

Xiaopeng Zhang

List of Publications by Year in descending order

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57
papers

1,383
citations

257357

24
h-index

360920

35
g-index

57
all docs

57
docs citations

57
times ranked

951
citing authors

#	ARTICLE	IF	CITATIONS
1	On topology optimization of damping layer in shell structures under harmonic excitations. <i>Structural and Multidisciplinary Optimization</i> , 2012, 46, 51-67.	1.7	125
2	Dynamic topology optimization of piezoelectric structures with active control for reducing transient response. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2014, 281, 200-219.	3.4	91
3	Co ₃ O ₄ Nanosheets Preferentially Growing (220) Facet with a Large Amount of Surface Chemisorbed Oxygen for Efficient Oxidation of Elemental Mercury from Flue Gas. <i>Environmental Science & Technology</i> , 2020, 54, 8601-8611.	4.6	72
4	Mechanics of self-folding of single-layer graphene. <i>Journal Physics D: Applied Physics</i> , 2013, 46, 055308.	1.3	68
5	Topology optimization of damping layers for minimizing sound radiation of shell structures. <i>Journal of Sound and Vibration</i> , 2013, 332, 2500-2519.	2.1	64
6	Topological design of compliant smart structures with embedded movable actuators. <i>Smart Materials and Structures</i> , 2014, 23, 045024.	1.8	59
7	Realization of full and directional band gap design by non-gradient topology optimization in acoustic metamaterials. <i>Extreme Mechanics Letters</i> , 2021, 42, 101126.	2.0	55
8	Robust topology optimization of phononic crystals with random field uncertainty. <i>International Journal for Numerical Methods in Engineering</i> , 2018, 115, 1154-1173.	1.5	50
9	Co ₃ O ₄ Nanorods with a Great Amount of Oxygen Vacancies for Highly Efficient Hg ⁰ Oxidation from Coal Combustion Flue Gas. <i>Energy & Fuels</i> , 2019, 33, 6552-6561.	2.5	46
10	Topology optimization of piezoelectric layers in plates with active vibration control. <i>Journal of Intelligent Material Systems and Structures</i> , 2014, 25, 697-712.	1.4	41
11	Simultaneous optimization of system structure and working fluid for the three-stage condensation Rankine cycle utilizing LNG cold energy. <i>Applied Thermal Engineering</i> , 2018, 140, 120-130.	3.0	40
12	Method to optimize an additively-manufactured functionally-graded lattice structure for effective liquid cooling. <i>Additive Manufacturing</i> , 2019, 28, 285-298.	1.7	35
13	Topology optimization of electrode coverage of piezoelectric thin-walled structures with CGVF control for minimizing sound radiation. <i>Structural and Multidisciplinary Optimization</i> , 2014, 50, 799-814.	1.7	34
14	Review on structural control and modification of graphene oxide-based membranes in water treatment: From separation performance to robust operation. <i>Chinese Journal of Chemical Engineering</i> , 2019, 27, 1348-1360.	1.7	33
15	Sensitivity analysis and lattice density optimization for sequential inherent strain method used in additive manufacturing process. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 370, 113231.	3.4	32
16	Narrow-band filter design of phononic crystals with periodic point defects via topology optimization. <i>International Journal of Mechanical Sciences</i> , 2021, 212, 106829.	3.6	32
17	Robust topology optimization for dynamic compliance minimization under uncertain harmonic excitations with inhomogeneous eigenvalue analysis. <i>Structural and Multidisciplinary Optimization</i> , 2016, 54, 1469-1484.	1.7	30
18	Ce-Co interaction effects on the catalytic performance of uniform mesoporous Cex-Coy catalysts in HgO oxidation process. <i>Fuel</i> , 2018, 226, 18-26.	3.4	30

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19	Optimization of an additively manufactured functionally graded lattice structure with liquid cooling considering structural performances. <i>International Journal of Heat and Mass Transfer</i> , 2019, 143, 118564.	2.5	29
20	Multi-material topology optimization of piezoelectric composite structures for energy harvesting. <i>Composite Structures</i> , 2021, 265, 113783.	3.1	28
21	Topology optimization of piezoelectric smart structures for minimum energy consumption under active control. <i>Structural and Multidisciplinary Optimization</i> , 2018, 58, 185-199.	1.7	27
22	Isotropic TiAl ₄ V lattice via topology optimization and electron-beam melting. <i>Additive Manufacturing</i> , 2018, 22, 634-642.	1.7	27
23	A phase-field based robust topology optimization method for phononic crystals design considering uncertain diffuse regions. <i>Computational Materials Science</i> , 2019, 160, 159-172.	1.4	26
24	Topological design of microstructures using periodic material-field series-expansion and gradient-free optimization algorithm. <i>Materials and Design</i> , 2021, 199, 109437.	3.3	26
25	Robust topology optimization of vibrating structures considering random diffuse regions via a phase-field method. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2019, 344, 766-797.	3.4	21
26	Vibration suppression using integrated topology optimization of host structures and damping layers. <i>JVC/Journal of Vibration and Control</i> , 2016, 22, 60-76.	1.5	20
27	A general assessment index for non-probabilistic reliability of structures with bounded field and parametric uncertainties. <i>Computer Methods in Applied Mechanics and Engineering</i> , 2020, 366, 113046.	3.4	16
28	Layout design of piezoelectric patches in structural linear quadratic regulator optimal control using topology optimization. <i>Journal of Intelligent Material Systems and Structures</i> , 2018, 29, 2277-2294.	1.4	15
29	Topological design of phononic crystals for multiple wide band gaps. <i>Journal of Sound and Vibration</i> , 2022, 529, 116962.	2.1	15
30	Topology optimization of magnetorheological fluid layers in sandwich plates for semi-active vibration control. <i>Smart Materials and Structures</i> , 2015, 24, 085024.	1.8	14
31	An objective function for the topology optimization of sound-absorbing materials. <i>Journal of Sound and Vibration</i> , 2019, 443, 804-819.	2.1	14
32	Topology optimization of composite macrostructures comprising multi-phase viscoelastic composite microstructures for enhanced structural damping. <i>Composite Structures</i> , 2021, 278, 114712.	3.1	12
33	Wrinkling and wrinkling-suppression in graphene membranes with frozen zone. <i>Thin Solid Films</i> , 2017, 638, 345-353.	0.8	11
34	Energy and Economic Optimization of the Multistage Condensation Rankine Cycle That Utilizes LNG Cold Energy: Considerations on Working Fluids and Cycle Configurations. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 13505-13516.	3.2	11
35	Promoting Effect of the Core-Shell Structure of MnO ₂ @TiO ₂ Nanorods on SO ₂ Resistance in Hg ₀ Removal Process. <i>Catalysts</i> , 2020, 10, 72.	1.6	11
36	Co ₃ O ₄ -based catalysts derived from natural wood with hierarchical structure for elemental mercury oxidation. <i>Journal of the Energy Institute</i> , 2021, 94, 285-293.	2.7	11

