

Pengwan Chen

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131
papers

1,940
citations

22
h-index

38
g-index

143
ext. papers

2,532
ext. citations

4.7
avg, IF

5.39
L-index

#	Paper	IF	Citations
131	Edge-to-edge assembled graphene oxide aerogels with outstanding mechanical performance and superhigh chemical activity. <i>Small</i> , 2013 , 9, 1397-404	11	169
130	Interfacial Residual Stress Relaxation in Perovskite Solar Cells with Improved Stability. <i>Advanced Materials</i> , 2019 , 31, e1904408	24	126
129	Evaluation of the quality of a speckle pattern in the digital image correlation method by mean subset fluctuation. <i>Optics and Laser Technology</i> , 2011 , 43, 9-13	4.2	114
128	Characterization of the condensed carbon in detonation soot. <i>Carbon</i> , 2003 , 41, 2093-2099	10.4	92
127	Recent progress in carbonyl-based organic polymers as promising electrode materials for lithium-ion batteries (LIBs). <i>Journal of Materials Chemistry A</i> , 2020 , 8, 11906-11922	13	64
126	Residual stress in thermal spray coatings measured by curvature based on 3D digital image correlation technique. <i>Surface and Coatings Technology</i> , 2011 , 206, 1396-1402	4.4	57
125	Deformation and failure of polymer bonded explosives under diametric compression test. <i>Polymer Testing</i> , 2006 , 25, 333-341	4.5	51
124	Experimental study on the micromechanical behavior of a PBX simulant using SEM and digital image correlation method. <i>Optics and Lasers in Engineering</i> , 2011 , 49, 366-370	4.6	50
123	Self-Assembling VO ₂ Nanonet with High Switching Performance at Wafer-Scale. <i>Chemistry of Materials</i> , 2015 , 27, 7419-7424	9.6	48
122	Microstructure, deformation and failure of polymer bonded explosives. <i>Journal of Materials Science</i> , 2007 , 42, 5272-5280	4.3	48
121	One-step solution combustion synthesis of CuO/Cu ₂ O/C anode for long cycle life Li-ion batteries. <i>Carbon</i> , 2019 , 142, 51-59	10.4	47
120	Numerical and Experimental Studies on the Explosive Welding of Tungsten Foil to Copper. <i>Materials</i> , 2017 , 10,	3.5	35
119	Evolution of Structural and Electrical Properties of Oxygen-Deficient VO under Low Temperature Heating Process. <i>ACS Applied Materials & Interfaces</i> , 2017 , 9, 27135-27141	9.5	30
118	Cross-Sectional Residual Stresses in Thermal Spray Coatings Measured by Moiré Interferometry and Nanoindentation Technique. <i>Journal of Thermal Spray Technology</i> , 2012 , 21, 810-817	2.5	29
117	Investigation on the Explosive Welding of 1100 Aluminum Alloy and AZ31 Magnesium Alloy. <i>Journal of Materials Engineering and Performance</i> , 2016 , 25, 2635-2641	1.6	29
116	Non-Shock Ignition Probability of Octahydro-1,3,5,7-Tetranitro-Tetrazocine-Based Polymer Bonded Explosives Based on Microcrack Stochastic Distribution. <i>Propellants, Explosives, Pyrotechnics</i> , 2020 , 45, 568-580	1.7	28
115	Modeling ignition prediction of HMX-based polymer bonded explosives under low velocity impact. <i>Mechanics of Materials</i> , 2018 , 124, 106-117	3.3	28

