

# William M Kier

## List of Publications by Year in descending order

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Version: 2024-02-01

43  
papers

3,884  
citations

361045

20  
h-index

301761

39  
g-index

43  
all docs

43  
docs citations

43  
times ranked

2925  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | Soft Robotics: Biological Inspiration, State of the Art, and Future Research. Applied Bionics and Biomechanics, 2008, 5, 99-117.   | 0.5 | 1,168     |
| 2  | Tongues, tentacles and trunks: the biomechanics of movement in muscular-hydrostats. Zoological Journal of the Linnean Society, 1985, 83, 307-324.  | 1.0 | 732       |
| 3  | Soft robotics: Biological inspiration, state of the art, and future research. Applied Bionics and Biomechanics, 2008, 5, 99-117.   | 0.5 | 344       |
| 4  | The Structure and Adhesive Mechanism of Octopus Suckers. Integrative and Comparative Biology, 2002, 42, 1146-1153.   | 0.9 | 192       |
| 5  | Continuum robot arms inspired by cephalopods. , 2005, 5804, 303.   |     | 192       |
| 6  | The diversity of hydrostatic skeletons. Journal of Experimental Biology, 2012, 215, 1247-1257.   | 0.8 | 188       |
| 7  | The arrangement and function of octopus arm musculature and connective tissue. Journal of Morphology, 2007, 268, 831-843.  | 0.6 | 138       |
| 8  | The functional morphology of the musculature of squid (Loliginidae) arms and tentacles. Journal of Morphology, 1982, 172, 179-192.   | 0.6 | 101       |
| 9  | The musculature of squid arms and tentacles: Ultrastructural evidence for functional differences. Journal of Morphology, 1985, 185, 223-239.   | 0.6 | 75        |
| 10 | The Musculature of Coleoid Cephalopod Arms and Tentacles. Frontiers in Cell and Developmental Biology, 2016, 4, 10.  | 1.8 | 71        |
| 11 | Switching Skeletons: Hydrostatic Support in Molting Crabs. Science, 2003, 301, 209-210.  | 6.0 | 69        |
| 12 | The fin musculature of cuttlefish and squid (Mollusca, Cephalopoda): morphology and mechanics. Journal of Zoology, 1989, 217, 23-38.   | 0.8 | 52        |
| 13 | The Arrangement and Function of Molluscan Muscle. , 1988, , 211-252.   |     | 48        |
| 14 | Functional morphology of the cephalopod buccal mass: A novel joint type. Journal of Morphology, 2005, 264, 211-222.  | 0.6 | 42        |
| 15 | Fast muscle in squid ( <i>Loligo pealei</i> ): contractile properties of a specialized muscle fibre type. Journal of Experimental Biology, 2002, 205, 1907-1916.   | 0.8 | 39        |
| 16 | Muscle development in squid: Ultrastructural differentiation of a specialized muscle fiber type. , 1996, 229, 271-288.   |     | 30        |
| 17 | Ontogenetic Changes in Mantle Kinematics During Escape-Jet Locomotion in the Oval Squid, <i>Sepioteuthis lessoniana</i> Lesson, 1830. Biological Bulletin, 2001, 201, 154-166.   | 0.7 | 30        |
| 18 | Electromyography of the buccal musculature of octopus ( <i>Octopus bimaculoides</i> ): a test of the function of the muscle articulation in support and movement. Journal of Experimental Biology, 2007, 210, 118-128. | 0.8 | 29        |

