John M Squire

List of Publications by Year
in descending order

109 papers	4,387 citations	117625 34 h-index	128289 60 g-index
119 all docs	119 docs citations	119 times ranked	2730 citing authors

#	Article	IF	Citations
1	Quasi-Periodic Substructure in the Microvessel Endothelial Glycocalyx: A Possible Explanation for Molecular Filtering?. Journal of Structural Biology, 2001, 136, 239-255.	2.8	251
2	The Structural Basis of Muscular Contraction. , 1981, , .		241
3	Fifty years of coiled-coils and Î±-helical bundles: A close relationship between sequence and structure. Journal of Structural Biology, 2008, 163, 258-269.	2.8	240
4	A new look at thin filament regulation in vertebrate skeletal muscle. FASEB Journal, 1998, 12, 761-771.	0.5	210
5	Architecture and function in the muscle sarcomere. Current Opinion in Structural Biology, 1997, 7, 247-257.	5.7	191
6	Fine structure of the A-band in cryo-sections. Journal of Molecular Biology, 1977, 109, 49-68.	4.2	185
7	Direct visualization of myosin-binding protein C bridging myosin and actin filaments in intact muscle. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 11423-11428.	7.1	159
8	Atomic model of the human cardiac muscle myosin filament. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 318-323.	7.1	153
9	Structural Evidence for the Interaction of C-protein (MyBP-C) with Actin and Sequence Identification of a Possible Actin-binding Domain. Journal of Molecular Biology, 2003, 331, 713-724.	4.2	146
10	Three-dimensional structure of the vertebrate muscle A-band. Journal of Molecular Biology, 1981, 151, 703-730.	4.2	113
11	Three-dimensional structure of the vertebrate muscle M-region. Journal of Molecular Biology, 1978, 125, 313-324.	4.2	110
12	Three-dimensional structure of the vertebrate muscle A-band. Journal of Molecular Biology, 1980, 141, 409-439.	4.2	102
13	Myosin Head Configuration in Relaxed Insect Flight Muscle: X-Ray Modeled Resting Cross-Bridges in a Pre-Powerstroke State Are Poised for Actin Binding. Biophysical Journal, 2003, 85, 1063-1079.	0.5	74
14	Fine structure of the A-band in cryo-sections. Journal of Molecular Biology, 1982, 155, 467-494.	4.2	67
15	Structural Changes in Actin-Tropomyosin During Muscle Regulation: Computer Modelling of Low-Angle X-ray Diffraction Data. Journal of Molecular Biology, 1995, 252, 611-632.	4.2	64
16	Cryoâ€ultramicrotomy and myofibrillar fine structure: a review. Journal of Microscopy, 1977, 111, 239-278.	1.8	60
17	Molecular Architecture in Muscle Contractile Assemblies. Advances in Protein Chemistry, 2005, 71, 17-87.	4.4	60
18	Resolution of the three dimensional structure of components of the glomerular filtration barrier. BMC Nephrology, 2014, 15, 24.	1.8	56

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19	Muscle Z-band Ultrastructure: Titin Z-repeats and Z-band Periodicities Do Not Match. Journal of Molecular Biology, 2002, 319, 1157-1164.	4.2	54
20	Î²â€Structures in Fibrous Proteins. Advances in Protein Chemistry, 2006, 73, 1-15.	4.4	50
21	Muscle ultrastructure in the teleost fish. Micron, 1995, 26, 431-459.	2.2	49
22	Electron tomography of fast frozen, stretched rigor fibers reveals elastic distortions in the myosin crossbridges. Journal of Structural Biology, 2004, 147, 268-282.	2.8	48
23	Symmetry and three-dimensional arrangement of filaments in vertebrate striated muscle. Journal of Molecular Biology, 1974, 90, 153-160.	4.2	43
24	Muscle filament lattices and stretch-activation: The match-mismatch model reassessed. Journal of Muscle Research and Cell Motility, 1992, 13, 183-189.	2.0	43
25	Skip Residues and Charge Interactions in Myosin II Coiled-coils: Implications for Molecular Packing. Journal of Molecular Biology, 2005, 353, 613-628.	4.2	43
26	Time-resolved diffraction studies of muscle using synchrotron radiation. Reports on Progress in Physics, 1997, 60, 1723-1787.	20.1	42
27	HELIX: a helical diffraction simulation program. Journal of Applied Crystallography, 2004, 37, 832-835.	4.5	42
28	Actin filament organization and myosin head labelling patterns in vertebrate skeletal muscles in the rigor and weak binding states. Journal of Muscle Research and Cell Motility, 1988, 9, 344-358.	2.0	40
29	Titin Organisation and the 3D Architecture of the Vertebrate-striated Muscle I-band. Journal of Molecular Biology, 2002, 322, 731-739.	4.2	39
30	3D Reconstruction of the Glycocalyx Structure in Mammalian Capillaries using Electron Tomography. Microcirculation, 2012, 19, 343-351.	1.8	39
31	Molecular Packing in Network-Forming Collagens. Advances in Protein Chemistry, 2005, 70, 375-403.	4.4	38
32	Evolution of myosin filament arrangements in vertebrate skeletal muscle. Journal of Morphology, 1996, 229, 325-335.	1.2	37
33	Myosin Rod-Packing Schemes in Vertebrate Muscle Thick Filaments. Journal of Structural Biology, 1998, 122, 128-138.	2.8	36
34	Myosin filament 3D structure in mammalian cardiac muscle. Journal of Structural Biology, 2008, 163, 117-126.	2.8	36
35	Crystal Structure of the C1 domain of Cardiac Myosin Binding Protein-C: Implications for Hypertrophic Cardiomyopathy. Journal of Molecular Biology, 2008, 378, 387-397.	4.2	36
36	Heterogeneity of Z-band Structure Within a Single Muscle Sarcomere: Implications for Sarcomere Assembly. Journal of Molecular Biology, 2003, 332, 161-169.	4.2	35