114	Buckling modes of polymer membranes restricted by metal wires. <i>Soft Matter</i> , 2011 , 7, 2888	3.6	27
113	Fabrication of W/Cu composite by shock consolidation of Cu-coated W powders. <i>Journal of Alloys and Compounds</i> , 2016 , 657, 215-223	5.7	26
112	Hydrothermal growth of VO ₂ nanoplate thermochromic films on glass with high visible transmittance. <i>Scientific Reports</i> , 2016 , 6, 27898	4.9	25
111	High-strain-rate plastic deformation and fracture behaviour of Ti-5Al-5Mo-5V-1Cr-1Fe titanium alloy at room temperature. <i>Mechanics of Materials</i> , 2018 , 116, 3-10	3.3	24
110	Fabrication of visible-light-driven Ag/TiO ₂ heterojunction composites induced by shock wave. <i>Journal of Alloys and Compounds</i> , 2016 , 679, 463-469	5.7	24
109	Dynamic shear deformation and failure of Ti-5Al-5Mo-5V-1Cr-1Fe titanium alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017 , 694, 41-47	5.3	22
108	Preparation of graphene by electrical explosion of graphite sticks. <i>Nanoscale</i> , 2017 , 9, 10639-10646	7.7	22
107	Fabrication technique of micro/nano-scale speckle patterns with focused ion beam. <i>Science China: Physics, Mechanics and Astronomy</i> , 2012 , 55, 1037-1044	3.6	22
106	Detection and characterization of long-pulse low-velocity impact damage in plastic bonded explosives. <i>International Journal of Impact Engineering</i> , 2005 , 31, 497-508	4	22
105	Ignition criterion and safety prediction of explosives under low velocity impact. <i>Journal of Applied Physics</i> , 2013 , 114, 113505	2.5	21
104	Characterization of fine-grained W/10wt.% Cu composite fabricated by hot-shock consolidation. <i>International Journal of Refractory Metals and Hard Materials</i> , 2015 , 52, 137-142	4.1	20
103	Shock-wave synthesis of multilayer graphene and nitrogen-doped graphene materials from carbonate. <i>Carbon</i> , 2015 , 94, 928-935	10.4	20
102	Nitrogen-doped titania photocatalysts induced by shock wave. <i>Materials Research Bulletin</i> , 2009 , 44, 1842-1845	5.1	20
101	Solvent-less method for efficient photocatalytic Fe ₂ O ₃ nanoparticles using macromolecular polymeric precursors. <i>New Journal of Chemistry</i> , 2016 , 40, 6768-6776	3.6	18
100	One Step Preparation of Fe ₃ O ₄ /Graphene Nanocomposite through Pulsed Wire Discharge. <i>Crystals</i> , 2018 , 8, 104	2.3	17
99	Joining AlCoCrFeNi high entropy alloys and Al-6061 by explosive welding method. <i>Vacuum</i> , 2020 , 174, 109221	3.7	16
98	One-step detonation-assisted synthesis of FeO-Fe@BCNT composite towards high performance lithium-ion batteries. <i>Nanoscale</i> , 2017 , 9, 14376-14384	7.7	16
97	Observation of damage evolution in polymer bonded explosives using acoustic emission and digital image correlation. <i>Polymer Testing</i> , 2011 , 30, 861-866	4.5	16

