David B Buchwalter

List of Publications by Year
in descending order

65 papers	3,039 citations	145106 33 h-index	190340 53 g-index
67 all docs	67 docs citations	67 times ranked	3242 citing authors

#	Article	IF	Citations
1	Assessing the Pcrit in relation to temperature and the expression of hypoxia associated genes in the mayfly, Neocloeon triangulifer. Science of the Total Environment, 2022, 808, 151743.	3.9	2
2	Weak differences in sensitivity to major ions by different larval stages of the mayfly <i>Neocloeon triangulifer</i>. Freshwater Science, 2022, 41, 215-225.	0.9	5
3	Periphyton enhances arsenic release and methylation at the soil-water interface of paddy soils. Journal of Hazardous Materials, 2021, 409, 124946.	6.5	15
4	Physiological plasticity and acclimatory responses to salinity stress are ion-specific in the mayfly, Neocloeon triangulifer. Environmental Pollution, 2021, 286, 117221.	3.7	9
5	Water temperature interacts with the insecticide imidacloprid to alter acute lethal and sublethal toxicity to mayfly larvae. New Zealand Journal of Marine and Freshwater Research, 2020, 54, 115-130.	0.8	22
6	Energetics as a lens to understanding aquatic insect's responses to changing temperature, dissolved oxygen and salinity regimes. Current Opinion in Insect Science, 2020, 41, 46-53.	2.2	37
7	Transcriptomic and life history responses of the mayfly Neocloeon triangulifer to chronic diel thermal challenge. Scientific Reports, 2020, 10, 19119.	1.6	4
8	Itâ€™s all about the fluxes: Temperature influences ion transport and toxicity in aquatic insects. Aquatic Toxicology, 2020, 221, 105405.	1.9	23
9	Are sulfate effects in the mayfly <i>Neocloeon triangulifer</i> driven by the cost of ion regulation?. Philosophical Transactions of the Royal Society B: Biological Sciences, 2019, 374, 20180013.	1.8	23
10	Cadmium exposure increases the risk of juvenile obesity: a human and zebrafish comparative study. International Journal of Obesity, 2018, 42, 1285-1295.	1.6	54
11	Why adult mayflies of<i>Cloeon dipterum</i>(Ephemeroptera:Baetidae) become smaller as temperature warms. Freshwater Science, 2018, 37, 64-81.	0.9	44
12	Periphyton and abiotic factors influencing arsenic speciation in aquatic environments. Environmental Toxicology and Chemistry, 2018, 37, 903-913.	2.2	9
13	The Good, the Bad, and the Lethal: Gene Expression and Metabolomics Reveal Physiological Mechanisms Underlying Chronic Thermal Effects in Mayfly Larvae (Neocloeon triangulifer). Frontiers in Ecology and Evolution, 2018, 6, .	1.1	17
14	Arsenic (V) bioconcentration kinetics in freshwater macroinvertebrates and periphyton is influenced by pH. Environmental Pollution, 2017, 224, 82-88.	3.7	15
15	Modernizing Water Quality Criteria in the United States: A Need to Expand the Definition of Acceptable Data. Environmental Toxicology and Chemistry, 2017, 36, 285-291.	2.2	42
16	The authorsâ€™ reply. Environmental Toxicology and Chemistry, 2017, 36, 1425-1426.	2.2	0
17	Physiological responses to short-term thermal stress in mayfly (<i>Neocloeon triangulifer</i>) larvae in relation to upper thermal limits. Journal of Experimental Biology, 2017, 220, 2598-2605.	0.8	36
18	Sulfate transport kinetics and toxicity are modulated by sodium in aquatic insects. Aquatic Toxicology, 2017, 190, 62-69.	1.9	25

