Tjalling Jager

List of Publications by Year
in descending order

122 papers	6,247 citations	53660 45 h-index	76769 74 g-index
123 all docs	123 docs citations	123 times ranked	4788 citing authors

#	Article	IF	Citations
1	General Unified Threshold Model of Survival - a Toxicokinetic-Toxicodynamic Framework for Ecotoxicology. Environmental Science & Technology, 2011, 45, 2529-2540.	4.6	341
2	Monitoring approaches to assess bioaccessibility and bioavailability of metals: Matrix issues. Ecotoxicology and Environmental Safety, 2003, 56, 63-77.	2.9	288
3	Priority assessment of toxic substances in life cycle assessment. Part I: Calculation of toxicity potentials for 181 substances with the nested multi-media fate, exposure and effects model USESâ€“LCA. Chemosphere, 2000, 41, 541-573.	4.2	247
4	Making Sense of Ecotoxicological Test Results: Towards Application of Process-based Models. Ecotoxicology, 2006, 15, 305-314.	1.1	195
5	Temperature-Dependent Effects of Cadmium onDaphnia magna:Â Accumulation versus Sensitivity. Environmental Science & Technology, 2003, 37, 2145-2151.	4.6	194
6	Elucidating the Routes of Exposure for Organic Chemicals in the Earthworm,Eisenia andrei(Oligochaeta). Environmental Science & Technology, 2003, 37, 3399-3404.	4.6	194
7	Relating Environmental Availability to Bioavailability: Soil-Type-Dependent Metal Accumulation in the Oligochaete Eisenia andrei. Ecotoxicology and Environmental Safety, 1999, 44, 294-310.	2.9	163
8	Solid-Phase Microextraction To Predict Bioavailability and Accumulation of Organic Micropollutants in Terrestrial Organisms after Exposure to a Field-Contaminated Soil. Environmental Science & Technology, 2004, 38, 4842-4848.	4.6	143
9	From foodâ€dependent statistics to metabolic parameters, a practical guide to the use of dynamic energy budget theory. Biological Reviews, 2008, 83, 533-552.	4.7	128
10	Simplified Dynamic Energy Budget model for analysing ecotoxicity data. Ecological Modelling, 2012, 225, 74-81.	1.2	118
11	Dynamic Energy Budget theory meets individualâ€based modelling: a generic and accessible implementation. Methods in Ecology and Evolution, 2012, 3, 445-449.	2.2	116
12	Quantification of Metal Bioavailability for Lettuce (Lactuca sativa L.) in Field Soils. Archives of Environmental Contamination and Toxicology, 2000, 39, 420-430.	2.1	106
13	Prediction of Metal Bioavailability in Dutch Field Soils for the Oligochaete Enchytraeus crypticus. Ecotoxicology and Environmental Safety, 1999, 43, 170-186.	2.9	105
14	European Union System for the Evaluation of Substances (EUSES). Principles and structure. Chemosphere, 1997, 34, 1823-1836.	4.2	100
15	A biology-based approach for mixture toxicity of multiple endpoints over the life cycle. Ecotoxicology, 2010, 19, 351-361.	1.1	96
16	Predicting Population Dynamics from the Properties of Individuals: A Cross-Level Test of Dynamic Energy Budget Theory. American Naturalist, 2013, 181, 506-519.	1.0	95
17	Simultaneous Modeling of Multiple End Points in Life-Cycle Toxicity Tests. Environmental Science & Technology, 2004, 38, 2894-2900.	4.6	94
18	Adding Value to Ecological Risk Assessment with Population Modeling. Human and Ecological Risk Assessment (HERA), 2011, 17, 287-299.	1.7	90

