

Kamel Fezzaa

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/543561/publications.pdf>

Version: 2024-02-01

79
papers

4,372
citations

147801

31
h-index

110387

64
g-index

80
all docs

80
docs citations

80
times ranked

3262
citing authors

#	ARTICLE	IF	CITATIONS
1	Ultrafast synchrotron X-ray imaging and multiphysics modelling of liquid phase fatigue exfoliation of graphite under ultrasound. <i>Carbon</i> , 2022, 186, 227-237.	10.3	14
2	Uncertainties Induced by Processing Parameter Variation in Selective Laser Melting of Ti6Al4V Revealed by In-Situ X-ray Imaging. <i>Materials</i> , 2022, 15, 530.	2.9	6
3	Effects of Particle Size Distribution with Efficient Packing on Powder Flowability and Selective Laser Melting Process. <i>Materials</i> , 2022, 15, 705.	2.9	7
4	High-throughput, in situ imaging of multi-layer powder-blown directed energy deposition with angled nozzle. <i>Review of Scientific Instruments</i> , 2022, 93, 023701.	1.3	1
5	Revealing melt flow instabilities in laser powder bed fusion additive manufacturing of aluminum alloy via in-situ high-speed X-ray imaging. <i>International Journal of Machine Tools and Manufacture</i> , 2022, 175, 103861.	13.4	26
6	Boiling Transitions During Droplet Contact on Superheated Nano/Micro-Structured Surfaces. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 15774-15783.	8.0	7
7	Keyhole fluctuation and pore formation mechanisms during laser powder bed fusion additive manufacturing. <i>Nature Communications</i> , 2022, 13, 1170.	12.8	98
8	Dynamic fracture of glass fiber-reinforced ductile polymer matrix composites and loading rate effect. <i>Composites Part B: Engineering</i> , 2022, 235, 109754.	12.0	7
9	Multiscale dynamic experiments on fiber-reinforced composites with damage assessment using high-speed synchrotron X-ray phase-contrast imaging. <i>NDT and E International</i> , 2022, 129, 102636.	3.7	1
10	An instrument for <i>in situ</i> characterization of powder spreading dynamics in powder-bed-based additive manufacturing processes. <i>Review of Scientific Instruments</i> , 2022, 93, 043707.	1.3	5
11	Mitigating keyhole pore formation by nanoparticles during laser powder bed fusion additive manufacturing. <i>Additive Manufacturing Letters</i> , 2022, 3, 100068.	2.1	8
12	Direct observation on supersonic microprojectile penetration of carbon fiber composites with ultrafast synchrotron X-ray phase contrast imaging. <i>Carbon</i> , 2021, 172, 781-790.	10.3	11
13	In Situ Analysis of Laser Powder Bed Fusion Using Simultaneous High-Speed Infrared and X-ray Imaging. <i>Jom</i> , 2021, 73, 201-211.	1.9	51
14	Nonlinear elasticity and damping govern ultrafast dynamics in click beetles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	24
15	Real-time damage characterization for GFRCs using high-speed synchrotron X-ray phase contrast imaging. <i>Composites Part B: Engineering</i> , 2021, 207, 108565.	12.0	14
16	In-Situ Characterization of Pore Formation Dynamics in Pulsed Wave Laser Powder Bed Fusion. <i>Materials</i> , 2021, 14, 2936.	2.9	13
17	Impact-induced twinning in a magnesium alloy under different stress conditions. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 818, 141360.	5.6	3
18	Ultrafast x-ray imaging of pulsed plasmas in water. <i>Physical Review Research</i> , 2021, 3, .	3.6	4

