

Brian Douglas Metscher

List of Publications by Year in descending order

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66
papers

3,136
citations

201385

27
h-index

161609

54
g-index

75
all docs

75
docs citations

75
times ranked

3965
citing authors

#	ARTICLE	IF	CITATIONS
1	MicroCT for comparative morphology: simple staining methods allow high-contrast 3D imaging of diverse non-mineralized animal tissues. <i>BMC Physiology</i> , 2009, 9, 11.	3.6	846
2	MicroCT for developmental biology: A versatile tool for high-contrast 3D imaging at histological resolutions. <i>Developmental Dynamics</i> , 2009, 238, 632-640.	0.8	520
3	Dental cell type atlas reveals stem and differentiated cell types in mouse and human teeth. <i>Nature Communications</i> , 2020, 11, 4816.	5.8	126
4	Open data and digital morphology. <i>Proceedings of the Royal Society B: Biological Sciences</i> , 2017, 284, 20170194.	1.2	103
5	Zebrafish in Context: Uses of a Laboratory Model in Comparative Studies. <i>Developmental Biology</i> , 1999, 210, 1-14.	0.9	98
6	An ancient dental gene set governs development and continuous regeneration of teeth in sharks. <i>Developmental Biology</i> , 2016, 415, 347-370.	0.9	95
7	Relationship between Swim Bladder Morphology and Hearing Abilities—A Case Study on Asian and African Cichlids. <i>PLoS ONE</i> , 2012, 7, e42292.	1.1	64
8	Expression of Hoxa-11 and Hoxa-13 in the pectoral fin of a basal ray-finned fish, <i>Polyodon spathula</i> : implications for the origin of tetrapod limbs. <i>Evolution & Development</i> , 2005, 7, 186-195.	1.1	61
9	A New Dimension in Documenting New Species: High-Detail Imaging for Myriapod Taxonomy and First 3D Cyber-type of a New Millipede Species (Diplopoda, Julida, Julidae). <i>PLoS ONE</i> , 2015, 10, e0135243.	1.1	60
10	MicroCT for molecular imaging: Quantitative visualization of complete three-dimensional distributions of gene products in embryonic limbs. <i>Developmental Dynamics</i> , 2011, 240, 2301-2308.	0.8	59
11	Sox2+ progenitors in sharks link taste development with the evolution of regenerative teeth from denticles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 14769-14774.	3.3	59
12	X-Ray Microtomographic Imaging of Intact Vertebrate Embryos. <i>Cold Spring Harbor Protocols</i> , 2011, 2011, pdb.prot067033.	0.2	51
13	Development and Evolution of Dentition Pattern and Tooth Order in the Skates And Rays (Batoidea). <i>Trends in Ecology & Evolution</i> , 2011, 26, 111-119.	1.1	49
14	Structure and sensory physiology of the leg scolopidial organs in Mantophasmatodea and their role in vibrational communication. <i>Arthropod Structure and Development</i> , 2010, 39, 230-241.	0.8	47
15	The function and phylogenetic implications of the tentorium in adult Neuroptera (Insecta). <i>Arthropod Structure and Development</i> , 2011, 40, 571-582.	0.8	40
16	Functional morphology of the feeding apparatus and evolution of proboscis length in metalmark butterflies (Lepidoptera: Riodinidae). <i>Biological Journal of the Linnean Society</i> , 2013, 110, 291-304.	0.7	40
17	One proboscis, two tasks: Adaptations to blood-feeding and nectar-extracting in long-proboscid horse flies (Tabanidae, Philoliche). <i>Arthropod Structure and Development</i> , 2014, 43, 403-413.	0.8	40
18	Showing their true colors: a practical approach to volume rendering from serial sections. <i>BMC Developmental Biology</i> , 2010, 10, 41.	2.1	37