96	The role of tension-compression asymmetrical microcrack evolution in the ignition of polymer-bonded explosives under low-velocity impact. <i>Journal of Applied Physics</i> , 2021 , 129, 175108	2.5	16
95	Simulations of meso-scale deformation and damage of polymer bonded explosives by the numerical manifold method. <i>Engineering Analysis With Boundary Elements</i> , 2018 , 96, 123-137	2.6	16
94	Synthesis of N-doped TiO ₂ with Different Nitrogen Concentrations by Mild Hydrothermal Method. <i>Materials and Manufacturing Processes</i> , 2014 , 29, 1162-1167	4.1	15
93	Quasi-static tensile deformation and fracture behavior of a highly particle-filled composite using digital image correlation method. <i>Theoretical and Applied Mechanics Letters</i> , 2011 , 1, 051002	1.8	15
92	Controlled Ag-TiO ₂ heterojunction obtained by combining physical vapor deposition and bifunctional surface modifiers. <i>Journal of Physics and Chemistry of Solids</i> , 2018 , 119, 147-156	3.9	14
91	Effects of microstructure on the dynamic properties of TA15 titanium alloy. <i>Mechanics of Materials</i> , 2019 , 137, 103121	3.3	14
90	Experimental and Numerical Study on Microstructure and Mechanical Properties of Ti-6Al-4V/Al-1060 Explosive Welding. <i>Metals</i> , 2019 , 9, 1189	2.3	14
89	Fabrication and characterization of pure tungsten using the hot-shock consolidation. <i>International Journal of Refractory Metals and Hard Materials</i> , 2014 , 42, 215-220	4.1	14
88	High strain rate deformation of explosion-welded Ti6Al4V/pure titanium. <i>Defence Technology</i> , 2020 , 16, 678-688	3	14
87	Comparative study of the fracture toughness determination of a polymer-bonded explosive simulant. <i>Engineering Fracture Mechanics</i> , 2011 , 78, 2991-2997	4.2	13
86	Shock induced conversion of carbon dioxide to few layer graphene. <i>Carbon</i> , 2017 , 115, 471-476	10.4	13
85	Stabilizing Metastable Polymorphs of Metal-Organic Frameworks via Encapsulation of Graphene Oxide and Mechanistic Studies. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 32828-32837	9.5	13
84	Molecular Hinges Stabilize Formamidinium-Based Perovskite Solar Cells with Compressive Strain. <i>Advanced Functional Materials</i> , 2020 , 1193	15.6	13
83	Reaction synthesis of TiSi ₂ and Ti ₅ Si ₃ by ball-milling and shock loading and their photocatalytic activities. <i>Journal of Alloys and Compounds</i> , 2013 , 555, 375-380	5.7	12
82	Symmetric Confined Growth of Superstructured Vanadium Dioxide Nanonet with a Regular Geometrical Pattern by a Solution Approach. <i>Crystal Growth and Design</i> , 2017 , 17, 5838-5844	3.5	10
81	Fabrication of Nanocrystalline AlCoCrFeNi High Entropy Alloy through Shock Consolidation and Mechanical Alloying. <i>Entropy</i> , 2019 , 21, 880	2.8	10
80	Fabrication and characterization of the NiAl energetic structural material with high energy density and mechanical properties. <i>Journal of Alloys and Compounds</i> , 2020 , 832, 154894	5.7	10
79	Study on the mechanical behavior of adhesive interface by digital image correlation. <i>Science China: Physics, Mechanics and Astronomy</i> , 2011 , 54, 574-580	3.6	10