#	ARTICLE	IF	CITATIONS
19	High-speed synchrotron X-ray phase-contrast imaging for evaluating microscale damage mechanisms and tracking cracking behaviors inside cross-ply GFRCS. Composites Science and Technology, 2021, 210, 108814.	7.8	5
20	Strain rate effects on the mechanical behavior of porous titanium with different pore sizes. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 821, 141593.	5.6	11
21	Ultrafast X-Ray Diffraction Visualization of β Phase Transition in KCl under Shock Compression. Physical Review Letters, 2021, 127, 045702.	7.8	10
22	Microbubble dynamics and heat transfer in boiling droplets. International Journal of Heat and Mass Transfer, 2021, 176, 121413.	4.8	14
23	Time-Resolved Geometric Feature Tracking Elucidates Laser-Induced Keyhole Dynamics. Integrating Materials and Manufacturing Innovation, 2021, 10, 677-688.	2.6	4
24	Rate effects on fiber-matrix interfacial transverse debonding behavior. Journal of Composite Materials, 2020, 54, 501-517.	2.4	9
25	In-situ full-field mapping of melt flow dynamics in laser metal additive manufacturing. Additive Manufacturing, 2020, 31, 100939.	3.0	69
26	Physiological responses to gravity in an insect. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 2180-2186.	7.1	2
27	Critical instability at moving keyhole tip generates porosity in laser melting. Science, 2020, 370, 1080-1086.	12.6	316
28	Experimental investigation of internal two-phase flow structures and dynamics of quasi-stable sheet cavitation by fast synchrotron x-ray imaging. Physics of Fluids, 2020, 32, .	4.0	31
29	Drop impact on hot plates: contact times, lift-off and the lamella rupture. Soft Matter, 2020, 16, 7935-7949.	2.7	13
30	A three-dimensional thalamocortical dataset for characterizing brain heterogeneity. Scientific Data, 2020, 7, 358.	5.3	11
31	Detonation-induced transformation of graphite to hexagonal diamond. Physical Review B, 2020, 102, .	3.2	13
32	In situ characterization of foreign object damage (FOD) in environmental-barrier-coated silicon carbide (SiC) ceramic. Journal of the American Ceramic Society, 2020, 103, 4586-4601.	3.8	9
33	Direct observation of pore formation mechanisms during LPBF additive manufacturing process and high energy density laser welding. International Journal of Machine Tools and Manufacture, 2020, 153, 103555.	13.4	143
34	Downward jetting of a dynamic Leidenfrost drop. Physical Review Fluids, 2020, 5, .	2.5	11
35	Real-time visualization of dynamic fractures in porcine bones and the loading-rate effect on their fracture toughness. Journal of the Mechanics and Physics of Solids, 2019, 131, 358-371.	4.8	21
36	Pore elimination mechanisms during 3D printing of metals. Nature Communications, 2019, 10, 3088.	12.8	158

#	ARTICLE	IF	CITATIONS
37	Resolving Detonation Nanodiamond Size Evolution and Morphology at Sub-Microsecond Timescales during High-Explosive Detonations. <i>Journal of Physical Chemistry C</i> , 2019, 123, 19153-19164.	3.1	18
38	Bulk-Explosion-Induced Metal Spattering During Laser Processing. <i>Physical Review X</i> , 2019, 9, .	8.9	34
39	In-situ characterization and quantification of melt pool variation under constant input energy density in laser powder bed fusion additive manufacturing process. <i>Additive Manufacturing</i> , 2019, 28, 600-609.	3.0	103
40	Rate-dependent deformation and Poisson's effect in porous titanium. <i>Materials Letters</i> , 2019, 245, 134-137.	2.6	5
41	Real-time visualization of impact damage in monolithic silicon carbide and fibrous silicon carbide ceramic composite. <i>International Journal of Impact Engineering</i> , 2019, 129, 168-179.	5.0	14
42	Rate-dependent phase transition of high density polyethylene. <i>Materialia</i> , 2019, 6, 100274.	2.7	4
43	High-speed X-ray visualization of dynamic crack initiation and propagation in bone. <i>Acta Biomaterialia</i> , 2019, 90, 278-286.	8.3	11
44	High-speed Synchrotron X-ray Imaging of Laser Powder Bed Fusion Process. <i>Synchrotron Radiation News</i> , 2019, 32, 4-8.	0.8	17
45	High-speed X-ray imaging of the Leidenfrost collapse. <i>Scientific Reports</i> , 2019, 9, 1598.	3.3	10
46	Keyhole threshold and morphology in laser melting revealed by ultrahigh-speed x-ray imaging. <i>Science</i> , 2019, 363, 849-852.	12.6	592
47	Capture Deformation Twinning in Mg during Shock Compression with Ultrafast Synchrotron X-Ray Diffraction. <i>Physical Review Letters</i> , 2019, 123, 255501.	7.8	28
48	Synchrotron x-ray imaging visualization study of capillary-induced flow and critical heat flux on surfaces with engineered micropillars. <i>Science Advances</i> , 2018, 4, e1701571.	10.3	44
49	Dynamic shear localization of a titanium alloy under high-rate tension characterized by x-ray digital image correlation. <i>Materials Characterization</i> , 2018, 137, 58-66.	4.4	23
50	Measurement of the vapor layer under a dynamic Leidenfrost drop. <i>International Journal of Heat and Mass Transfer</i> , 2018, 124, 1163-1171.	4.8	23
51	Transient dynamics of powder spattering in laser powder bed fusion additive manufacturing process revealed by in-situ high-speed high-energy x-ray imaging. <i>Acta Materialia</i> , 2018, 151, 169-180.	7.9	276
52	Visualization of dynamic fiber-matrix interfacial shear debonding. <i>Journal of Materials Science</i> , 2018, 53, 5845-5859.	3.7	15
53	Ultrafast synchrotron X-ray imaging studies of microstructure fragmentation in solidification under ultrasound. <i>Acta Materialia</i> , 2018, 144, 505-515.	7.9	112
54	Revealing particle-scale powder spreading dynamics in powder-bed-based additive manufacturing process by high-speed x-ray imaging. <i>Scientific Reports</i> , 2018, 8, 15079.	3.3	85