#	Article	IF	Citations
19	Periphyton uptake and trophic transfer of coal flyâ€ashâ€“derived trace elements. Environmental Toxicology and Chemistry, 2017, 36, 2991-2996.	2.2	8
20	Metabolomics reveal physiological changes in mayfly larvae (Neocloeon triangulifer) at ecological upper thermal limits. Journal of Insect Physiology, 2017, 101, 107-112.	0.9	15
21	Integrative behavioral ecotoxicology: bringing together fields to establish new insight to behavioral ecology, toxicology, and conservation. Environmental Epigenetics, 2017, 63, 185-194.	0.9	82
22	Bioaccumulation Dynamics of Arsenate at the Base of Aquatic Food Webs. Environmental Science & Technology, 2016, 50, 6556-6564.	4.6	25
23	Canâ¿¿t take the heat: Temperature-enhanced toxicity in the mayfly Isonychia bicolor exposed to the neonicotinoid insecticide imidacloprid. Aquatic Toxicology, 2016, 178, 49-57.	1.9	73
24	Saving freshwater from salts. Science, 2016, 351, 914-916.	6.0	232
25	Salinized rivers: degraded systems or new habitats for salt-tolerant faunas?. Biology Letters, 2016, 12, 20151072.	1.0	129
26	Comparative sodium transport patterns provide clues for understanding salinity and metal responses in aquatic insects. Aquatic Toxicology, 2016, 171, 20-29.	1.9	35
27	The importance of retaining a phylogenetic perspective in traitsâ€based community analyses. Freshwater Biology, 2015, 60, 1330-1339.	1.2	10
28	Part 2: Sensitivity comparisons of the mayfly Centroptilum triangulifer to Ceriodaphnia dubia and Daphnia magna using standard reference toxicants; NaCl, KCl and CuSO4. Chemosphere, 2015, 139, 597-603.	4.2	44
29	Part 1: Laboratory culture of Centroptilum triangulifer (Ephemeroptera: Baetidae) using a defined diet of three diatoms. Chemosphere, 2015, 139, 589-596.	4.2	23
30	A stressful shortness of breath: molting disrupts breathing in the mayfly <i>Cloeon dipterum</i>. Freshwater Science, 2014, 33, 695-699.	0.9	28
31	Phylogeny and Size Differentially Influence Dissolved Cd and Zn Bioaccumulation Parameters among Closely Related Aquatic Insects. Environmental Science & Technology, 2014, 48, 5274-5281.	4.6	30
32	Mercury bioaccumulation in Southern Appalachian birds, assessed through feather concentrations. Ecotoxicology, 2014, 23, 304-316.	1.1	32
33	Dynamic Selenium Assimilation, Distribution, Efflux, and Maternal Transfer in Japanese Medaka Fed a Diet of Se-enriched Mayflies. Environmental Science & Technology, 2014, 48, 2971-2978.	4.6	31
34	Four Reasons Why Traditional Metal Toxicity Testing with Aquatic Insects Is Irrelevant. Environmental Science & Technology, 2014, 48, 887-888.	4.6	53
35	Bioconcentration and Biotransformation of Selenite versus Selenate Exposed Periphyton and Subsequent Toxicity to the Mayfly Centroptilum triangulifer. Environmental Science & Technology, 2013, 47, 7965-7973.	4.6	47
36	Biochemical and behavioral responses in the estuarine polychaete Perinereis gualpensis (Nereididae) after in situ exposure to polluted sediments. Ecotoxicology and Environmental Safety, 2013, 89, 182-188.	2.9	27