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37	Xâ€ray Diffraction Studies of Muscle and the Crossbridge Cycle. Advances in Protein Chemistry, 2005, 71, 195-255.	4.4	34
38	3D structure of relaxed fish muscle myosin filaments by single particle analysis. Journal of Structural Biology, 2006, 155, 202-217.	2.8	32
39	In situ cryo-electron tomography reveals filamentous actin within the microtubule lumen. Journal of Cell Biology, 2020, 219, .	5.2	32
40	New X-ray Diffraction Observations on Vertebrate Muscle: Organisation of C-protein (MyBP-C) and Troponin and Evidence for Unknown Structures in the Vertebrate A-band. Journal of Molecular Biology, 2004, 343, 1345-1363.	4.2	31
41	Structure and Orientation of Troponin in the Thin Filament. Journal of Biological Chemistry, 2009, 284, 15007-15015.	3.4	31
42	Direct observation of a transverse periodicity in collagen fibrils. Nature, 1980, 288, 410-413.	27.8	30
43	Analysis of the Collagen VI Assemblies Associated with Sorsby's Fundus Dystrophy. Journal of Structural Biology, 2002, 137, 31-40.	2.8	30
44	The CCP13FibreFixprogram suite: semi-automated analysis of diffraction patterns from non-crystalline materials. Journal of Applied Crystallography, 2007, 40, 178-184.	4.5	30
45	The three-dimensional structure of a vertebrate wide (slow muscle) Z-band: lessons on Z-band assembly11Edited by J. Karn. Journal of Molecular Biology, 2002, 315, 9-20.	4.2	28
46	3D Structure of Fish Muscle Myosin Filaments. Journal of Structural Biology, 2002, 137, 154-163.	2.8	28
47	Collagen VI assemblies in age-related macular degeneration. Journal of Structural Biology, 2002, 139, 181-189.	2.8	28
48	Myosin and Actin Filaments in Muscle: Structures and Interactions. Sub-Cellular Biochemistry, 2017, 82, 319-371.	2.4	28
49	Structure of Abnormal Molecular Assemblies (Collagen VI) Associated with Human Full Thickness Macular Holes. Journal of Structural Biology, 2000, 129, 38-47.	2.8	27
50	Muscle regulation: a decade of the steric blocking model. Nature, 1981, 291, 614-615.	27.8	26
51	Single particle analysis of filamentous and highly elongated macromolecular assemblies. Journal of Structural Biology, 2004, 148, 236-250.	2.8	26
52	Muscle myosin filaments: cores, crowns and couplings. Biophysical Reviews, 2009, 1, 149-160.	3.2	26
53	The 7-stranded structure of relaxed scallop muscle myosin filaments: Support for a common head configuration in myosin-regulated muscles. Journal of Structural Biology, 2009, 166, 183-194.	2.8	26
54	Probing Muscle Myosin Motor Action: X-Ray (M3 and M6) Interference Measurements Report Motor Domain Not Lever Arm Movement. Journal of Molecular Biology, 2009, 390, 168-181.	4.2	26