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19	A unique swim bladder-inner ear connection in a teleost fish revealed by a combined high-resolution microtomographic and three-dimensional histological study. <i>BMC Biology</i> , 2013, 11, 75.	1.7	37
20	Testing hypotheses of bat baculum function with 3D models derived from microCT. <i>Journal of Anatomy</i> , 2015, 226, 229-235.	0.9	37
21	Past climate change on Sky Islands drives novelty in a core developmental gene network and its phenotype. <i>BMC Evolutionary Biology</i> , 2015, 15, 183.	3.2	36
22	Microscopic dual-energy CT (microDECT): a flexible tool for multichannel <i>ex vivo</i> 3D imaging of biological specimens. <i>Journal of Microscopy</i> , 2017, 267, 3-26.	0.8	35
23	Sensory epithelia of the fish inner ear in 3D: studied with high-resolution contrast enhanced microCT. <i>Frontiers in Zoology</i> , 2013, 10, 63.	0.9	33
24	Micro-CT in cephalopod research: Investigating the internal anatomy of a sepiolid squid using a non-destructive technique with special focus on the ganglionic system. <i>Journal of Experimental Marine Biology and Ecology</i> , 2013, 447, 140-148.	0.7	32
25	Dispersal of thermophilic beetles across the intercontinental Arctic forest belt during the early Eocene. <i>Scientific Reports</i> , 2017, 7, 12972.	1.6	31
26	Evolutionary trajectories of tooth histology patterns in modern sharks (Chondrichthyes). <i>Trends in Ecology and Evolution</i> , 2019, 30, 462-472.	0.9	30
27	Are accessory hearing structures linked to inner ear morphology? Insights from 3D orientation patterns of ciliary bundles in three cichlid species. <i>Frontiers in Zoology</i> , 2014, 11, 25.	0.9	29
28	Secondary ossification center induces and protects growth plate structure. <i>eLife</i> , 2020, 9, .	2.8	29
29	Homeobox genes in axolotl lateral line placodes and neuromasts. <i>Development Genes and Evolution</i> , 1997, 207, 287-295.	0.4	28
30	Micro-computed tomography for natural history specimens: a handbook of best practice protocols. <i>European Journal of Taxonomy</i> , 2019, , .	0.6	28
31	Pre-oral gut contributes to facial structures in non-teleost fishes. <i>Nature</i> , 2017, 547, 209-212.	13.7	27
32	Histomorphology of the Penis Bone (Baculum) in the Gray Long-eared Bat <i>Plecotus austriacus</i> (Chiroptera, Vespertilionidae). <i>Anatomical Record</i> , 2010, 293, 1248-1258.	0.8	25
33	Time management and nectar flow: flower handling and suction feeding in long-proboscid flies (Nemestrinidae: Prosoeca). <i>Die Naturwissenschaften</i> , 2013, 100, 1083-1093.	0.6	23
34	Correlative 3D imaging of <i>Pipistrellus</i> penis micromorphology: Validating quantitative microCT images with undecalcified serial ground section histomorphology. <i>Journal of Morphology</i> , 2015, 276, 695-706.	0.6	22
35	Volume analysis of heat-induced cracks in human molars: A preliminary study. <i>Journal of Forensic Dental Sciences</i> , 2014, 6, 139.	0.4	20
36	Studying Developmental Variation with Geometric Morphometric Image Analysis (GMIA). <i>PLoS ONE</i> , 2014, 9, e115076.	1.1	19