78	Microstructure characterization and tensile shear failure mechanism of the bonding interface of explosively welded titanium-steel composite. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 820, 141559	5.3	10
77	Monitoring micro-structural evolution during aluminum sintering and understanding the sintering mechanism of aluminum nanoparticles: A molecular dynamics study. <i>Journal of Materials Science and Technology</i> , 2020 , 57, 92-100	9.1	9
76	Dynamic Shear Deformation and Failure of Ti-6Al-4V and Ti-5Al-5Mo-5V-1Cr-1Fe Alloys. <i>Materials</i> , 2018 , 11,	3.5	9
75	Investigation on Explosive Welding of Zr ₅₃ Cu ₃₅ Al ₁₂ Bulk Metallic Glass with Crystalline Copper. <i>Journal of Materials Engineering and Performance</i> , 2018 , 27, 2932-2937	1.6	9
74	Shear localization and recrystallization in high strain rate deformation in Ti-5Al-5Mo-5V-1Cr-1Fe alloy. <i>Materials Letters</i> , 2018 , 232, 142-145	3.3	9
73	Quasi-static in-plane compression of zig-zag folded metamaterials at large plastic strains. <i>Thin-Walled Structures</i> , 2021 , 159, 107285	4.7	8
72	Scalable Conversion of CO ₂ to N-Doped Carbon Foam for Efficient Oxygen Reduction Reaction and Lithium Storage. <i>ACS Sustainable Chemistry and Engineering</i> , 2018 , 6, 3358-3366	8.3	7
71	Formation of bonding interface in explosive welding-a molecular dynamics approach. <i>Journal of Physics Condensed Matter</i> , 2019 , 31, 415403	1.8	7
70	Effects of Specimen Size on Impact-Induced Reaction of High Explosives. <i>Combustion Science and Technology</i> , 2013 , 185, 1227-1240	1.5	7
69	Enhanced visible-light absorption of nitrogen-doped titania induced by shock wave. <i>Materials Letters</i> , 2011 , 65, 685-687	3.3	7
68	Optical characterization of nanocarbon phases in detonation soot and shocked graphite. <i>Diamond and Related Materials</i> , 2006 , 15, 1400-1404	3.5	7
67	Effect of microstructure on the mechanical properties of Ti ₅ Al ₃ Mo ₅ V ₁ Cr ₁ Fe alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020 , 773, 138728	5.3	7
66	Dynamic forced shear characteristics of Ti-6Al-4V alloy using flat hat-shaped specimen. <i>Engineering Fracture Mechanics</i> , 2020 , 238, 107286	4.2	7
65	Welding Window: Comparison of Deribas and Wittman Approaches and SPH Simulation Results. <i>Metals</i> , 2019 , 9, 1323	2.3	7
64	Enhanced synthesis method of graphene oxide. <i>Nanoscale Advances</i> , 2021 , 3, 223-230	5.1	7
63	Modelling Microstructural Deformation and the Failure Process of Plastic Bonded Explosives Using the Cohesive Zone Model. <i>Materials</i> , 2019 , 12,	3.5	6
62	Meso-scale failure simulation of polymer bonded explosive with initial defects by the numerical manifold method. <i>Computational Materials Science</i> , 2020 , 173, 109425	3.2	6
61	Synthesis of nano titanium oxide with controlled oxygen content using pulsed discharge in water. <i>Advanced Powder Technology</i> , 2020 , 31, 986-992	4.6	6

60	Fabrication and characterization of the Mo/cu bimetal with thick Mo layer and high interfacial strength. <i>International Journal of Refractory Metals and Hard Materials</i> , 2021 , 94, 105383	4.1	6
59	CO2 Conversion into N-Doped Carbon Nanomesh Sheets. <i>ACS Applied Nano Materials</i> , 2019 , 2, 2991-2998	3.6	5
58	Preparation of Few-Layer Graphene by Pulsed Discharge in Graphite Micro-Flake Suspension. <i>Crystals</i> , 2019 , 9, 150	2.3	5
57	Shock-induced consolidation of tungsten nanoparticles—a molecular dynamics approach. <i>Journal of Applied Physics</i> , 2020 , 127, 025901	2.5	5
56	Measurement of dynamic fracture toughness and failure behavior for explosive mock materials. <i>Frontiers of Mechanical Engineering</i> , 2011 , 6, 292	3.3	5
55	Fabrication of tungsten-copper composites by hot-shock consolidation 2012 ,		5
54	One-step synthesis of FeO(OH) nanoparticles by electric explosion of iron wire underwater. <i>Defence Technology</i> , 2021 , 18, 133-133	3	5
53	Detonation Synthesis of Carbon-Encapsulated Magnetic Nanoparticles. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2015 , 23, 605-611	1.8	4
52	Microstructural characterization of pressure-induced cracking in melamine/F2311 composites and crack-healing behavior via thermal-pressure aging treatment. <i>Materials and Design</i> , 2020 , 189, 108538	8.1	4
51	Dynamic mechanical contact behaviours of amorphous nanoparticles subjected to high-speed impact. <i>Powder Technology</i> , 2020 , 364, 689-697	5.2	4
50	Existence of fractal packing in metallic glasses: Molecular dynamics simulations of Cu ₄₆ Zr ₅₄ . <i>Physical Review B</i> , 2018 , 98,	3.3	4
49	A New S-Shape Specimen for Studying the Dynamic Shear Behavior of Metals. <i>Metals</i> , 2019 , 9, 838	2.3	4
48	Macro-Micro Mechanical Behavior of a Highly-Particle-Filled Composite Using Digital Image Correlation Method 2011 ,		4
47	Study on dynamic fracture and mechanical properties of a PBX simulant by using dic and SHPB method 2012 ,		4
46	Effect of microstructure on mechanical properties of titanium-steel explosive welding interface. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 142260	5.3	4
45	Investigation on the interfacial microstructure and mechanical properties of the W-Cu joints fabricated by hot explosive welding. <i>Journal of Materials Processing Technology</i> , 2022 , 300, 117400	5.3	4
44	Topography-driven delamination of thin patch adhered to wrinkling surface. <i>International Journal of Mechanical Sciences</i> , 2020 , 178, 105622	5.5	4
43	Hierarchical Surface Patterns via Global Wrinkling on Curved Substrate for Fluid Drag Control. <i>Advanced Materials Interfaces</i> , 2021 , 8, 2001489	4.6	4

