Behrad Koohbor

List of Publications by Year
in descending order

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79 papers	1,275 citations	361413 20 h-index	414414 32 g-index
83 all docs	83 docs citations	83 times ranked	931 citing authors

#	Article	IF	Citations
1	Hardnessâ^'strength relationships in fine and ultra-fine grained metals processed through constrained groove pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 636, 331-339.	5.6	117
2	Investigation of the dynamic stressâ€"strain response of compressible polymeric foam using a non-parametric analysis. International Journal of Impact Engineering, 2016, 91, 170-182.	5.0	83
3	Design optimization of continuously and discretely graded foam materials for efficient energy absorption. Materials and Design, 2016, 102, 151-161.	7.0	81
4	A DIC-based study of in-plane mechanical response and fracture of orthotropic carbon fiber reinforced composite. Composites Part B: Engineering, 2014, 66, 388-399.	12.0	65
5	Effect of specimen size, compressibility and inertia on the response of rigid polymer foams subjected to high velocity direct impact loading. International Journal of Impact Engineering, 2016, 98, 62-74.	5.0	46
6	Experimental determination of Representative Volume Element (RVE) size in woven composites. Optics and Lasers in Engineering, 2017, 90, 59-71.	3.8	46
7	Densityâ€Graded Cellular Solids: Mechanics, Fabrication, and Applications. Advanced Engineering Materials, 2022, 24, 2100646.	3.5	43
8	Meso-scale strain localization and failure response of an orthotropic woven glassâ€"fiber reinforced composite. Composites Part B: Engineering, 2015, 78, 308-318.	12.0	37
9	Determining the tensile response of materials at high temperature using DIC and the Virtual Fields Method. Optics and Lasers in Engineering, 2017, 91, 53-61.	3.8	37
10	Gradient optimization of multi-layered density-graded foam laminates for footwear material design. Journal of Biomechanics, 2020, 109, 109950.	2.1	36
11	A Robust Patterning Technique for Electron Microscopy-Based Digital Image Correlation at Sub-Micron Resolutions. Experimental Mechanics, 2019, 59, 1063-1073.	2.0	31
12	Fracture Behavior of Prestressed Composites Subjected to Shock Loading: A DIC-Based Study. Experimental Mechanics, 2015, 55, 211-225.	2.0	30
13	Characterizing the constitutive response and energy absorption of rigid polymeric foams subjected to intermediate-velocity impact. Polymer Testing, 2016, 54, 48-58.	4.8	30
14	Analysis of dynamic bending test using ultra high speed DIC and the virtual fields method. International Journal of Impact Engineering, 2017, 110, 299-310.	5.0	30
15	Effects of cell-wall instability and local failure on the response of closed-cell polymeric foams subjected to dynamic loading. Mechanics of Materials, 2018, 116, 67-76.	3.2	30
16	The deformation and failure response of closed-cell PMDI foams subjected to dynamic impact loading. Polymer Testing, 2015, 44, 112-124.	4.8	28
17	Experimental characterization of compaction wave propagation in cellular polymers. International Journal of Solids and Structures, 2018, 139-140, 270-282.	2.7	26
18	Characterization of Energy Absorption and Strain Rate Sensitivity of a Novel Elastomeric Polyurea Foam. Advanced Engineering Materials, 2021, 23, .	3.5	24

