

Niranjana D Parab

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/3935082/publications.pdf>

Version: 2024-02-01

65
papers

3,121
citations

236912

25
h-index

161844

54
g-index

69
all docs

69
docs citations

69
times ranked

1778
citing authors

#	ARTICLE	IF	CITATIONS
1	Investigating fracture mechanisms in opaque materials under dynamic loading using high-speed synchrotron X-ray imaging. , 2022, , 285-314.		0
2	Defects and anomalies in powder bed fusion metal additive manufacturing. Current Opinion in Solid State and Materials Science, 2022, 26, 100974.	11.5	157
3	High-Speed Real-Time X-Ray Visualization of Impact Damage Inside Geomaterials. , 2022, , 423-452.		0
4	An instrument for <i>in situ</i> characterization of powder spreading dynamics in powder-bed-based additive manufacturing processes. Review of Scientific Instruments, 2022, 93, 043707.	1.3	5
5	In Situ Analysis of Laser Powder Bed Fusion Using Simultaneous High-Speed Infrared and X-ray Imaging. Jom, 2021, 73, 201-211.	1.9	51
6	In-situ Observations of Directed Energy Deposition Additive Manufacturing Using High-Speed X-ray Imaging. Jom, 2021, 73, 189-200.	1.9	40
7	Microscale Observation via High-Speed X-ray Diffraction of Alloy 718 During In Situ Laser Melting. Jom, 2021, 73, 212-222.	1.9	15
8	High-Speed Real-Time X-Ray Visualization of Impact Damage Inside Geomaterials. , 2021, , 1-30.		0
9	High-speed synchrotron X-ray imaging of directed energy deposition of titanium: effects of processing parameters on the formation of entrapped-gas pores. Procedia Manufacturing, 2021, 53, 148-154.	1.9	3
10	Universal scaling laws of keyhole stability and porosity in 3D printing of metals. Nature Communications, 2021, 12, 2379.	12.8	105
11	In-Situ Characterization of Pore Formation Dynamics in Pulsed Wave Laser Powder Bed Fusion. Materials, 2021, 14, 2936.	2.9	13
12	Solidification crack propagation and morphology dependence on processing parameters in AA6061 from ultra-high-speed x-ray visualization. Additive Manufacturing, 2021, 42, 101959.	3.0	12
13	The causal relationship between melt pool geometry and energy absorption measured in real time during laser-based manufacturing. Applied Materials Today, 2021, 23, 101049.	4.3	28
14	In situ X-ray imaging of pore formation mechanisms and dynamics in laser powder-blown directed energy deposition additive manufacturing. International Journal of Machine Tools and Manufacture, 2021, 166, 103743.	13.4	58
15	Effect of particle characteristics on the evolution of particle size, particle morphology, and fabric of sands loaded under uniaxial compression. Acta Geotechnica, 2021, 16, 3489-3516.	5.7	16
16	<i>in situ</i> characterization of laser-generated melt pools using synchronized ultrasound and high-speed X-ray imaging. Journal of the Acoustical Society of America, 2021, 150, 2409-2420.	1.1	16
17	Time-Resolved Geometric Feature Tracking Elucidates Laser-Induced Keyhole Dynamics. Integrating Materials and Manufacturing Innovation, 2021, 10, 677-688.	2.6	4
18	Observation of Damage During Dynamic Compression of Production and Low-Defect HMX Crystals in Sylgard® Binder Using X-Ray Phase Contrast Imaging. Journal of Dynamic Behavior of Materials, 2020, 6, 34-44.	1.7	5

#	ARTICLE	IF	CITATIONS
19	In-situ full-field mapping of melt flow dynamics in laser metal additive manufacturing. Additive Manufacturing, 2020, 31, 100939.	3.0	69
20	Critical instability at moving keyhole tip generates porosity in laser melting. Science, 2020, 370, 1080-1086.	12.6	316
21	Simultaneous high-speed x-ray transmission imaging and absolute dynamic absorptance measurements during high-power laser-metal processing. Procedia CIRP, 2020, 94, 775-779.	1.9	15
22	Types of spatter and their features and formation mechanisms in laser powder bed fusion additive manufacturing process. Additive Manufacturing, 2020, 36, 101438.	3.0	48
23	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
24	Preliminary Study on the Influence of an External Magnetic Field on Melt Pool Behavior in Laser Melting of 4140 Steel Using In-Situ X-Ray Imaging. Journal of Micro and Nano-Manufacturing, 2020, 8, .	0.7	6
25	Investigation of Dynamic Fracture Behavior of Additively Manufactured Al-10Si-Mg Using High-Speed Synchrotron X-ray Imaging. Conference Proceedings of the Society for Experimental Mechanics, 2020, , 91-95.	0.5	0
26	In situ Characterization of Laser Powder Bed Fusion Using High-Speed Synchrotron X-ray Imaging Technique. Microscopy and Microanalysis, 2019, 25, 2566-2567.	0.4	2
27	Pore elimination mechanisms during 3D printing of metals. Nature Communications, 2019, 10, 3088.	12.8	158
28	Investigation of dynamic fracture behavior of additively manufactured Al-10Si-Mg using high-speed synchrotron X-ray imaging. Additive Manufacturing, 2019, 30, 100878.	3.0	12
29	In-situ high-speed X-ray imaging of piezo-driven directed energy deposition additive manufacturing. Scientific Reports, 2019, 9, 962.	3.3	96
30	High-speed X-ray investigation of melt dynamics during continuous-wave laser remelting of selective laser melted Co-Cr alloy. CIRP Annals - Manufacturing Technology, 2019, 68, 229-232.	3.6	34
31	Bulk-Explosion-Induced Metal Spattering During Laser Processing. Physical Review X, 2019, 9, .	8.9	34
32	Effect of Laser-Matter Interaction on Molten Pool Flow and Keyhole Dynamics. Physical Review Applied, 2019, 11, .	3.8	107
33	In-situ characterization and quantification of melt pool variation under constant input energy density in laser powder bed fusion additive manufacturing process. Additive Manufacturing, 2019, 28, 600-609.	3.0	103
34	In-situ X-ray observations of ultrasound-induced explosive decomposition. Applied Materials Today, 2019, 15, 286-294.	4.3	6
35	In situ synchrotron X-ray imaging of 4140 steel laser powder bed fusion. Materialia, 2019, 6, 100306.	2.7	52
36	High-speed Synchrotron X-ray Imaging of Laser Powder Bed Fusion Process. Synchrotron Radiation News, 2019, 32, 4-8.	0.8	17