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19	Understanding toxicity as processes in time. Science of the Total Environment, 2010, 408, 3735-3739.	3.9	87
20	Bioaccumulation of Organic Chemicals in Contaminated Soils:Â Evaluation of Bioassays with Earthworms. Environmental Science & Technology, 2005, 39, 293-298.	4.6	83
21	Toxicokinetics of polycyclic aromatic hydrocarbons inEisenia andrei(Oligochaeta) using spiked soil. Environmental Toxicology and Chemistry, 2000, 19, 953-961.	2.2	82
22	Mechanistic approach for estimating bioconcentration of organic chemicals in earthworms (oligochaeta). Environmental Toxicology and Chemistry, 1998, 17, 2080-2090.	2.2	81
23	Extrapolating ecotoxicological effects from individuals to populations: a generic approach based on Dynamic Energy Budget theory and individual-based modeling. Ecotoxicology, 2013, 22, 574-583.	1.1	80
24	Metal uptake from soils and soilâ€“sediment mixtures by larvae of Tenebrio molitor (L.) (Coleoptera). Ecotoxicology and Environmental Safety, 2003, 54, 277-289.	2.9	79
25	DEBkiss or the quest for the simplest generic model of animal life history. Journal of Theoretical Biology, 2013, 328, 9-18.	0.8	78
26	Hormesis on life-history traits: is there such thing as a free lunch?. Ecotoxicology, 2013, 22, 263-270.	1.1	78
27	Automated, high-throughput measurement of size and growth curves of small organisms in well plates. Scientific Reports, 2019, 9, 10.	1.6	78
28	Toxicokineticâ€“toxicodynamic modeling of quantal and graded sublethal endpoints: A brief discussion of concepts. Environmental Toxicology and Chemistry, 2011, 30, 2519-2524.	2.2	77
29	PHYSIOLOGICAL MODES OF ACTION OF TOXIC CHEMICALS IN THE NEMATODE ACROBELOIDES NANUS. Environmental Toxicology and Chemistry, 2006, 25, 3230.	2.2	75
30	Dynamic energy budgets in population ecotoxicology: Applications and outlook. Ecological Modelling, 2014, 280, 140-147.	1.2	73
31	Bad habits die hard: The NOEC's persistence reflects poorly on ecotoxicology. Environmental Toxicology and Chemistry, 2012, 31, 228-229.	2.2	71
32	Physiological modes of action across species and toxicants: the key to predictive ecotoxicology. Environmental Sciences: Processes and Impacts, 2018, 20, 48-57.	1.7	70
33	Priority assessment of toxic substances in life cycle assessment. Part II: assessing parameter uncertainty and human variability in the calculation of toxicity potentials. Chemosphere, 2000, 41, 575-588.	4.2	64
34	Some Good Reasons to Ban ECx and Related Concepts in Ecotoxicology. Environmental Science & Technology, 2011, 45, 8180-8181.	4.6	63
35	Modeling responses of Daphnia magna to pesticide pulse exposure under varying food conditions: intrinsic versus apparent sensitivity. Ecotoxicology, 2006, 15, 601-608.	1.1	58
36	Acute exposure of water soluble fractions of marine diesel on Arctic Calanus glacialis and boreal Calanus finmarchicus: Effects on survival and biomarker response. Science of the Total Environment, 2013, 449, 276-284.	3.9	56

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37	Modelling survival: exposure pattern, species sensitivity and uncertainty. Scientific Reports, 2016, 6, 29178.	1.6	56
38	Opportunities for a probabilistic risk assessment of chemicals in the European Union. Chemosphere, 2001, 43, 257-264.	4.2	54
39	Sorption Kinetics and Microbial Biodegradation Activity of Hydrophobic Chemicals in Sewage Sludge:Â Model and Measurements Based on Free Concentrations. Environmental Science & Technology, 2003, 37, 116-122.	4.6	54
40	Extrapolating toxic effects on individuals to the population level: the role of dynamic energy budgets. Philosophical Transactions of the Royal Society B: Biological Sciences, 2010, 365, 3531-3540.	1.8	54
41	Modelling nematode life cycles using dynamic energy budgets. Functional Ecology, 2005, 19, 136-144.	1.7	49
42	Biphasic elimination and uptake kinetics of Zn and Cd in the earthworm Lumbricus rubellus exposed to contaminated floodplain soil. Soil Biology and Biochemistry, 2005, 37, 1843-1851.	4.2	49
43	Responses to stress of Caenorhabditis elegans populations with different reproductive strategies. Functional Ecology, 2005, 19, 656-664.	1.7	46
44	Linking toxicant physiological mode of action with induced gene expression changes in Caenorhabditis elegans. BMC Systems Biology, 2010, 4, 32.	3.0	46
45	Integrating population modeling into ecological risk assessment. Integrated Environmental Assessment and Management, 2010, 6, 191-193.	1.6	46
46	Impact of metal pools and soil properties on metal accumulation inFolsomia candida(Collembola). Environmental Toxicology and Chemistry, 2001, 20, 712-720.	2.2	45
47	Kinetics of Zn and Cd accumulation in the isopod Porcellio scaber exposed to contaminated soil and/or food. Soil Biology and Biochemistry, 2006, 38, 1554-1563.	4.2	44
48	A biology-based approach for quantitative structure-activity relationships (QSARs) in ecotoxicity. Ecotoxicology, 2009, 18, 187-196.	1.1	44
49	A review of DEB theory in assessing toxic effects of mixtures. Science of the Total Environment, 2010, 408, 3740-3745.	3.9	43
50	Dynamic Modeling of Sublethal Mixture Toxicity in the Nematode Caenorhabditis elegans. Environmental Science & Technology, 2014, 48, 7026-7033.	4.6	43
51	Modeling Receptor Kinetics in the Analysis of Survival Data for Organophosphorus Pesticides. Environmental Science & Technology, 2005, 39, 8307-8314.	4.6	42
52	Chronic exposure to chlorpyrifos reveals two modes of action in the springtail Folsomia candida. Environmental Pollution, 2007, 145, 452-458.	3.7	42
53	Feeding activity of the earthworm Eisenia andrei in artificial soil. Soil Biology and Biochemistry, 2003, 35, 313-322.	4.2	41
54	A model to analyze effects of complex mixtures on survival. Ecotoxicology and Environmental Safety, 2009, 72, 669-676.	2.9	40