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37	The Developmental Pattern of the Musculature Associated with the Mandibular and Hyoid Arches in the Longnose Gar, <i>Lepisosteus osseus</i> (Actinopterygii, Ginglymodi, Lepisosteiformes). <i>Copeia</i> , 2015, 103, 920-932.	1.4	18
38	Clidicostigus gen. nov., the first Mesozoic genus of Mastigini (Coleoptera: Staphylinidae). <i>Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 702 Td</i>	0.6	17
39	MicroCT Imaging Reveals Morphometric Baculum Differences for Discriminating the Cryptic Species <i>Pipistrellus pipistrellus</i> and <i>P. pygmaeus</i> . <i>Acta Chiropterologica</i> , 2014, 16, 157-168.	0.2	16
40	Bichir external gills arise via heterochronic shift that accelerates hyoid arch development. <i>ELife</i> , 2019, 8, .	2.8	15
41	Photon detection with cooled avalanche photodiodes. <i>Applied Physics Letters</i> , 1987, 51, 1493-1494.	1.5	14
42	Internal head morphology of minor workers and soldiers in the hyperdiverse ant genus <i>Pheidole</i> . <i>Canadian Journal of Zoology</i> , 2018, 96, 383-392.	0.4	14
43	Heterochrony and Early Left-Right Asymmetry in the Development of the Cardiorespiratory System of Snakes. <i>PLoS ONE</i> , 2015, 10, e116416.	1.1	14
44	Shifts of sensory modalities in early life history stage estuarine fishes (Sciaenidae) from the Chesapeake Bay using X-ray micro computed tomography. <i>Environmental Biology of Fishes</i> , 2016, 99, 361-375.	0.4	12
45	Hard and soft X-ray imaging to resolve human ovarian cortical structures. <i>Journal of Synchrotron Radiation</i> , 2019, 26, 1322-1329.	1.0	12
46	The lateral mesodermal divide: an epigenetic model of the origin of paired fins. <i>Evolution & Development</i> , 2014, 16, 38-48.	1.1	10
47	New avatars for Myriapods: Complete 3D morphology of type specimens transcends conventional species description (Myriapoda, Chilopoda). <i>PLoS ONE</i> , 2018, 13, e0200158.	1.1	9
48	Thumbs down: a molecular morphogenetic approach to avian digit homology. <i>Journal of Experimental Zoology Part B: Molecular and Developmental Evolution</i> , 2014, 322, 1-12.	0.6	8
49	Unusual pharyngeal dentition in the African Chedrin fishes (Teleostei: Cyprinidae): Significance for phylogeny and character evolution. <i>Zoologischer Anzeiger</i> , 2015, 255, 85-102.	0.4	8
50	A simple nuclear contrast staining method for microCT-based 3D histology using lead(II) acetate. <i>Journal of Anatomy</i> , 2021, 238, 1036-1041.	0.9	7
51	Delivery of Iron Oxide Nanoparticles into Primordial Germ Cells in Sturgeon. <i>Biomolecules</i> , 2019, 9, 333.	1.8	6
52	Embryology of the naso-palatal complex in Gekkota based on detailed 3D analysis in <i>Lepidodactylus lugubris</i> and <i>Eublepharis macularius</i> . <i>Journal of Anatomy</i> , 2021, 238, 249-287.	0.9	6
53	Laboratory-based X-ray NanoCT Explores Morphology of a Zebrafish Embryo. <i>Microscopy and Microanalysis</i> , 2018, 24, 184-185.	0.2	4
54	Development of the squamate naso-palatal complex: detailed 3D analysis of the vomeronasal organ and nasal cavity in the brown anole <i>Anolis sagrei</i> (Squamata: Iguania). <i>Frontiers in Zoology</i> , 2020, 17, 28.	0.9	4

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55	Do all geckos hatch in the same way? Histological and 3D studies of egg tooth morphogenesis in the geckos <i>Eublepharis macularius</i> Blyth 1854 and <i>Lepidodactylus lugubris</i> DumÃ©nil & Bibron 1836. <i>Journal of Morphology</i> , 2020, 281, 1313-1327.	0.6	4
56	Anuran development: A reinvestigation of the conus arteriosus and gill formation in <i>Bufo bufo</i> throughout metamorphosis using microCT. <i>Anatomical Record</i> , 2022, 305, 1100-1111.	0.8	3
57	Substantiating microCT for diagnosing bioerosion in archaeological bone using a new Virtual Histological Index (VHI). <i>Archaeological and Anthropological Sciences</i> , 2022, 14, .	0.7	3
58	Three-dimensional acousto-optic spectrum analysis. <i>Optics Letters</i> , 1990, 15, 1245.	1.7	2
59	First record of an upper deciduous molar in <i>Desmanella</i> (Uropsilinae, Talpidae, Mammalia). <i>Geobios</i> , 2013, 46, 503-510.	0.7	2
60	X-ray micro-computed tomography of postmortem brain tissue using potassium dichromate as a contrast agent. <i>Archives Italiennes De Biologie</i> , 2018, 156, 48-53.	0.1	2
61	The remarkable dynamics in the establishment, rearrangement, and loss of dentition during the ontogeny of the sterlet sturgeon. <i>Developmental Dynamics</i> , 2022, 251, 826-845.	0.8	2
62	Experimental considerations for 2-D acousto-optic spectrum analysis. <i>Applied Optics</i> , 1990, 29, 5317.	2.1	1
63	Postcards from The Wedge: review and commentary on <i>Explore Evolution: The Arguments For and Against Neo-Darwinism</i> by Steven C. Meyer et al.. <i>Evolution & Development</i> , 2009, 11, 124-125.	1.1	1
64	<i>Wallaceochromis</i> gen. nov, a new chromidotilapiine cichlid genus (Pisces: Perciformes) from West Africa. <i>Zootaxa</i> , 2016, 4144, 124-30.	0.2	0
65	Ultrastructural studies of developing egg tooth in grass snake <i>Natrix natrix</i> (Squamata, Serpentes) embryos, supported by X-ray microtomography analysis. <i>Zoology</i> , 2021, 146, 125913.	0.6	0
66	Quantitative Immunostaining: 3D X-ray Microscopy for Visualizing and Measuring Protein Distribution in Three Dimensions. <i>FASEB Journal</i> , 2013, 27, 532.6.	0.2	0