42	Meso-structure construction and effective modulus simulation of PBXs. <i>Journal of Energetic Materials</i> , 2020 , 38, 261-282	1.6	3
41	High-Efficiency Production of Large-Size Few-Layer Graphene Platelets via Pulsed Discharge of Graphite Strips. <i>Nanomaterials</i> , 2019 , 9,	5.4	3
40	Quasi-static compression properties of graphene aerogel. <i>Diamond and Related Materials</i> , 2021 , 111, 108225	3.5	3
39	Local shear dominance in equation of state of metallic glass under hydrostatic pressure. <i>Journal of Applied Physics</i> , 2018 , 124, 165901	2.5	3
38	Recent strategies to improve moisture stability in metal halide perovskites materials and devices. <i>Journal of Energy Chemistry</i> , 2022 , 65, 219-235	12	3
37	Detonation-assisted self-assembly synthesis of carbon onions using organics with long carbon chain. <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2017 , 25, 163-169	1.8	2
36	Effect of Continuous Damage Accumulation on Ignition of HMX-Based Polymer Bonded Explosives under Low-Velocity Impact. <i>Propellants, Explosives, Pyrotechnics</i> , 2020 , 45, 1908-1919	1.7	2
35	Shock-induced phase transition of g-C ₃ N ₄ to a new C ₃ N ₄ phase. <i>Journal of Applied Physics</i> , 2019 , 126, 155901	2.5	2
34	Ti-Si photocatalyst for producing hydrogen synthesized by shock wave 2012 ,		2
33	The influence of the drying method on the microstructure and the compression behavior of graphene aerogel. <i>Diamond and Related Materials</i> , 2022 , 121, 108772	3.5	2
32	Atomistic simulation on the formation mechanism of bonding interface in explosive welding. <i>Journal of Applied Physics</i> , 2022 , 131, 025903	2.5	2
31	Dynamic contact behaviours involving crystalline diamond nanospheres. <i>European Journal of Mechanics, A/Solids</i> , 2020 , 80, 103896	3.7	2
30	A molecular dynamics study on the chemical reaction of Ni/Al reactive intermetallics. <i>Journal of Applied Physics</i> , 2020 , 128, 185901	2.5	2
29	Formation of nanodiamond by pulsed discharge of carbon fiber wires. <i>Applied Physics Letters</i> , 2020 , 117, 081902	3.4	2
28	Comprehensive simulations of rock fracturing with pre-existing cracks by the numerical manifold method. <i>Acta Geotechnica</i> , 1	4.9	2
27	Absence of 2.5 power law for fractal packing in metallic glasses. <i>Journal of Physics Condensed Matter</i> , 2018 , 30, 255402	1.8	2
26	One-step combustion synthesis of carbon-coated NiO/Ni composites for lithium and sodium storage. <i>Journal of Alloys and Compounds</i> , 2021 , 884, 160927	5.7	2
25	A corrugated gradient mechanical metamaterial: Lightweight, tunable auxeticity and enhanced specific energy absorption. <i>Thin-Walled Structures</i> , 2022 , 176, 109355	4.7	2