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55	Gill damage and delayed mortality of Northern shrimp (Pandalus borealis) after short time exposure to anti-parasitic veterinary medicine containing hydrogen peroxide. Ecotoxicology and Environmental Safety, 2019, 180, 473-482.	2.9	39
56	Modelling the influence of terrestrial vegetation on the environmental fate of xenobiotics. Chemosphere, 1998, 37, 41-62.	4.2	37
57	Near-future ocean acidification impacts maintenance costs in sea-urchin larvae: Identification of stress factors and tipping points using a DEB modelling approach. Journal of Experimental Marine Biology and Ecology, 2016, 474, 11-17.	0.7	37
58	Revisiting simplified DEBtox models for analysing ecotoxicity data. Ecological Modelling, 2020, 416, 108904.	1.2	37
59	Availability of polycyclic aromatic hydrocarbons to earthworms (Eisenia andrei, Oligochaeta) in fieldâ€polluted soils and soilâ€sediment mixtures. Environmental Toxicology and Chemistry, 2003, 22, 767-775.	2.2	36
60	Limitations of extrapolating toxic effects on reproduction to the population level. Ecological Applications, 2014, 24, 1972-1983.	1.8	36
61	Body sizeâ€mediated starvation resistance in an insect predator. Journal of Animal Ecology, 2014, 83, 758-768.	1.3	36
62	Validation of models on uptake of organic chemicals by plant roots. Environmental Toxicology and Chemistry, 1995, 14, 1615-1623.	2.2	34
63	Comparison of two screening level risk assessment approaches for six disinfectants and pharmaceuticals. Chemosphere, 2002, 47, 1113-1128.	4.2	31
64	Modeling ingestion as an exposure route for organic chemicals in earthworms (Oligochaeta). Ecotoxicology and Environmental Safety, 2004, 57, 30-38.	2.9	31
65	Juvenile food limitation in standardized tests: a warning to ecotoxicologists. Ecotoxicology, 2012, 21, 2195-2204.	1.1	31
66	IMPACT OF METAL POOLS AND SOIL PROPERTIES ON METAL ACCUMULATION IN FOLSOMIA CANDIDA (COLLEMBOLA). Environmental Toxicology and Chemistry, 2001, 20, 712.	2.2	31
67	Using process-based modelling to analyse earthworm life cycles. Soil Biology and Biochemistry, 2006, 38, 1-6.	4.2	30
68	Time is of the essence. Environmental Toxicology and Chemistry, 2010, 29, 1396-1398.	2.2	29
69	Temporal Dynamics of Effect Concentrations. Environmental Science & Technology, 2006, 40, 2478-2484.	4.6	28
70	Modeling the environmental fate of perfluorooctanoate and its precursors from global fluorotelomer acrylate polymer use. Environmental Toxicology and Chemistry, 2008, 27, 2216-2223.	2.2	27
71	How to Evaluate the Quality of Toxicokineticâ€"Toxicodynamic Models in the Context of Environmental Risk Assessment. Integrated Environmental Assessment and Management, 2018, 14, 604-614.	1.6	27
72	Robust Likelihoodâ€Based Approach for Automated Optimization and Uncertainty Analysis of Toxicokineticâ€Toxicodynamic Models. Integrated Environmental Assessment and Management, 2021, 17, 388-397.	1.6	27

