Wen Yang

List of Publications by Year
in descending order

42 papers	3,671 citations	172457 29 h-index	289244 40 g-index
43 all docs	43 docs citations	43 times ranked	3598 citing authors

#	Article	IF	Citations
1	Keratin: Structure, mechanical properties, occurrence in biological organisms, and efforts at bioinspiration. Progress in Materials Science, 2016, 76, 229-318.	32.8	571
2	Natural Flexible Dermal Armor. Advanced Materials, 2013, 25, 31-48.	21.0	327
3	On the tear resistance of skin. Nature Communications, 2015, 6, 6649.	12.8	297
4	Mechanical adaptability of the Bouligand-type structure in natural dermal armour. Nature Communications, 2013, 4, 2634.	12.8	277
5	The Structure, Functions, and Mechanical Properties of Keratin. Jom, 2012, 64, 449-468.	1.9	266
6	The materials science of collagen. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 52, 22-50.	3.1	227
7	Protective role of Arapaima gigas fish scales: Structure and mechanical behavior. Acta Biomaterialia, 2014, 10, 3599-3614.	8.3	161
8	Structure and fracture resistance of alligator gar (Atractosteus spatula) armored fish scales. Acta Biomaterialia, 2013, 9, 5876-5889.	8.3	116
9	Structure and mechanical behavior of human hair. Materials Science and Engineering C, 2017, 73, 152-163.	7.3	112
10	Pangolin armor: Overlapping, structure, and mechanical properties of the keratinous scales. Acta Biomaterialia, 2016, 41, 60-74.	8.3	109
11	Leatherback sea turtle shell: A tough and flexible biological design. Acta Biomaterialia, 2015, 28, 2-12.	8.3	84
12	Predation versus protection: Fish teeth and scales evaluated by nanoindentation. Journal of Materials Research, 2012, 27, 100-112.	2.6	83
13	Structural architectures with toughening mechanisms in Nature: A review of the materials science of Type-I collagenous materials. Progress in Materials Science, 2019, 103, 425-483.	32.8	78
14	Structural characterization and mechanical behavior of a bivalve shell (Saxidomus purpuratus). Materials Science and Engineering C, 2011, 31, 724-729.	7.3	64
15	Tensile behavior and structural characterization of pig dermis. Acta Biomaterialia, 2019, 86, 77-95.	8.3	64
16	The armored carapace of the boxfish. Acta Biomaterialia, 2015, 23, 1-10.	8.3	63
17	Structure and mechanical properties of Saxidomus purpuratus biological shells. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 1514-1530.	3.1	61
18	Novel Defense Mechanisms in the Armor of the Scales of the â€œLiving Fossilâ€•Coelacanth Fish. Advanced Functional Materials, 2018, 28, 1804237.	14.9	61

#	Article	IF	Citations
19	A comparative study of piscine defense: The scales of Arapaima gigas, Latimeria chalumnae and Atractosteus spatula. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 73, 1-16.	3.1	52
20	Hyperelastic phase-field fracture mechanics modeling of the toughening induced by Bouligand structures in natural materials. Journal of the Mechanics and Physics of Solids, 2019, 131, 204-220.	4.8	50
21	Separating the influence of the cortex and foam on the mechanical properties of porcupine quills. Acta Biomaterialia, 2013, 9, 9065-9074.	8.3	48
22	A natural energy absorbent polymer composite: The equine hoof wall. Acta Biomaterialia, 2019, 90, 267-277.	8.3	47
23	Structure and Mechanical Adaptability of a Modern Elasmoid Fish Scale from the Common Carp. Matter, 2020, 3, 842-863.	10.0	47
24	Axial compression of a hollow cylinder filled with foam: A study of porcupine quills. Acta Biomaterialia, 2013, 9, 5297-5304.	8.3	46
25	Structural characterization and viscoelastic constitutive modeling of skin. Acta Biomaterialia, 2017, 53, 460-469.	8.3	44
26	Flexible Dermal Armor in Nature. Jom, 2012, 64, 475-485.	1.9	41
27	Arapaima Fish Scale: One of the Toughest Flexible Biological Materials. Matter, 2019, 1, 1557-1566.	10.0	40
28	Microstructural Characterization and Hardness Behavior of a Biological Saxidomus purpuratus Shell. Journal of Materials Science and Technology, 2011, 27, 139-146.	10.7	39
29	Alligator osteoderms: Mechanical behavior and hierarchical structure. Materials Science and Engineering C, 2014, 35, 441-448.	7.3	39
30	How Water Can Affect Keratin: Hydrationâ€Driven Recovery of Bighorn Sheep (Ovis Canadensis) Horns. Advanced Functional Materials, 2019, 29, 1901077.	14.9	29
31	Viscoelastic properties of Î±-keratin fibers in hair. Acta Biomaterialia, 2017, 64, 15-28.	8.3	28
32	Biological Selfâ€Arrangement of Fiber Like Aragonite and Its Effect on Mechanical Behavior of <i>Veined rapa whelk</i> Shell. Journal of the American Ceramic Society, 2015, 98, 3319-3325.	3.8	23
33	On the Strength of Hair across Species. Matter, 2020, 2, 136-149.	10.0	18
34	The toughness of porcine skin: Quantitative measurements and microstructural characterization. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 109, 103848.	3.1	14
35	A Sustainable Substitute for Ivory: the Jarina Seed from the Amazon. Scientific Reports, 2015, 5, 14387.	3.3	12
36	Structural Design Variations in Beetle Elytra. Advanced Functional Materials, 2021, 31, 2106468.	14.9	12

#	Article	IF	Citations
37	Active defense mechanisms of thorny catfish. Materials Today, 2020, 38, 35-48.	14.2	8
38	Mechanical Characterizations of <i>Saxidomus purpuratus</i> Shells. Key Engineering Materials, 0, 434-435, 601-604.	0.4	4
39	Comparisons of Microstructures and Hardness Distribution between Clinocardium Californiense and Veined Rapa Whelk Shells. Key Engineering Materials, 2013, 544, 295-298.	0.4	3
40	On the gular sac tissue of the brown pelican: Structural characterization and mechanical properties. Acta Biomaterialia, 2020, 118, 161-181.	8.3	3
41	Arapaima Fish Scale: One of the Toughest Flexible Biological Materials. SSRN Electronic Journal, 0, , .	0.4	2
42	Structural Design Variations in Beetle Elytra (Adv. Funct. Mater. 50/2021). Advanced Functional Materials, 2021, 31, .	14.9	0