Physical Review B*, **2013**, 88,	3.3	44
129	keV x-ray spectroscopy of plasmas produced by the intense picosecond irradiation of a gas of xenon clusters. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **1998**, 31, 2825-2831	1.3	44
128	Nanosecond white-light Laue diffraction measurements of dislocation microstructure in shock-compressed single-crystal copper. *Nature Communications*, **2012**, 3, 1224	17.4	41

127	High-pressure nanocrystalline structure of a shock-compressed single crystal of iron. *Physical Review B*, **2008**, 78,	3.3	41
126	High-pressure, high-strain-rate lattice response of shocked materials. *Physics of Plasmas*, **2003**, 10, 1569-1576	2.1	40
125	The creation of large-volume, gradient-free warm dense matter with an x-ray free-electron laser. *Physics of Plasmas*, **2015**, 22, 030703	2.1	38
124	Saturable absorption of an x-ray free-electron-laser heated solid-density aluminum plasma. *Physical Review Letters*, **2015**, 114, 015003	7.4	38
123	Soft x-ray free electron laser microfocus for exploring matter under extreme conditions. *Optics Express*, **2009**, 17, 18271-8	3.3	38
122	From microjoules to megajoules and kilobars to gigabars: Probing matter at extreme states of deformation. *Physics of Plasmas*, **2015**, 22, 090501	2.1	35
121	Direct measurements of compressive and tensile strain during shock breakout by use of subnanosecond x-ray diffraction. *Journal of Applied Physics*, **1990**, 68, 4531-4534	2.5	35
120	Femtosecond X-Ray Diffraction Studies of the Reversal of the Microstructural Effects of Plastic Deformation during Shock Release of Tantalum. *Physical Review Letters*, **2018**, 120, 265502	7.4	35
119	Transient strain driven by a dense electron-hole plasma. *Physical Review Letters*, **2003**, 91, 165502	7.4	34
118	Coherence and bandwidth measurements of harmonics generated from solid surfaces irradiated by intense picosecond laser pulses. *Physical Review A*, **1996**, 54, 1597-1603	2.6	34
117	Decay of cystalline order and equilibration during the solid-to-plasma transition induced by 20-fs microfocused 92-eV free-electron-laser pulses. *Physical Review Letters*, **2011**, 106, 164801	7.4	32
116	Multiple film plane diagnostic for shocked lattice measurements (invited). *Review of Scientific Instruments*, **2003**, 74, 1929-1934	1.7	32
115	Molecular dynamics simulations of shock-compressed single-crystal silicon. *Physical Review B*, **2014**, 89,	3.3	31
114	Freefree opacity in warm dense aluminum. *High Energy Density Physics*, **2009**, 5, 124-131	1.2	30
113	Metastability of diamond ramp-compressed to 2 terapascals. *Nature*, **2021**, 589, 532-535	50.4	30
112	Picosecond x-ray studies of coherent folded acoustic phonons in a multiple quantum well. *Physical Review Letters*, **2005**, 94, 125509	7.4	29
111	Spectroscopy of compressed high energy density matter. *Physical Review E*, **1996**, 53, 6396-6402	2.4	28
110	Electron temperature of optically ionized gases produced by high intensity 268 nm laser radiation. *Physical Review Letters*, **1993**, 71, 3983-3986	7.4	28

109	Simulations of neon irradiated by intense X-ray laser radiation. *High Energy Density Physics*, **2011**, 7, 111-116	1.6	27
108	Transient x-ray diffraction used to diagnose shock compressed Si crystals on the Nova laser. *Review of Scientific Instruments*, **1999**, 70, 629-632	1.7	27
107	Femtosecond diffraction studies of solid and liquid phase changes in shock-compressed bismuth. *Scientific Reports*, **2018**, 8, 16927	4.9	27
106	Orthogonal strains and onset of plasticity in shocked LiF crystals. *Physical Review B*, **1995**, 52, 8-11	3.3	25