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55	The Intriguing Dual Lattices of the Myosin Filaments in Vertebrate Striated Muscles: Evolution and Advantage. Biology, 2014, 3, 846-865.	2.8	26
56	Muscle thin-filament structure and regulation. Actin sub-domain movements and the tropomyosin shift modelled from low-angle X-ray diffraction. Journal of the Chemical Society, Faraday Transactions, 1993, 89, 2717.	1.7	24
57	Equatorial A-band and I-band X-ray Diffraction from Relaxed and Active Fish Muscle. Journal of Molecular Biology, 1994, 239, 500-512.	4.2	23
58	The Myosin Filament Superlattice in the Flight Muscles of Flies: A-band Lattice Optimisation for Stretch-activation?. Journal of Molecular Biology, 2006, 361, 823-838.	4.2	23
59	Relaxed and active thin filament structures; a new structural basis for the regulatory mechanism. Journal of Structural Biology, 2017, 197, 365-371.	2.8	23
60	Refined structure of bony fish muscle myosin filaments from low-angle X-ray diffraction data. Journal of Structural Biology, 2006, 155, 218-229.	2.8	22
61	Fine structure of the A-band in cryo-sections diversity of M-band structure in chicken breast muscle. Journal of Structural Biology, 1988, 100, 1-12.	0.8	21
62	Three-Dimensional Structure of the M-region (Bare Zone) of Vertebrate Striated Muscle Myosin Filaments by Single-Particle Analysis. Journal of Molecular Biology, 2010, 403, 763-776.	4.2	21
63	Collagen Packing in the Dogfish Egg Case Wall. Journal of Structural Biology, 1998, 122, 101-110.	2.8	20
64	Single Particle Analysis: A new approach to solving the 3D structure of myosin filaments. Journal of Muscle Research and Cell Motility, 2004, 25, 635-644.	2.0	20
65	Structural diversity in muscle fibres of chicken breast. Cell and Tissue Research, 1988, 251, 281-289.	2.9	19
66	Muscle contraction: Sliding filament history, sarcomere dynamics and the two Huxleys. Global Cardiology Science & Practice, 2016, 2016, e201611.	0.4	19
67	Three-dimensional structure of the insect (Lethocerus) flight muscle M-band. Journal of Molecular Biology, 1983, 169, 439-453.	4.2	16
68	Fish muscle structure: fibre types in flatfish and mullet fin muscles using histochemistry and antimyosin antibody labelling. Journal of Muscle Research and Cell Motility, 1993, 14, 533-542.	2.0	16
69	Comparative histochemistry of a flatfish fin muscle and of other vertebrate muscles used for ultrastructural studies. Journal of Muscle Research and Cell Motility, 1987, 8, 358-371.	2.0	15
70	Molecular movements in contracting muscle: Towards â€œmuscle - the movieâ€. Biophysical Chemistry, 1994, 50, 87-96.	2.8	15
71	Fibrous Proteins: New Structural and Functional Aspects Revealed. Advances in Protein Chemistry, 2005, 70, 1-10.	4.4	15
72	Molecular Packing in Network-Forming Collagens. Scientific World Journal, The, 2003, 3, 558-577.	2.1	14

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73	Organisation and Properties of the Striated Muscle Sarcomere. , 1990, , 1-48.		13
74	High-voltage electron microscopy of crossbridge interactions in striated muscle. Journal of Muscle Research and Cell Motility, 1980, 1, 321-343.	2.0	12
75	Molecular mechanisms in muscular contraction. Trends in Neurosciences, 1983, 6, 409-413.	8.6	12
76	Averaging of periodic images using a microcomputer. Journal of Microscopy, 1986, 142, 289-300.	1.8	12
77	X-ray Diffraction Evidence for Low Force Actin-Attached and Rigor-Like Cross-Bridges in the Contractile Cycle. Biology, 2016, 5, 41.	2.8	12
78	The Interacting Head Motif Structure Does Not Explain the X-Ray Diffraction Patterns in Relaxed Vertebrate (Bony Fish) Skeletal Muscle and Insect (Lethocerus) Flight Muscle. Biology, 2019, 8, 67.	2.8	12
79	Cryoultramicrotomy of muscle: improved preservation and resolution of muscle ultrastructure using negatively stained ultrathin cryosections. Journal of Microscopy, 1991, 163, 29-42.	1.8	11
80	Three-Dimensional Reconstruction of a Collagen IV Analogue in the Dogfish Egg Case Wall. Journal of Structural Biology, 1996, 117, 209-221.	2.8	11
81	MusLABEL: a program to model striated muscle A-band lattices, to explore crossbridge interaction geometries and to simulate muscle diffraction patterns. Journal of Muscle Research and Cell Motility, 2004, 25, 423-438.	2.0	11
82	X-Ray Diffraction Studies of Striated Muscles. , 2005, 565, 45-60.		11
83	Muscle structure, cryoâ€methods and image analysis. Journal of Microscopy, 1982, 125, 215-225.	1.8	10
84	A novel approach to the structural analysis of partially decorated actin based filaments. Journal of Structural Biology, 2010, 170, 278-285.	2.8	10
85	Partially Systematic Molecular Packing in the Hexagonal Columnar Phase of Dogfish Egg Case Collagen. Journal of Structural Biology, 1999, 126, 121-130.	2.8	9
86	Monitoring the myosin crossbridge cycle in contracting muscle: steps towards â€˜Muscleâ€"the Movieâ€™. Journal of Muscle Research and Cell Motility, 2019, 40, 77-91.	2.0	8
87	Crossbridge states in isometrically contracting fish muscle: Evidence for swinging of myosin heads on actin. Advances in Biophysics, 1991, 27, 45-61.	0.5	7
88	Fibrous Protein Structures: Hierarchy, History and Heroes. Sub-Cellular Biochemistry, 2017, 82, 1-33.	2.4	7
89	Analysis methods and quality criteria for investigating muscle physiology using x-ray diffraction. Journal of General Physiology, 2021, 153, .	1.9	6
90	Myosin Filament Structure and Myosin Crossbridge Dynamics in Fish and Insect Muscles. Advances in Experimental Medicine and Biology, 2003, 538, 251-266.	1.6	6