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19	Flexible planar metamaterials with tunable Poissonâ€™s ratios. Materials and Design, 2022, 215, 110446.	7.0	24
20	Optimization of energy absorption performance of polymer honeycombs by density gradation. Composites Part C: Open Access, 2020, 3, 100052.	3.2	23
21	In situ deformation characterization of density-graded foams in quasi-static and impact loading conditions. International Journal of Impact Engineering, 2021, 150, 103820.	5.0	22
22	The effect of dynamic strain aging on room temperature mechanical properties of high martensite dual phase (HMDP) steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2012, 550, 325-332.	5.6	20
23	Rapid multiple-front polymerization of fiber-reinforced polymer composites. Composites Part A: Applied Science and Manufacturing, 2022, 158, 106931.	7.6	20
24	A multiscale experimental approach for correlating global and local deformation response in woven composites. Composite Structures, 2018, 194, 328-334.	5.8	18
25	Investigations of the Failure in Boilers Economizer Tubes Used in Power Plants. Journal of Materials Engineering and Performance, 2013, 22, 2691-2697.	2.5	16
26	Meso-scale study of non-linear tensile response and fiber trellising mechanisms in woven composites. Journal of Reinforced Plastics and Composites, 2016, 35, 986-995.	3.1	16
27	In Situ Strain Measurement in Solid-State Li-Ion Battery Electrodes. Journal of the Electrochemical Society, 2021, 168, 010516.	2.9	16
28	Experimental characterization of mesoâ€scale deformation mechanisms and the RVE size in plastically deformed carbon steel. Strain, 2017, 53, e12217.	2.4	15
29	The Effect of Nano-Fillers on the In-Plane and Interlaminar Shear Properties of Carbon Fiber Reinforced Composite. Journal of Dynamic Behavior of Materials, 2018, 4, 296-307.	1.7	13
30	Predictability of mechanical behavior of additively manufactured particulate composites using machine learning and data-driven approaches. Computers in Industry, 2022, 142, 103739.	9.9	13
31	Through Thickness Elastic Profile Determination of Functionally Graded Materials. Experimental Mechanics, 2015, 55, 1427-1440.	2.0	12
32	Analyzing the Effects of Particle Diameter in Cold Spraying of Thermoplastic Polymers. Journal of Thermal Spray Technology, 2021, 30, 1226-1238.	3.1	11
33	Characterizing fracture response of cracked transversely graded materials. Composite Structures, 2019, 229, 111439.	5.8	10
34	Radial and axial inertia stresses in high strain rate deformation of polymer foams. International Journal of Mechanical Sciences, 2020, 181, 105679.	6.7	10
35	On the effect of microstructure on the torsional response of AA7050-T7651 at elevated strain rates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 639, 280-287.	5.6	9
36	Design Optimization of a Pneumatic Soft Robotic Actuator Using Model-Based Optimization and Deep Reinforcement Learning. Frontiers in Robotics and AI, 2021, 8, 639102.	3.2	9

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37	A multiscale experimental approach to characterize micro-to-macro transition length scale in polymer foams. Mechanics of Materials, 2021, 161, 104006.	3.2	9
38	Finite element modeling of thermal and mechanical stresses in work-rolls of warm strip rolling process. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2016, 230, 1076-1086.	2.4	8
39	Effect of rolling speed on the occurrence of strain aging during and after warm rolling of a low-carbon steel. Journal of Materials Science, 2010, 45, 3405-3412.	3.7	7
40	Thermomechanical Behavior of Work Rolls During Warm Strip Rolling. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2012, 43, 1638-1648.	2.1	7
41	Effect of elastic properties of material composition on the fracture response of transversely graded ceramic/metal material. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 619, 281-289.	5.6	7
42	The impact of alkaliâ€ion intercalation on redox chemistry and mechanical deformations: Case study on intercalation of Li, Na, and K ions into FePO₄ cathode. Electrochemical Science Advances, 2022, 2, e2100106.	2.8	7
43	Thermal Gradients Govern Impact Dynamics in Thermoplastic Polymer Cold Spray. Journal of Thermal Spray Technology, 2021, 30, 2034-2049.	3.1	7
44	Characterizing fiber-matrix debond and fiber interaction mechanisms by full-field measurements. Composites Part C: Open Access, 2022, 7, 100229.	3.2	7
45	In-Plane mechanical and failure responses of honeycombs with syntactic foam cell walls. Composite Structures, 2022, 295, 115866.	5.8	7
46	Dynamic Behavior and Impact Tolerance of Elastomeric Foams Subjected to Multiple Impact Conditions. Journal of Dynamic Behavior of Materials, 2022, 8, 359-370.	1.7	7
47	Identification of RVE length scale in fiber composites via combined optical and SEM digital image correlation. Composites Science and Technology, 2022, 227, 109613.	7.8	7
48	Kinetics of static strain aging after temper rolling of low carbon steel. Ironmaking and Steelmaking, 2011, 38, 314-320.	2.1	6
49	On the influence of rolling path change on static recrystallization behavior of commercial purity aluminum. International Journal of Material Forming, 2014, 7, 53-63.	2.0	6
50	Finite-element modeling of thermal aspects in high speed cold strip rolling. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2017, 231, 1350-1362.	2.4	6
51	Gradient optimization of transversely graded Ti-TiB structures for enhanced fracture resistance. International Journal of Mechanical Sciences, 2020, 187, 105917.	6.7	6
52	A Modeling Study of Bonding Mechanisms Between Similar and Dissimilar Materials in Cold Spraying on Polymeric Substrates. Journal of Thermal Spray Technology, 2022, 31, 508-524.	3.1	6
53	Desiccation cracking in clay-bottom ash mixtures: insights from crack image analysis and digital image correlation. Bulletin of Engineering Geology and the Environment, 2022, 81, 1.	3.5	6
54	Out-of-plane load-bearing and mechanical energy absorption properties of flexible density-graded TPU honeycombs. Composites Part C: Open Access, 2022, 8, 100284.	3.2	6