24	Effects of microstructure on mechanical and energy release properties of Ni/Al energetic structural materials. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 143332	5.3	2
23	Comparative Study of the Dynamic Fracture Toughness Determination of Brittle Materials Using the Kolsky-Hopkinson Bar Machine 2018 , 143-156		1
22	Specimen size effect of explosive sensitivity under low velocity impact. <i>Journal of Physics: Conference Series</i> , 2014 , 500, 052026	0.3	1
21	Predicting the mechanical behaviour of highly particle-filled polymer composites using the nonlinear finite element method. <i>Composite Structures</i> , 2022 , 286, 115275	5.3	1
20	Shock Consolidation of Ni/Al Nanoparticles: A Molecular Dynamics Simulation. <i>Journal of Materials Engineering and Performance</i> ,1	1.6	1
19	Dynamic mesoscale cracking modeling of energetic composite materials in Hopkinson bar test. <i>Composite Structures</i> , 2021 , 281, 114989	5.3	1
18	Dynamic behavior and adiabatic shearing formation of the commercially pure titanium with explosion-induced gradient microstructure. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 833, 142340	5.3	1
17	Mechanical behavior simulation of particulate-filled composite at meso-scale by numerical manifold method. <i>International Journal of Mechanical Sciences</i> , 2022 , 213, 106846	5.5	1
16	Measurement of the Dynamic Fracture Toughness of Alumina Ceramic. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2016 , 33-38	0.3	1
15	Comparative experimental study of the dynamic properties and adiabatic shear susceptibility of titanium alloys. <i>European Journal of Mechanics, A/Solids</i> , 2021 , 85, 104137	3.7	1
14	The effect of heating rate on the sintering of aluminum nanospheres. <i>Physical Chemistry Chemical Physics</i> , 2021 , 23, 11684-11697	3.6	1
13	Modeling of Impact Energy Release of PTFE/Al Reactive Material. <i>Applied Sciences (Switzerland)</i> , 2021 , 11, 8910	2.6	1
12	Formation of black phosphorus quantum dots via shock-induced phase transformation. <i>Applied Physics Letters</i> , 2022 , 120, 141902	3.4	1
11	Mechanical behavior of PBX with different HMX crystal size during die pressing: Experimental study and DEM simulation. <i>Composites Science and Technology</i> , 2022 , 222, 109378	8.6	1
10	Chemical reaction of Ni/Al interface associated with perturbation growth under shock compression. <i>Physics of Fluids</i> , 2022 , 34, 044111	4.4	1
9	Microstructure and mechanical properties of the bonding interface of explosively welded TA2/Q235 composite under dynamic shear loading. <i>International Journal of Mechanical Sciences</i> , 2022 , 107362	5.5	1
8	Shock-induced large-depth gradient microstructure in commercial pure titanium subjected to explosive hardening. <i>Materials and Design</i> , 2022 , 213, 110309	8.1	0
7	Simulation of force chains and particle breakage of granular material by numerical manifold method. <i>Powder Technology</i> , 2021 , 390, 464-472	5.2	0

- 6 Shock synthesis of nanocrystalline La₂Ti₂O₇ powder. *Journal of Applied Physics*, **2021**, 130, 125903 2.5 ○
- 5 Dynamic mechanical contact behaviors and sintering mechanism of Al nanoparticles subjected to high-speed impact. *Materials Chemistry and Physics*, **2021**, 273, 125111 4.4 ○
- 4 The combustion behavior of boron particles by using molecular perovskite energetic materials as high-energy oxidants. *Combustion and Flame*, **2022**, 241, 112118 5.3 ○
- 3 Effect of strain rate and temperature on deformation and recrystallization behaviour of BCC structure AlCoCrFeNi high entropy alloy. *Intermetallics*, **2022**, 147, 107601 3.5 ○
- 2 Dynamic Brazilian Test Using the Kolsky-Hopkinson Bar Machine **2018**, 121-141
- 1 Dynamic penetration behaviors of single/multi-layer graphene using nanoparticle under hypervelocity impact.. *Scientific Reports*, **2022**, 12, 7440 4.9