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73	Availability of polycyclic aromatic hydrocarbons to earthworms (Eisenia andrei, Oligochaeta) in field-polluted soils and soil-sediment mixtures. Environmental Toxicology and Chemistry, 2003, 22, 767-75.	2.2	27
74	Application of physiologically based modelling and transcriptomics to probe the systems toxicology of aldicarb for Caenorhabditis elegans (Maupas 1900). Ecotoxicology, 2011, 20, 397-408.	1.1	26
75	Modelling the dynamics of growth, development and lipid storage in the marine copepod Calanus finmarchicus. Marine Biology, 2017, 164, 1.	0.7	26
76	Ecotoxicological Applications of Dynamic Energy Budget Theory. Emerging Topics in Ecotoxicology, 2009, , 237-259.	1.5	25
77	Prediction of ecological noâ€effect concentrations for initial risk assessment: Combining substanceâ€specific data and database information. Environmental Toxicology and Chemistry, 2003, 22, 1387-1393.	2.2	24
78	Novel view on predicting acute toxicity: Decomposing toxicity data in species vulnerability and chemical potency. Ecotoxicology and Environmental Safety, 2007, 67, 311-322.	2.9	24
79	Acute toxicity of dispersed crude oil on the cold-water copepod Calanus finmarchicus: Elusive implications of lipid content. Journal of Toxicology and Environmental Health - Part A: Current Issues, 2016, 79, 549-557.	1.1	24
80	Toxicokinetics of Crude Oil Components in Arctic Copepods. Environmental Science & Technology, 2018, 52, 9899-9907.	4.6	24
81	Stageâ€dependent and sexâ€dependent sensitivity to waterâ€soluble fractions of fresh and weathered oil in the marine copepod Calanus finmarchicus. Environmental Toxicology and Chemistry, 2016, 35, 728-735.	2.2	23
82	Interpreting toxicity data in a DEB framework: A case study for nonylphenol in the marine polychaete Capitella teleta. Journal of Sea Research, 2011, 66, 456-462.	0.6	22
83	Parameterising a generic model for the dynamic energy budget of Antarctic krill Euphausia superba. Marine Ecology - Progress Series, 2015, 519, 115-128.	0.9	22
84	Standardizing chemical risk assessment, at last. Nature, 2002, 415, 14-14.	13.7	20
85	Scaling relationships based on partition coefficients and body sizes have similarities and interactionsâ€. SAR and QSAR in Environmental Research, 2007, 18, 315-330.	1.0	20
86	Linking survival and biomarker responses over time. Environmental Toxicology and Chemistry, 2013, 32, 1842-1845.	2.2	20
87	A Probabilistic Human Health Risk Assessment for Environmental Exposure to Dibutylphthalate. Human and Ecological Risk Assessment (HERA), 2001, 7, 1663-1679.	1.7	19
88	Bioconcentration of gaseous organic chemicals in plant leaves: Comparison of experimental data with model predictions. Environmental Toxicology and Chemistry, 1998, 17, 962-968.	2.2	18
89	The relationship between elimination rates and partition coefficients. Chemosphere, 2004, 57, 745-753.	4.2	18
90	Dynamic Links between Lipid Storage, Toxicokinetics and Mortality in a Marine Copepod Exposed to Dimethylnaphthalene. Environmental Science & Technology, 2017, 51, 7707-7713.	4.6	18