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55	Molecular-Weight-Dependent Interplay of Brittle-to-Ductile Transition in High-Strain-Rate Cold Spray Deposition of Glassy Polymers. ACS Omega, 2022, 7, 26465-26472.	3.5	6
56	Coupling between Voltage Profiles and Mechanical Deformations in LAGP Solid Electrolyte During Li Plating and Stripping. ACS Applied Energy Materials, 2022, 5, 2655-2662.	5.1	5
57	Study on effect of residual stress distributions on kinetics of static strain aging after cold rolling. Materials Science and Technology, 2011, 27, 1620-1626.	1.6	4
58	In-situ quantification of intra and intergranular deformation in pure magnesium using full-field measurements at low and high strain rates. Mechanics of Materials, 2018, 126, 36-46.	3.2	4
59	In Situ Strain Measurement in Solid-State Li-Ion Batteries. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 1-3.	0.5	4
60	Thermomechanical behaviours of strip and work-rolls in cold rolling process. Journal of Strain Analysis for Engineering Design, 2011, 46, 794-804.	1.8	3
61	Influence of deformation path change on static strain aging of cold rolled steel strip. International Journal of Advanced Manufacturing Technology, 2012, 61, 901-909.	3.0	3
62	Characterization of Fracture Behavior of Multi-Walled Carbon Nanotube Reinforced Cement Paste Using Digital Image Correlation. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 73-79.	0.5	3
63	On the Meso-Macro Scale Deformation of Low Carbon Steel. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 409-414.	0.5	3
64	Experimental Investigation of Compaction Wave Propagation in Cellular Polymers. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 113-115.	0.5	3
65	Impact Response of Density Graded Cellular Polymers. Conference Proceedings of the Society for Experimental Mechanics, 2018, , 17-23.	0.5	3
66	ANALYZING MICRO-MACRO TRANSITIONAL LENGTH SCALE IN UNIDIRECTIONAL COMPOSITES. , 2021, , .		2
67	On the influence of deformation rate and cooling media on the static strain aging of a warm-rolled low carbon steel. International Journal of Material Forming, 2013, 6, 417-422.	2.0	1
68	Thermo-mechanical Properties of Metals at Elevated Temperatures. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 117-123.	0.5	1
69	On the Mechanical Response of Polymer Fiber Composites Reinforced with Nanoparticles. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 125-130.	0.5	1
70	Investigating the Tensile Response of Materials at High Temperature Using DIC. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 77-82.	0.5	1
71	IntelliPad: Intelligent Soft Robotic Pad for Pressure Injury Prevention. , 2020, , .		1
72	Fracture of Pre-stressed Woven Glass Fiber Composite Exposed to Shock Loading. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 213-219.	0.5	1

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73	Through Thickness Fracture Behavior of Transversely Graded Ti/TiB Material. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 51-56.	0.5	1
74	Dynamic Flow Response of Rigid Polymer Foam Subjected to Direct Impact. Conference Proceedings of the Society for Experimental Mechanics, 2016, , 163-170.	0.5	1
75	Meso-Scale Strain Measurements in Fiber Reinforced Composites. , 0, , .		1
76	Thermo-Mechanical Properties of Thermoset Polymers and Composites Fabricated by Frontal Polymerization. Conference Proceedings of the Society for Experimental Mechanics, 2019, , 89-91.	0.5	0
77	Specimen Size Effect on Stress-Strain Response of Foams Under Direct-Impact. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 253-261.	0.5	0
78	Compaction Wave Characteristics of Polymeric Foams Under Dynamic Loading. Conference Proceedings of the Society for Experimental Mechanics, 2018, , 175-180.	0.5	0
79	IN SITU CHARACTERIZATION OF FIBER-MATRIX INTERFACE DEBONDING VIA FULL-FIELD MEASUREMENTS. , 2021, , .		0