105	Time-resolved X-ray diffraction. *Contemporary Physics*, **1996**, 37, 205-218	3.3	25
104	Effect of velocity gradients on x-ray line transfer in laser-produced plasmas. *Physical Review Letters*, **1994**, 72, 1826-1829	7.4	25
103	X-ray diffraction at the National Ignition Facility. *Review of Scientific Instruments*, **2020**, 91, 043902	1.7	24
102	Metal deformation and phase transitions at extremely high strain rates. *MRS Bulletin*, **2010**, 35, 999-1006	3.2	23
101	Nanosecond x-ray diffraction from polycrystalline and amorphous materials in a pinhole camera geometry suitable for laser shock compression experiments. *Review of Scientific Instruments*, **2007**, 78, 083908	1.7	22
100	Identification of Phase Transitions and Metastability in Dynamically Compressed Antimony Using Ultrafast X-Ray Diffraction. *Physical Review Letters*, **2019**, 122, 255704	7.4	21
99	Phonon instabilities in uniaxially compressed fcc metals as seen in molecular dynamics simulations. *Physical Review B*, **2010**, 81,	3.3	20
98	K-shell spectroscopy of an independently diagnosed uniaxially expanding laser-produced aluminum plasma. *Physical Review E*, **2002**, 66, 026410	2.4	20
97	Simulating picosecond x-ray diffraction from shocked crystals using post-processing molecular dynamics calculations. *Journal of Physics Condensed Matter*, **2008**, 20, 505203	1.8	19
96	Optimization of double pulse pumping for Ni-like Sm x-ray lasers. *Journal of Applied Physics*, **1999**, 85, 672-675	2.5	19
95	Novel plasma source for dense plasma effects. *Physical Review Letters*, **1995**, 74, 3616-3619	7.4	19
94	Novel measurements of high-dynamic crystal strength by picosecond x-ray diffraction. *Applied Physics Letters*, **1992**, 61, 651-653	3.4	19
93	Measuring stacking fault densities in shock-compressed FCC crystals usingin situx-ray diffraction. *Journal of Physics Condensed Matter*, **2006**, 18, 6749-6757	1.8	18
92	Coherent control of phonons probed by time-resolved x-ray diffraction. *Optics Letters*, **2002**, 27, 869-71	3	18

91	Inelastic response of silicon to shock compression. *Scientific Reports*, **2016**, 6, 24211	4.9	18
90	Simultaneous 8.2 keV phase-contrast imaging and 24.6 keV X-ray diffraction from shock-compressed matter at the LCLS. *Applied Physics Letters*, **2018**, 112, 221907	3.4	17
89	Comparison between x-ray scattering and velocity-interferometry measurements from shocked liquid deuterium. *Physical Review E*, **2013**, 87, 043112	2.4	17
88	Extension of the time-dependent dynamical diffraction theory to S optical phononS type distortions: application to diffraction from coherent acoustic and optical phonons. *Acta Crystallographica Section A: Foundations and Advances*, **2003**, 59, 7-13		17
87	Double-crystal high-resolution x-ray spectroscopy of laser-produced plasmas. *Review of Scientific Instruments*, **1993**, 64, 26-30	1.7	17
86	Simulations of copper single crystals subjected to rapid shear. *Journal of Applied Physics*, **2011**, 109, 063530	2.5	16
85	Nanosecond x-ray Laue diffraction apparatus suitable for laser shock compression experiments. *Review of Scientific Instruments*, **2010**, 81, 083902	1.7	16
84	Thomson scattering measurements of heat flow in a laser-produced plasma. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2004**, 37, 1541-1551	1.3	16
83	Clocking Femtosecond Collisional Dynamics via Resonant X-Ray Spectroscopy. *Physical Review Letters*, **2018**, 120, 055002	7.4	15
82	Simulations of in situ x-ray diffraction from uniaxially compressed highly textured polycrystalline targets. *Journal of Applied Physics*, **2015**, 118, 065902	2.5	15
81	Astrophysically relevant experiments on radiation transfer through plasmas with large velocity gradients. *Physics of Plasmas*, **1997**, 4, 2004-2010	2.1	15