#	ARTICLE	IF	CITATIONS
55	Ultrafast X-ray imaging of laser-metal additive manufacturing processes. <i>Journal of Synchrotron Radiation</i> , 2018, 25, 1467-1477.	2.4	142
56	Transient dynamics in drop impact on a superheated surface. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	15
57	Multiscale measurements on temperature-dependent deformation of a textured magnesium alloy with synchrotron x-ray imaging and diffraction. <i>Acta Materialia</i> , 2017, 132, 389-394.	7.9	20
58	Simultaneous multiscale measurements on dynamic deformation of a magnesium alloy with synchrotron x-ray imaging and diffraction. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 701, 143-148.	5.6	18
59	Real-time monitoring of laser powder bed fusion process using high-speed X-ray imaging and diffraction. <i>Scientific Reports</i> , 2017, 7, 3602.	3.3	389
60	Orientation-dependent tensile deformation and damage of a T700 carbon fiber/epoxy composite: A synchrotron-based study. <i>Carbon</i> , 2017, 121, 127-133.	10.3	42
61	Fracture mechanisms of glass particles under dynamic compression. <i>International Journal of Impact Engineering</i> , 2017, 106, 146-154.	5.0	20
62	Fast X-ray imaging of cavitating flows. <i>Experiments in Fluids</i> , 2017, 58, 1.	2.4	28
63	Quantifying Mesoscale Neuroanatomy Using X-Ray Microtomography. <i>ENeuro</i> , 2017, 4, ENEURO.0195-17.2017.	1.9	74
64	Anisotropic deformation of extruded magnesium alloy AZ31 under uniaxial compression: A study with simultaneous in situ synchrotron x-ray imaging and diffraction. <i>Acta Materialia</i> , 2016, 120, 86-94.	7.9	56
65	<i>HiSPoD</i> : a program for high-speed polychromatic X-ray diffraction experiments and data analysis on polycrystalline samples. <i>Journal of Synchrotron Radiation</i> , 2016, 23, 1046-1053.	2.4	34
66	Simultaneous, single-pulse, synchrotron x-ray imaging and diffraction under gas gun loading. <i>Review of Scientific Instruments</i> , 2016, 87, 053903.	1.3	21
67	Heterogeneity in deformation of granular ceramics under dynamic loading. <i>Scripta Materialia</i> , 2016, 111, 114-118.	5.2	42
68	Origin and dynamics of vortex rings in drop splashing. <i>Nature Communications</i> , 2015, 6, 8187.	12.8	50
69	Transient x-ray diffraction with simultaneous imaging under high strain-rate loading. <i>Review of Scientific Instruments</i> , 2014, 85, 113902.	1.3	35
70	Note: Dynamic strain field mapping with synchrotron X-ray digital image correlation. <i>Review of Scientific Instruments</i> , 2014, 85, 076101.	1.3	39
71	Dynamic experiment using IMPULSE at the Advanced Photon Source. <i>Journal of Physics: Conference Series</i> , 2014, 500, 042001.	0.4	25
72	High speed synchrotron x-ray phase contrast imaging of dynamic material response to split Hopkinson bar loading. <i>Review of Scientific Instruments</i> , 2013, 84, 025102.	1.3	82

#	ARTICLE	IF	CITATIONS
73	Gas gun shock experiments with single-pulse x-ray phase contrast imaging and diffraction at the Advanced Photon Source. Review of Scientific Instruments, 2012, 83, 073903.	1.3	136
74	How Does an Air Film Evolve into a Bubble During Drop Impact?. Physical Review Letters, 2012, 109, 204501.	7.8	115
75	Size limits the formation of liquid jets during bubble bursting. Nature Communications, 2011, 2, 367.	12.8	106
76	Synchrotron imaging of the grasshopper tracheal system: morphological and physiological components of tracheal hypermetry. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2009, 297, R1343-R1350.	1.8	44
77	Ultrafast X-ray study of dense-liquid-jet flow dynamics using structure-tracking velocimetry. Nature Physics, 2008, 4, 305-309.	16.7	166
78	Particle tracking velocimetry using fast x-ray phase-contrast imaging. Applied Physics Letters, 2007, 90, 091919.	3.3	55
79	Dedicated full-field X-ray imaging beamline at Advanced Photon Source. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2007, 582, 77-79.	1.6	52