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91	Invisible actin makes its debut. Nature, 1988, 335, 590-591.	27.8	5
92	<title>Determination of myosin filament positions and orientations in electron micrographs of muscle cross sections</title>. , 2004, , .		5
93	Different Myosin Head Conformations in Bony Fish Muscles Put into Rigor at Different Sarcomere Lengths. International Journal of Molecular Sciences, 2018, 19, 2091.	4.1	5
94	Myosin Cross-Bridge Behaviour in Contracting Muscleâ€"The T1 Curve of Huxley and Simmons (1971) Revisited. International Journal of Molecular Sciences, 2019, 20, 4892.	4.1	5
95	Structure and force generation in muscle. Nature, 1979, 281, 99-100.	27.8	4
96	Zebrafishâ€"Topical, Transparent, and Tractable for Ultrastructural Studies. Journal of General Physiology, 2008, 131, 439-443.	1.9	3
97	Determination of Myosin Filament Orientations in Electron Micrographs of Muscle Cross Sections. IEEE Transactions on Image Processing, 2009, 18, 831-839.	9.8	3
98	Quantitative MUC5AC and MUC6 mucin estimations in gastric mucus by a least-squares minimization method. Analytical Biochemistry, 2013, 439, 204-211.	2.4	3
99	Muscle Crossbridge Positions from Equatorial Diffraction Data: An Approach Towards Solving the Phase Problem. Advances in Experimental Medicine and Biology, 1984, 170, 221-236.	1.6	3
100	Time-Resolved Studies of Crossbridge Movement: Why Use X-Rays? Why Use Fish Muscle?. Advances in Experimental Medicine and Biology, 1993, 332, 435-450.	1.6	3
101	Molecular packing in collagen (reply). Nature, 1981, 293, 240-240.	27.8	2
102	Comparative Motile Mechanisms in Cells. Advances in Protein Chemistry, 2005, 71, 1-15.	4.4	2
103	Modelling X-ray Diffraction From The Myosin Superlattice Of Vertebrate Muscle. Biophysical Journal, 2009, 96, 615a-616a.	0.5	2
104	The muscle M3 x-ray diffraction peak and sarcomere length: No evidence for disordered myosin heads out of actin overlap. Journal of General Physiology, 2021, 153, .	1.9	2
105	The Transient Mechanics of Muscle Require Only a Single Force-Producing Cross-Bridge State and a 100 Å... Working Stroke. Biology, 2020, 9, 475.	2.8	1
106	Myosin Crossbridge Configurations in Equilibrium States of Vertebrate Skeletal Muscle. Advances in Experimental Medicine and Biology, 1998, , 297-308.	1.6	1
107	Mammalian muscle fibers may be simple as well as slow. Journal of General Physiology, 2019, 151, 1334-1338.	1.9	1
108	Geometric frustration in the myosin superlattice of vertebrate muscle. Journal of the Royal Society Interface, 2021, 18, 20210585.	3.4	1

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109	Chapter 2 Studies of Muscle Contraction Using X-Ray Diffraction. , 2016, , 35-74.		0