80	Enhancement of Optically Thick to Thin Line Intensities in Solar and Stellar Coronal Plasmas through Radiative Transfer Effects: An Angularly Resolved Study. *Astrophysical Journal*, **2004**, 613, L181-L184	4.7	15
79	An Analytic Geometry-Variant Approach to Line Ratio Enhancement above the Optically Thin Limit. *Astrophysical Journal*, **2005**, 629, 1091-1101	4.7	15
78	Detailed model for hot-dense aluminum plasmas generated by an x-ray free electron laser. *Physics of Plasmas*, **2016**, 23, 022707	2.1	15
77	Shocked materials at the intersection of experiment and simulation. *Scientific Modeling and Simulation SMNS*, **2008**, 15, 159-186		14
76	Near-field spatial imaging of a Ni-like Ag 140-Å x-ray laser. *Physical Review A*, **1997**, 56, 3161-3165	2.6	13
75	Vertical dispersion mode double-crystal spectrometer for advanced spectroscopy of laser-produced plasma. *Review of Scientific Instruments*, **1995**, 66, 3234-3243	1.7	13
74	Validating Continuum Lowering Models via Multi-Wavelength Measurements of Integrated X-ray Emission. *Scientific Reports*, **2018**, 8, 6276	4.9	12

73	Large acoustic transients induced by nonthermal melting of InSb. *Physical Review Letters*, **2007**, 98, 225502	7.4	12
72	Optically induced lattice dynamics probed with ultrafast x-ray diffraction. *Physical Review B*, **2008**, 77,	3.3	11
71	Measurements of the K-Shell Opacity of a Solid-Density Magnesium Plasma Heated by an X-Ray Free-Electron Laser. *Physical Review Letters*, **2017**, 119, 085001	7.4	10
70	X-ray diffraction measurements of plasticity in shock-compressed vanadium in the region of 1070 GPa. *Journal of Applied Physics*, **2017**, 122, 025117	2.5	10
69	Single photon energy dispersive x-ray diffraction. *Review of Scientific Instruments*, **2014**, 85, 033906	1.7	10
68	Molecular dynamics simulations of ramp-compressed copper. *Physical Review B*, **2012**, 85,	3.3	10
67	Modeling Planetary Interiors in Laser Based Experiments Using Shockless Compression. *Astrophysics and Space Science*, **2007**, 307, 285-289	1.6	10
66	An approach for the measurement of the bulk temperature of single crystal diamond using an X-ray free electron laser. *Scientific Reports*, **2020**, 10, 14564	4.9	10
65	Femtosecond quantification of void evolution during rapid material failure. *Science Advances*, **2020**, 6,	14.3	10
64	Ab initio simulations and measurements of the free-free opacity in aluminum. *Physical Review E*, **2019**, 100, 043207	2.4	9
63	Recovery of metastable dense Bi synthesized by shock compression. *Applied Physics Letters*, **2019**, 114, 120601	3.4	9
62	Observation of Reverse Saturable Absorption of an X-ray Laser. *Physical Review Letters*, **2017**, 119, 075002	7.4	9
61	Modeling of time resolved x-ray diffraction from laser-shocked crystals. *Journal of Applied Physics*, **1997**, 81, 3023-3037	2.5	9
60	Imaging of high harmonic radiation emitted during the interaction of a 20 TW laser with a solid target. *Journal of Applied Physics*, **1997**, 81, 2055-2058	2.5	9
59	Molecular dynamics simulations of the Debye-Waller effect in shocked copper. *Physical Review B*, **2008**, 78,	3.3	9
58	Femtosecond x-ray diffraction: experiments and limits **2001**,		9
57	Characterization of a capillary-discharge plasma. *Physical Review E*, **1993**, 47, 1305-1312	2.4	9
56	Line intensity enhancements in stellar coronal X-ray spectra due to opacity effects. *Astronomy and Astrophysics*, **2008**, 483, 887-890	5.1	9

55	Simulations of Al XIII He XXIV X-ray laser photopumping scheme. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2001**, 71, 129-138	2.1	8