#	Article	IF	Citations
37	Evolutionary Patterns in Trace Metal (Cd and Zn) Efflux Capacity in Aquatic Organisms. Environmental Science & Technology, 2013, 47, 7989-7995.	4.6	31
38	Use of reconstituted waters to evaluate effects of elevated major ions associated with mountaintop coal mining on freshwater invertebrates. Environmental Toxicology and Chemistry, 2013, 32, 2826-2835.	2.2	85
39	Calcium uptake in aquatic insects: Influences of phylogeny and metals (Cd and Zn). Journal of Experimental Biology, 2013, 217, 1180-6.	0.8	31
40	Divalent metal (Ca, Cd, Mn, Zn) uptake and interactions in the aquatic insect<i>Hydropsyche sparna</i>. Journal of Experimental Biology, 2012, 215, 1575-1583.	0.8	25
41	Dietary (periphyton) and aqueous Zn bioaccumulation dynamics in the mayfly Centroptilum triangulifer. Ecotoxicology, 2012, 21, 2288-2296.	1.1	55
42	Absolute quantification of free glutathione and cysteine in aquatic insects using isotope dilution and selected reaction monitoring. Analytical and Bioanalytical Chemistry, 2012, 402, 357-366.	1.9	8
43	Cadmium exposure route affects antioxidant responses in the mayfly Centroptilum triangulifer. Aquatic Toxicology, 2011, 105, 199-205.	1.9	64
44	Food rationing affects dietary selenium bioaccumulation and life cycle performance in the mayfly Centroptilum triangulifer. Ecotoxicology, 2011, 20, 1840-1851.	1.1	47
45	Framework for traitsâ€based assessment in ecotoxicology. Integrated Environmental Assessment and Management, 2011, 7, 172-186.	1.6	123
46	Top-down control analysis of the cadmium effects on molluscan mitochondria and the mechanisms of cadmium-induced mitochondrial dysfunction. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2011, 300, R21-R31.	0.9	50
47	Does proximity to coal-fired power plants influence fish tissue mercury?. Ecotoxicology, 2010, 19, 1601-1611.	1.1	35
48	Trophic transfer of Cd from natural periphyton to the grazing mayfly Centroptilum triangulifer in a life cycle test. Environmental Pollution, 2010, 158, 272-277.	3.7	63
49	Manganese Bioconcentration in Aquatic Insects: Mn Oxide Coatings, Molting Loss, and Mn(II) Thiol Scavenging. Environmental Science & Technology, 2010, 44, 9182-9188.	4.6	27
50	Bioaccumulation and Trophic Transfer of Selenium. , 2010, , 93-139.		61
51	Selenium Bioaccumulation and Maternal Transfer in the Mayfly <i>Centroptilum triangulifer</i> in a Life-Cycle, Periphyton-Biofilm Trophic Assay. Environmental Science & Technology, 2009, 43, 7952-7957.	4.6	94
52	Mercury(II) Bioaccumulation and Antioxidant Physiology in Four Aquatic Insects. Environmental Science & Technology, 2009, 43, 934-940.	4.6	41
53	Cadmium biodynamics in the oligochaete Lumbriculus variegatus and its implications for trophic transfer. Aquatic Toxicology, 2008, 86, 265-271.	1.9	25
54	Differential exposure, duration, and sensitivity of unionoidean bivalve life stages to environmental contaminants. Journal of the North American Benthological Society, 2008, 27, 451-462.	3.0	161

#	Article	IF	Citations
55	Aquatic insect ecophysiological traits reveal phylogenetically based differences in dissolved cadmium susceptibility. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 8321-8326.	3.3	171
56	Cadmium Ecophysiology in Seven Stonefly (Plecoptera) Species:Â Delineating Sources and Estimating Susceptibility. Environmental Science & Technology, 2007, 41, 7171-7177.	4.6	38
57	Using Biodynamic Models to Reconcile Differences Between Laboratory Toxicity Tests and Field Biomonitoring with Aquatic Insects. Environmental Science & Technology, 2007, 41, 4821-4828.	4.6	84
58	INFLUENCE OF METAL EXPOSURE HISTORY ON THE BIOACCUMULATION AND SUBCELLULAR DISTRIBUTION OF AQUEOUS CADMIUM IN THE INSECT HYDROPSYCHE CALIFORNICA. Environmental Toxicology and Chemistry, 2006, 25, 1042.	2.2	33
59	Differences in Dissolved Cadmium and Zinc Uptake among Stream Insects:â€‰ Mechanistic Explanations. Environmental Science & Technology, 2005, 39, 498-504.	4.6	98
60	Roles of uptake, biotransformation, and target site sensitivity in determining the differential toxicity of chlorpyrifos to second to fourth instar Chironomous riparius (Meigen). Aquatic Toxicology, 2004, 66, 149-157.	1.9	41
61	TEMPERATURE INFLUENCES ON WATER PERMEABILITY AND CHLORPYRIFOS UPTAKE IN AQUATIC INSECTS WITH DIFFERING RESPIRATORY STRATEGIES. Environmental Toxicology and Chemistry, 2003, 22, 2806.	2.2	58
62	Respiratory strategy is a major determinant of [3H]water and [14C]chlorpyrifos uptake in aquatic insects. Canadian Journal of Fisheries and Aquatic Sciences, 2002, 59, 1315-1322.	0.7	55
63	Phase III Interlaboratory Study of Fetax, Part 2: Interlaboratory Validation of an Exogenous Metabolic Activation System for Frog Embryo Teratogenesis<i>Assay-Xenopus</i>(Fetax). Drug and Chemical Toxicology, 1998, 21, 1-14.	1.2	46
64	Initial interlaboratory validation study of FETAX: Phase I testing. Journal of Applied Toxicology, 1994, 14, 213-223.	1.4	42
65	Fetax interlaboratory validation study: Phase II testing. Environmental Toxicology and Chemistry, 1994, 13, 1629-1637.	2.2	36