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37	A MATLAB code for the material-field series-expansion topology optimization method. <i>Frontiers of Mechanical Engineering</i> , 2021, 16, 607-622.	2.5	11
38	Inverse analysis of giant macroscopic negative thermal expansion of Ca ₂ RuO ₄ ceramics based on elasticity and structural topology optimization. <i>Applied Physics Express</i> , 2018, 11, 055801.	1.1	10
39	Photonic crystal topological design for polarized and polarization-independent band gaps by gradient-free topology optimization. <i>Optics Express</i> , 2021, 29, 24861.	1.7	10
40	Topology optimisation of a porous unit cell in a fluid flow considering Forchheimer drag. <i>International Journal of Computational Fluid Dynamics</i> , 2020, 34, 50-60.	0.5	8
41	Photonic Band Gap Material Topological Design at Specified Target Frequency. <i>Advanced Theory and Simulations</i> , 2021, 4, 2100125.	1.3	8
42	Numerical study on the effective stiffness of topology-optimized lattice structures made of orthotropic crystal grains with optimal orientation. <i>Computational Materials Science</i> , 2019, 159, 202-209.	1.4	7
43	Two-stage layout "size optimization method for prow stiffeners. <i>International Journal of Naval Architecture and Ocean Engineering</i> , 2019, 11, 44-51.	1.0	7
44	A Systematic Review and Meta-analysis of Clinical Trials of Neuraxial, Intravenous, and Inhalational Anesthesia for External Cephalic Version. <i>Anesthesia and Analgesia</i> , 2020, 131, 1800-1811.	1.1	7
45	Topological Design of Freely Vibrating Bi-Material Structures to Achieve the Maximum Band Gap Centering at a Specified Frequency. <i>Journal of Applied Mechanics, Transactions ASME</i> , 2021, 88, .	1.1	6
46	A Precisely Controlled Multichannel Phononic Crystal Resonant Cavity. <i>Advanced Theory and Simulations</i> , 2021, 4, 2100250.	1.3	6
47	A velocity field level set method for topology optimization of piezoelectric layer on the plate with active vibration control. <i>Mechanics of Advanced Materials and Structures</i> , 2023, 30, 1326-1339.	1.5	6
48	Topology optimization of magnetorheological smart materials included PnCs for tunable wide bandgap design. <i>Acta Mechanica Sinica/Lixue Xuebao</i> , 2022, 38, .	1.5	6
49	A new form of forbidden frequency band constraint for dynamic topology optimization. <i>Structural and Multidisciplinary Optimization</i> , 2022, 65, 1.	1.7	5
50	Topology optimization for realizing tailored self-collimation in phononic crystals. <i>International Journal for Numerical Methods in Engineering</i> , 2022, 123, 4170-4182.	1.5	5
51	A Systematic Review and Meta-Analysis of Randomized Controlled Trials of Labor Epidural Analgesia Using Moderately High Concentrations of Plain Local Anesthetics versus Low Concentrations of Local Anesthetics with Opioids. <i>Journal of Pain Research</i> , 2021, Volume 14, 1303-1313.	0.8	4
52	Multi-electrode layout design of electrorheological composite plates considering energy consumption in semi-active control. <i>Thin-Walled Structures</i> , 2021, 165, 108001.	2.7	2
53	Robust topology optimization of biodegradable composite structures under uncertain degradation rates. <i>Composite Structures</i> , 2022, 291, 115593.	3.1	2
54	Robust topology optimization for dynamic compliance minimization under uncertain harmonic excitations with inhomogeneous eigenvalue analysis. , 2016, 54, 1469.		1

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55	Concurrent Topology Optimization of Composite Plates for Minimum Dynamic Compliance. <i>Materials</i> , 2022, 15, 538.	1.3	1
56	Bi-material Topology Optimization Using Analysis Mesh-Independent Point-Wise Density Interpolation. <i>Acta Mechanica Solida Sinica</i> , 2019, 32, 698-712.	1.0	0
57	Optimal Designs of Phononic Crystal Microstructures Considering Point and Line Defects. <i>Symmetry</i> , 2021, 13, 1993.	1.1	0