54	Testing quantum mechanics in non-Minkowski space-time with high power lasers and 4(th) generation light sources. *Scientific Reports*, **2012**, 2, 491	4.9	8
53	Laboratory measurements of geometrical effects in the x-ray emission of optically thick lines for ICF diagnostics. *Physics of Plasmas*, **2019**, 26, 063302	2.1	7
52	Calculations of the modal photon densities and gain in a K/Cl resonantly photopumped X-ray laser. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2000**, 65, 71-81	2.1	7
51	Production of strongly coupled plasmas by the laser irradiation of thin metallic films confined within micrometer-scale gaps by transparent insulators. *Physical Review E*, **1994**, 50, 3935-3942	2.4	7
50	Generation of large, high density, homogeneous plasma by capillary discharge. *Applied Physics Letters*, **1994**, 64, 3542-3544	3.4	7
49	Recovery of a high-pressure phase formed under laser-driven compression. *Physical Review B*, **2020**, 102,	3.3	7
48	Time-Resolved XUV Opacity Measurements of Warm Dense Aluminum. *Physical Review Letters*, **2020**, 124, 225002	7.4	6
47	Simultaneous diagnosis of radial profiles and mix in NIF ignition-scale implosions via X-ray spectroscopy. *Physics of Plasmas*, **2017**, 24, 112703	2.1	6
46	Predicting EXAFS signals from shock compressed iron by use of molecular dynamics simulations. *High Energy Density Physics*, **2009**, 5, 44-50	1.2	6
45	High-resolution inelastic x-ray scattering at the high energy density scientific instrument at the European X-Ray Free-Electron Laser. *Review of Scientific Instruments*, **2021**, 92, 013101	1.7	6
44	Comparison of the semiclassical and modified semiempirical method of spectral calculation. *Physical Review E*, **1997**, 56, 936-946	2.4	5
43	Vertical variant of a double channel-cut crystal spectrometer for investigation of laser-generated plasmas. *Review of Scientific Instruments*, **1999**, 70, 3025-3031	1.7	5
42	Nonisentropic Release of a Shocked Solid. *Physical Review Letters*, **2019**, 123, 245501	7.4	5
41	Atomic processes modeling of X-ray free electron laser produced plasmas using SCFLY code **2017**,		4
40	Bragg diffraction using a 100 ps 17.5 keV x-ray backlighter and the Bragg diffraction imager. *Review of Scientific Instruments*, **2010**, 81, 10E522	1.7	4
39	Simulations of time-resolved x-ray diffraction in Laue geometry. *Journal of Physics Condensed Matter*, **2006**, 18, 9231-9244	1.8	4
38	Picosecond X-Ray Diffraction from Laser-Shocked Copper and Iron. *AIP Conference Proceedings*, **2006**,	0	4

37	Investigation of the onset and development of forward scattering in an underdense plasma. *Physical Review Letters*, **2003**, 90, 245001	7.4	4
36	Detailed simulations of sonoluminescence spectra. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2001**, 34, L511-L518	1.3	4
35	Generation of bright, extreme-ultraviolet harmonic radiation from a krypton fluoride laser. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **1998**, 31, 1069-1082	1.3	4
34	Molecular dynamics simulations of grain interactions in shock-compressed highly textured columnar nanocrystals. *Physical Review Materials*, **2019**, 3,	3.2	4
33	Probing the Electronic Structure of Warm Dense Nickel via Resonant Inelastic X-Ray Scattering. *Physical Review Letters*, **2020**, 125, 195001	7.4	3
32	Combined Hydrodynamic and Diffraction Simulations of Femtosecond X-ray Scattering from Laser-Shocked Crystals. *Journal of Physics: Conference Series*, **2014**, 500, 152016	0.3	3
31	X-Ray Diffraction from Shocked Crystals: Experiments and Predictions of Molecular Dynamics Simulations. *AIP Conference Proceedings*, **2004**,	0	3
