Fan Zhang

List of Publications by Year
in descending order

32 papers	2,146 citations	331259 21 h-index	414034 32 g-index
33 all docs	33 docs citations	33 times ranked	2294 citing authors

#	Article	IF	Citations
1	Printing, folding and assembly methods for forming 3D mesostructures in advanced materials. Nature Reviews Materials, 2017, 2, .	23.3	463
2	Controlled Mechanical Buckling for Origamiâ€Inspired Construction of 3D Microstructures in Advanced Materials. Advanced Functional Materials, 2016, 26, 2629-2639.	7.8	231
3	Mechanical assembly of complex, 3D mesostructures from releasable multilayers of advanced materials. Science Advances, 2016, 2, e1601014.	4.7	200
4	Three-dimensional mesostructures as high-temperature growth templates, electronic cellular scaffolds, and self-propelled microrobots. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E9455-E9464.	3.3	129
5	Soft three-dimensional network materials with rational bio-mimetic designs. Nature Communications, 2020, 11, 1180.	5.8	120
6	Freestanding 3D Mesostructures, Functional Devices, and Shapeâ€Programmable Systems Based on Mechanically Induced Assembly with Shape Memory Polymers. Advanced Materials, 2019, 31, e1805615.	11.1	105
7	Highly-integrated, miniaturized, stretchable electronic systems based on stacked multilayer network materials. Science Advances, 2022, 8, eabm3785.	4.7	89
8	A finite deformation model of planar serpentine interconnects for stretchable electronics. International Journal of Solids and Structures, 2016, 91, 46-54.	1.3	83
9	Electro-mechanically controlled assembly of reconfigurable 3D mesostructures and electronic devices based on dielectric elastomer platforms. National Science Review, 2020, 7, 342-354.	4.6	68
10	High Performance, Tunable Electrically Small Antennas through Mechanically Guided 3D Assembly. Small, 2019, 15, e1804055.	5.2	60
11	Liquid Crystal Elastomer Metamaterials with Giant Biaxial Thermal Shrinkage for Enhancing Skin Regeneration. Advanced Materials, 2021, 33, e2106175.	11.1	60
12	Submillimeter-scale multimaterial terrestrial robots. Science Robotics, 2022, 7, .	9.9	57
13	Harnessing the interface mechanics of hard films and soft substrates for 3D assembly by controlled buckling. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 15368-15377.	3.3	54
14	Designing Mechanical Metamaterials with Kirigamiâ€Inspired, Hierarchical Constructions for Giant Positive and Negative Thermal Expansion. Advanced Materials, 2021, 33, e2004919.	11.1	51
15	Geometrically reconfigurable 3D mesostructures and electromagnetic devices through a rational bottom-up design strategy. Science Advances, 2020, 6, eabb7417.	4.7	50
16	Plasticity-induced origami for assembly of three dimensional metallic structures guided by compressive buckling. Extreme Mechanics Letters, 2017, 11, 105-110.	2.0	48
17	Inverse Design Strategies for 3D Surfaces Formed by Mechanically Guided Assembly. Advanced Materials, 2020, 32, e1908424.	11.1	34
18	An Antiâ€Fatigue Design Strategy for 3D Ribbonâ€Shaped Flexible Electronics. Advanced Materials, 2021, 33, e2102684.	11.1	27

#	Article	IF	Citations
19	Rapidly deployable and morphable 3D mesostructures with applications in multimodal biomedical devices. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	24
20	A theoretical model of postbuckling in straight ribbons with engineered thickness distributions for three-dimensional assembly. International Journal of Solids and Structures, 2018, 147, 254-271.	1.3	23
21	Design and Fabrication of Heterogeneous, Deformable Substrates for the Mechanically Guided 3D Assembly. ACS Applied Materials & Interfaces, 2019, 11, 3482-3492.	4.0	23
22	Porous GNP/PDMS composites with significantly reduced percolation threshold of conductive filler for stretchable strain sensors. Composites Communications, 2022, 29, 101033.	3.3	19
23	Reprogrammable 3D Mesostructures Through Compressive Buckling of Thin Films with Prestrained Shape Memory Polymer. Acta Mechanica Solida Sinica, 2018, 31, 589-598.	1.0	17
24	Recent progress in three-dimensional flexible physical sensors. International Journal of Smart and Nano Materials, 2022, 13, 17-41.	2.0	17
25	Analyses of mechanically-assembled 3D spiral mesostructures with applications as tunable inductors. Science China Technological Sciences, 2019, 62, 243-251.	2.0	16
26	Torsional deformation dominated buckling of serpentine structures to form three-dimensional architectures with ultra-low rigidity. Journal of the Mechanics and Physics of Solids, 2021, 155, 104568.	2.3	16
27	Design and Assembly of Reconfigurable 3D Radioâ€Frequency Antennas Based on Mechanically Triggered Switches. Advanced Electronic Materials, 2019, 5, 1900256.	2.6	14
28	Bioinspired design and assembly of a multilayer cage-shaped sensor capable of multistage load bearing and collapse prevention. Nanotechnology, 2021, 32, 155506.	1.3	14
29	Tunable seesaw-like 3D capacitive sensor for force and acceleration sensing. Npj Flexible Electronics, 2021, 5, .	5.1	12
30	Morphable three-dimensional electronic mesofliers capable of on-demand unfolding. Science China Materials, 2022, 65, 2309-2318.	3.5	12
31	Mechanics of Three-Dimensional Soft Network Materials With a Class of Bio-Inspired Designs. Journal of Applied Mechanics, Transactions ASME, 2022, 89, .	1.1	7
32	Folding and assembly methods for forming three-dimensional mesostructures. Chinese Science Bulletin, 2018, 63, 2335-2347.	0.4	0