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|----|---|------|-----------|
| 19 | Venom kinematics during prey capture in <i>Conus</i> : the biomechanics of a rapid injection system. <i>Journal of Experimental Biology</i> , 2010, 213, 673-682.   | 0.8  | 29        |
| 20 | A Soft End Effector Inspired by Cephalopod Suckers and Augmented by a Dielectric Elastomer Actuator. <i>Soft Robotics</i> , 2019, 6, 356-367.   | 4.6  | 28        |
| 21 | Ontogeny of mantle musculature and implications for jet locomotion in oval squid <i>Sepioteuthis lessoniana</i> . <i>Journal of Experimental Biology</i> , 2006, 209, 433-443.  | 0.8  | 25        |
| 22 | Mechanical properties of the rigid and hydrostatic skeletons of molting blue crabs, <i>Callinectes sapidus</i> Rathbun. <i>Journal of Experimental Biology</i> , 2007, 210, 4272-4278.                                      | 0.8  | 23        |
| 23 | Muscle specialization in the squid motor system. <i>Journal of Experimental Biology</i> , 2008, 211, 164-169.   | 0.8  | 23        |
| 24 | Ontogenetic Changes in Fibrous Connective Tissue Organization in the Oval Squid, <i>Sepioteuthis lessoniana</i> Lesson, 1830. <i>Biological Bulletin</i> , 2001, 201, 136-153.  | 0.7  | 21        |
| 25 | EVOLUTIONARY MECHANICS OF PROTRUSIBLE TENTACLES AND TONGUES. <i>Animal Biology</i> , 2000, 50, 113-139.   | 0.4  | 20        |
| 26 | Fast muscle in squid ( <i>Loligo pealei</i> ): contractile properties of a specialized muscle fibre type. <i>Journal of Experimental Biology</i> , 2002, 205, 1907-16.  | 0.8  | 20        |
| 27 | Scaling of the hydrostatic skeleton in the earthworm <i>Lumbricus terrestris</i> . <i>Journal of Experimental Biology</i> , 2014, 217, 1860-1867.   | 0.8  | 19        |
| 28 | The Functional Morphology of the Tentacle Musculature of <i>Nautilus pompilius</i> . <i>Topics in Geobiology</i> , 1987, , 257-269.   | 0.6  | 19        |
| 29 | Three-dimensional architecture of identified cerebral neurosecretory cells in an insect. <i>Journal of Morphology</i> , 1991, 208, 161-174.   | 0.6  | 15        |
| 30 | The length-force behavior and operating length range of squid muscle varies as a function of position in the mantle wall. <i>Journal of Experimental Biology</i> , 2014, 217, 2181-92.                                      | 0.8  | 15        |
| 31 | Shade-seeking behaviour under polarized light by the brittlestar <i>Ophioderma Brevispinum</i> (Echinodermata: Ophiuroidea). <i>Journal of the Marine Biological Association of the United Kingdom</i> , 1999, 79, 761-763. | 0.4  | 14        |
| 32 | Muscular tissues of the squid <i>Doryteuthis pealeii</i> express identical myosin heavy chain isoforms: an alternative mechanism for tuning contractile speed. <i>Journal of Experimental Biology</i> , 2012, 215, 239-246. | 0.8  | 13        |
| 33 | A pneumo-hydrostatic skeleton in land crabs. <i>Nature</i> , 2006, 440, 1005-1005.  | 13.7 | 11        |
| 34 | Tuning of shortening speed in coleoid cephalopod muscle: no evidence for tissue-specific muscle myosin heavy chain isoforms. <i>Invertebrate Biology</i> , 2016, 135, 3-12.   | 0.3  | 9         |
| 35 | Differences in scaling and morphology between lumbricid earthworm ecotypes. <i>Journal of Experimental Biology</i> , 2015, 218, 2970-8.   | 0.8  | 8         |
| 36 | Damage Due to Solar Ultraviolet Radiation in the Brittlestar <i>Ophioderma Brevispinum</i> (Echinodermata: Ophiuroidea). <i>Journal of the Marine Biological Association of the United Kingdom</i> , 1998, 78, 681-684.     | 0.4  | 6         |

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|----|---|-----|-----------|
| 37 | Evidence that eye-facing photophores serve as a reference for counterillumination in an order of deep-sea fishes. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2020, 287, 20192918. | 1.2 | 6         |
| 38 | Connective Tissue in Squid Mantle Is Arranged to Accommodate Strain Gradients. <i>Biological Bulletin</i> , 2014, 227, 1-6.   | 0.7 | 5         |
| 39 | Specialization for rapid excitation in fast squid tentacle muscle involves action potentials absent in slow arm muscle. <i>Journal of Experimental Biology</i> , 2020, 223, .                           | 0.8 | 5         |
| 40 | Shape, Size, and Structure Affect Obliquely Striated Muscle Function in Squid. <i>Integrative and Comparative Biology</i> , 2018, 58, 261-275.  | 0.9 | 4         |
| 41 | Muscle force is modulated by internal pressure. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 2245-2247.  | 3.3 | 3         |
| 42 | Muscle development in squid: Ultrastructural differentiation of a specialized muscle fiber type. <i>Journal of Morphology</i> , 1996, 229, 271-288.   | 0.6 | 3         |
| 43 | Transmural variation in the length-force relationships and in vivo operating length ranges of the mantle muscles of squid. <i>FASEB Journal</i> , 2013, 27, 1149.1.                                     | 0.2 | 0         |