30	A versatile matrix-based solution for the two plasmon decay instability. *Physics of Plasmas*, **2001**, 8, 704-712	2.2	3
29	Development of XUV lasers at the RAL Central Laser Facility. *Optical and Quantum Electronics*, **1996**, 28, 201-208	2.4	3
28	Investigating off-Hugoniot states using multi-layer ring-up targets. *Scientific Reports*, **2020**, 10, 13172	4.9	3
27	Single Hit Energy-resolved Laue Diffraction. *Review of Scientific Instruments*, **2015**, 86, 053908	1.7	2
26	Investigations into rapid uniaxial compression of polycrystalline targets using femtosecond X-ray diffraction. *Journal of Physics: Conference Series*, **2014**, 500, 112063	0.3	2
25	Comley et al. reply. *Physical Review Letters*, **2014**, 113, 039602	7.4	2
24	Probing dynamic material strength using in situ x-ray diffraction **2012**,		2
23	Radiation transfer effects on the spectra of laser-generated plasmas. *Physical Review Letters*, **2006**, 96, 185002	7.4	2
22	A novel method to measure ion density in ICF experiments using x-ray spectroscopy of cylindrical tracers. *Physics of Plasmas*, **2020**, 27, 112714	2.1	2
21	Simulations of the time and space-resolved x-ray transmission of a free-electron-laser-heated aluminium plasma. *Journal of Physics B: Atomic, Molecular and Optical Physics*, **2016**, 49, 035603	1.3	2
20	A history of high-power laser research and development in the United Kingdom. *High Power Laser Science and Engineering*, **2021**, 9,	4.3	2

19	Kinematics of slip-induced rotation for uniaxial shock or ramp compression. *Journal of Applied Physics*, **2021**, 129, 085109	2.5	2
18	SIMULATING PICOSECOND X-RAY DIFFRACTION FROM CRYSTALS USING FFT METHODS ON MD OUTPUT **2008**,		1
17	X-Ray Line Transfer in Plasmas with Large Velocity Gradients. *Astrophysics and Space Science*, **2005**, 298, 171-176	1.6	1
16	Simulation of the time-dependent dynamical diffraction of FEL x-ray pulses **2001**,		1
15	A fluid-kinetic model for the two plasmon decay instability. *Physics of Plasmas*, **2001**, 8, 4357-4366	2.1	1
14	Transient effects in laser-plasma X-ray spectrometers. *Laser and Particle Beams*, **1991**, 9, 569-577	0.9	1
13	Comments on A new theory for X-ray diffraction. *Acta Crystallographica Section A: Foundations and Advances*, **2018**, 74, 447-456	1.7	1
12	Sub-nanosecond X-Ray Diffraction from Laser-Shocked Crystals. *Springer Series in Optical Sciences*, **1992**, 455-457	0.5	1
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10	Molecular dynamics simulations of inelastic x-ray scattering from shocked copper. *Journal of Applied Physics*, **2021**, 130, 125901	2.5	1
9	Spectral line formation in dense large-gradient plasma. *European Physical Journal D*, **1998**, 48, 557-563		
8	Shocked materials at the intersection of experiment and simulation. *Lecture Notes in Computational Science and Engineering*, **2008**, 159-186	0.3	
7	Simulations of a photopumped X-ray laser using the H-like Cl□i-like Se scheme. *Journal of Quantitative Spectroscopy and Radiative Transfer*, **2004**, 83, 203-213	2.1	
6	Opportunities and challenges using short-pulse x-ray sources. *Journal of Physics: Conference Series*, **2005**, 21, 87-94	0.3	
5	Modeling Planetary Interiors in Laser Based Experiments Using Shockless Compression **2007**, 285-289		
4	Sub-nanosecond X-ray diffraction from laser-shocked crystals **1992**, 393-398		
3	PLASTICITY IN SHOCKED SINGLE CRYSTALS VIEWED BY PULSED X-RAY DIFFRACTION **1992**, 809-812		
2	The Optimisation of Soft X-Ray Laser Output **1998**, 59-64		

1 X-ray Spectroscopic Studies of a Solid-Density Germanium Plasma Created by a Free Electron Laser. *Applied Sciences (Switzerland)*, **2020**, 10, 8153 2.6