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91	Predicting Mixture Effects over Time with Toxicokineticâ€“Toxicodynamic Models (GUTS): Assumptions, Experimental Testing, and Predictive Power. Environmental Science & Technology, 2021, 55, 2430-2439.	4.6	18
92	How to analyse and account for interactions in mixture toxicity with toxicokinetic-toxicodynamic models. Science of the Total Environment, 2022, 843, 157048.	3.9	18
93	Prediction of Daphnid Survival after in Situ Exposure to Complex Mixtures. Environmental Science & Technology, 2009, 43, 6064-6069.	4.6	16
94	Capturing the life history of the marine copepod Calanus sinicus into a generic bioenergetics framework. Ecological Modelling, 2015, 299, 114-120.	1.2	15
95	Probabilistic Environmental Risk Assessment for Dibutylphthalate (DBP). Human and Ecological Risk Assessment (HERA), 2001, 7, 1681-1697.	1.7	14
96	Metabolic acceleration in the pond snail Lymnaea stagnalis?. Journal of Sea Research, 2014, 94, 84-91.	0.6	14
97	Reconsidering sufficient and optimal test design in acute toxicity testing. Ecotoxicology, 2014, 23, 38-44.	1.1	14
98	Modelling growth of northern krill (Meganyctiphanes norvegica) using an energy-budget approach. Ecological Modelling, 2016, 325, 28-34.	1.2	14
99	Estimation of no effect concentrations from exposure experiments when values scatter among individuals. Ecological Modelling, 2009, 220, 411-418.	1.2	13
100	All Individuals Are Not Created Equal; Accounting for Interindividual Variation in Fitting Life-History Responses to Toxicants. Environmental Science & Technology, 2013, 47, 130111083350000.	4.6	12
101	Considerations for test design to accommodate energyâ€budget models in ecotoxicology: A case study for acetone in the pond snail Lymnaea stagnalis. Environmental Toxicology and Chemistry, 2014, 33, 1466-1475.	2.2	12
102	Predicting environmental risk: A road map for the future. Journal of Toxicology and Environmental Health - Part A: Current Issues, 2016, 79, 572-584.	1.1	12
103	TOXICOKINETICS OF POLYCYCLIC AROMATIC HYDROCARBONS IN EISENIA ANDREI (OLIGOCHAETA) USING SPIKED SOIL. Environmental Toxicology and Chemistry, 2000, 19, 953.	2.2	12
104	Uniform system for the evaluation of substances IV Distribution and intake. Chemosphere, 1994, 29, 353-369.	4.2	11
105	Feeding behaviour of Eisenia andrei in two different field contaminated soilsThe 7th international symposium on earthworm ecology Â· Cardiff Â· Wales Â· 2002. Pedobiologia, 2003, 47, 670-675.	0.5	11
106	Time-related survival effects of two gluconasturtiin hydrolysis products on the terrestrial isopod Porcellio scaber. Chemosphere, 2012, 89, 1084-1090.	4.2	11
107	Uniform system for the evaluation of substances II Effects assessment. Chemosphere, 1994, 29, 319-335.	4.2	10
108	Short-term ecological risks of depositing contaminated sediment on arable soil. Ecotoxicology and Environmental Safety, 2005, 60, 1-14.	2.9	10

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109	Dynamic Modeling for Uptake and Effects of Chemicals. , 2016, , 71-98.		7
110	Considerations for using reproduction data in toxicokineticâ€“toxicodynamic modeling. Integrated Environmental Assessment and Management, 2022, 18, 479-487.	1.6	6
111	Prediction of ecological no-effect concentrations for initial risk assessment: combining substance-specific data and database information. Environmental Toxicology and Chemistry, 2003, 22, 1387-93.	2.2	6
112	Mechanistic approach for estimating bioconcentration of organic chemicals in earthworms (oligochaeta). , 1998, 17, 2080.		5
113	Bioaccumulation of organic chemicals in contaminated soils: evaluation of bioassays with earthworms. Environmental Science & Technology, 2005, 39, 293-8.	4.6	4
114	Effects of marine mine tailing exposure on the development, growth, and lipid accumulation in Calanus finmarchicus. Chemosphere, 2021, 282, 131051.	4.2	3
115	AVAILABILITY OF POLYCYCLIC AROMATIC HYDROCARBONS TO EARTHWORMS (EISENIA ANDREI,) Tj ETQq1 1 0.784314 rgBT /Overlo Chemistry, 2003, 22, 767.	2.2	3
116	Feeding behaviour of Eisenia andrei in two different field contaminated soils. Pedobiologia, 2003, 47, 670-675.	0.5	2
117	Simple energy-budget model for yolk-feeding stages of Atlantic cod (Gadus morhua). Ecological Modelling, 2018, 385, 213-219.	1.2	2
118	The application and limitations of exposure multiplication factors in sublethal effect modelling. Scientific Reports, 2022, 12, 6031.	1.6	2
119	Analysing individual growth curves for the copepod Tigriopus brevicornis, while considering changes in shape. Journal of Sea Research, 2021, 174, 102075.	0.6	1
120	Testing a simple energy-budget model for yolk-feeding stages of cleaner fish. Ecological Modelling, 2022, 469, 110005.	1.2	1
121	Comment on â€œRobust Fit of Toxicokineticâ€“Toxicodynamic Models Using Prior Knowledge Contained in the Design of Survival Toxicity Testsâ€• Environmental Science & Technology, 2017, 51, 8200-8201.	4.6	0
122	Exposure to low environmental copper concentrations does not affect survival and development in Atlantic cod (Gadus morhua) early life stages. Toxicology Reports, 2021, 8, 1909-1916.	1.6	0