#	ARTICLE	IF	CITATIONS
37	Investigating Powder Spreading Dynamics in Additive Manufacturing Processes by <i>In-situ</i> High-speed X-ray Imaging. Synchrotron Radiation News, 2019, 32, 9-13.	0.8	16
38	In Situ Characterization of Hot Cracking Using Dynamic X-Ray Radiography. Minerals, Metals and Materials Series, 2019, , 77-85.	0.4	6
39	Real time observation of binder jetting printing process using high-speed X-ray imaging. Scientific Reports, 2019, 9, 2499.	3.3	88
40	Keyhole threshold and morphology in laser melting revealed by ultrahigh-speed x-ray imaging. Science, 2019, 363, 849-852.	12.6	592
41	A compressed sensing X-ray camera with a multilayer architecture. Journal of Instrumentation, 2018, 13, C01035-C01035.	1.2	4
42	State-of-Charge and Deformation-Rate Dependent Mechanical Behavior of Electrochemical Cells. Experimental Mechanics, 2018, 58, 627-632.	2.0	16
43	Visualization of dynamic fiber-matrix interfacial shear debonding. Journal of Materials Science, 2018, 53, 5845-5859.	3.7	15
44	Revealing particle-scale powder spreading dynamics in powder-bed-based additive manufacturing process by high-speed x-ray imaging. Scientific Reports, 2018, 8, 15079.	3.3	85
45	Dynamic crack propagation from a circular defect in a unidirectional carbon fiber reinforced plastic composite. Journal of Composite Materials, 2018, 52, 3539-3547.	2.4	4
46	Ultrafast X-ray imaging of laser-metal additive manufacturing processes. Journal of Synchrotron Radiation, 2018, 25, 1467-1477.	2.4	142
47	Fracture mechanisms of glass particles under dynamic compression. International Journal of Impact Engineering, 2017, 106, 146-154.	5.0	20
48	<i>In situ</i> observation of fracture processes in high-strength concretes and limestone using high-speed X-ray phase-contrast imaging. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2017, 375, 20160178.	3.4	13
49	High-speed X-ray PCI and XRD During Dynamic Fracture. Procedia Engineering, 2017, 197, 278-284.	1.2	3
50	Dynamic fracture behavior of single and contacting Poly(methyl methacrylate) particles. Advanced Powder Technology, 2017, 28, 2929-2939.	4.1	5
51	Real-time visualization of dynamic particle contact failures. AIP Conference Proceedings, 2017, , .	0.4	1
52	High speed X-ray phase contrast imaging of energetic composites under dynamic compression. Applied Physics Letters, 2016, 109, .	3.3	56
53	Mechanical Energy Dissipation in a Multifunctional Battery System. MRS Advances, 2016, 1, 381-388.	0.9	8
54	Crash analysis of a conceptual electric vehicle with a damage tolerant battery pack. Extreme Mechanics Letters, 2016, 9, 371-378.	4.1	65

#	ARTICLE	IF	CITATIONS
55	10.1063/1.4963137.1., 2016, , .		0
56	In Situ Visual Observation of Fracture Processes in Several High-Performance Fibers. Journal of Dynamic Behavior of Materials, 2015, 1, 55-64.	1.7	25
57	Simultaneous X-ray diffraction and phase-contrast imaging for investigating material deformation mechanisms during high-rate loading. Journal of Synchrotron Radiation, 2015, 22, 49-58.	2.4	30
58	New pulverization parameter derived from indentation and dynamic compression of brittle microspheres. Powder Technology, 2015, 283, 57-65.	4.2	19
59	Micromechanical Behavior of Sand Learned from Multiscale Kolsky Bar Experiments. , 2015, , 65-92.		0
60	<i>In situ</i> damage assessment using synchrotron X-rays in materials loaded by a Hopkinson bar. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130191.	3.4	43
61	Crack Propagation Through Interfaces in a Borosilicate Glass and a Glass Ceramic. International Journal of Applied Glass Science, 2014, 5, 353-362.	2.0	18
62	Observation of Crack Propagation in Glass Using X-ray Phase Contrast Imaging. International Journal of Applied Glass Science, 2014, 5, 363-373.	2.0	23
63	Experimental assessment of fracture of individual sand particles at different loading rates. International Journal of Impact Engineering, 2014, 68, 8-14.	5.0	70
64	Loading Rate Effects on Mode I Delamination of Z-Pinned Composite Laminates. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 51-58.	0.5	3
65	Visualization of Fiber/Matrix Interfacial Shear Debonding Mechanism at High Rate Loading. , 0, , .		1