Mario Schirmer

List of Publications by Year
in descending order

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144 papers	5,416 citations	81900 39 h-index	102487 66 g-index
177 all docs	177 docs citations	177 times ranked	5233 citing authors

#	Article	IF	Citations
1	Measuring methods for groundwater â€“ surface water interactions: aÂreview. Hydrology and Earth System Sciences, 2006, 10, 873-887.	4.9	564
2	A review of threats to groundwater quality in the anthropocene. Science of the Total Environment, 2019, 684, 136-154.	8.0	265
3	Characterization of spatial heterogeneity of groundwater-stream water interactions using multiple depth streambed temperature measurements at the reach scale. Hydrology and Earth System Sciences, 2006, 10, 849-859.	4.9	160
4	Evaluation and field-scale application of an analytical method to quantify groundwater discharge using mapped streambed temperatures. Journal of Hydrology, 2007, 347, 292-307.	5.4	157
5	Sources and transport of selected organic micropollutants in urban groundwater underlying the city of Halle (Saale), Germany. Water Research, 2007, 41, 3259-3270.	11.3	140
6	Current research in urban hydrogeology â€“ A review. Advances in Water Resources, 2013, 51, 280-291.	3.8	137
7	Microbial degradation of methyl tert-butyl ether and tert-butyl alcohol in the subsurface. Journal of Contaminant Hydrology, 2004, 70, 173-203.	3.3	134
8	Temporal and spatial patterns of micropollutants in urban receiving waters. Environmental Pollution, 2009, 157, 3069-3077.	7.5	117
9	Is the Hyporheic Zone Relevant beyond the Scientific Community?. Water (Switzerland), 2019, 11, 2230.	2.7	113
10	Influence of aquifer and streambed heterogeneity on the distribution of groundwater discharge. Hydrology and Earth System Sciences, 2009, 13, 69-77.	4.9	110
11	Fluctuations of electrical conductivity as a natural tracer for bank filtration in a losing stream. Advances in Water Resources, 2010, 33, 1296-1308.	3.8	108
12	Impact of urbanization on groundwater recharge rates in DÃ¼bendorf, Switzerland. Journal of Hydrology, 2018, 563, 1135-1146.	5.4	108
13	A global-scale dataset of direct natural groundwater recharge rates: A review of variables, processes and relationships. Science of the Total Environment, 2020, 717, 137042.	8.0	95
14	Micropollutant Loads in the Urban Water Cycle. Environmental Science & Technology, 2010, 44, 4877-4883.	10.0	87
15	Groundwater arsenic contamination in Burkina Faso, West Africa: Predicting and verifying regions at risk. Science of the Total Environment, 2017, 584-585, 958-970.	8.0	86
16	Dissolution and mass transfer of multiple organics under field conditions: The Borden emplaced source. Water Resources Research, 1999, 35, 683-694.	4.2	85
17	Indicators for assessing anthropogenic impact on urban surface and groundwater. Journal of Soils and Sediments, 2008, 8, 23-33.	3.0	81
18	A Study of Long-Term MTBE Attenuation in the Borden Aquifer, Ontario, Canada. Ground Water Monitoring and Remediation, 1998, 18, 113-122.	0.8	68

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19	Biodegradation modelling of a dissolved gasoline plume applying independent laboratory and field parameters. Journal of Contaminant Hydrology, 2000, 46, 339-374.	3.3	68
20	Monitoring in situ biodegradation of benzene and toluene by stable carbon isotope fractionation. Environmental Toxicology and Chemistry, 2005, 24, 51-60.	4.3	65
21	Benzene oxidation under sulfate-reducing conditions in columns simulating in situ conditions. Biodegradation, 2007, 18, 625-636.	3.0	58
22	Natural attenuation research at the contaminated megasite Zeitz. Journal of Hydrology, 2006, 328, 393-407.	5.4	56
23	Enabling Effective Problem-oriented Research for Sustainable Development. Ecology and Society, 2012, 17, .	2.3	55
24	Laboratory evidence of MTBE biodegradation in Borden aquifer material. Journal of Contaminant Hydrology, 2003, 60, 229-249.	3.3	54
25	Climatic and landscape controls on effective discharge. Geophysical Research Letters, 2015, 42, 8441-8447.	4.0	53
26	Predicting streamflow distributions and flow duration curves from landscape and climate. Advances in Water Resources, 2015, 83, 285-298.	3.8	53
27	Characterization of a managed aquifer recharge system using multiple tracers. Science of the Total Environment, 2017, 609, 701-714.	8.0	53
28	Modeling the impact of ethanol on the persistence of benzene in gasoline-contaminated groundwater. Water Resources Research, 2002, 38, 4-1-4-12.	4.2	52
29	Regionally contaminated aquifers?toxicological relevance and remediation options (Bitterfeld case) Tj ETQq1 1 0.784314 rgBT /Overlock	4.2	51
30	Determination of naturally occurring MTBE biodegradation by analysing metabolites and biodegradation by-products. Journal of Contaminant Hydrology, 2006, 87, 37-53.	3.3	51
31	Mass fluxes and spatial trends of xenobiotics in the waters of the city of Halle, Germany. Environmental Pollution, 2008, 152, 452-460.	7.5	51
32	A relative-least-squares technique to determine unique Monod kinetic parameters of BTEX compounds using batch experiments. Journal of Contaminant Hydrology, 1999, 37, 69-86.	3.3	49
33	Diurnal fluctuations of electrical conductivity in a pre-alpine river: Effects of photosynthesis and groundwater exchange. Journal of Hydrology, 2012, 450-451, 93-104.	5.4	49
34	Towards improved instrumentation for assessing river-groundwater interactions in a restored river corridor. Hydrology and Earth System Sciences, 2011, 15, 2531-2549.	4.9	47
35	Geochemical and isotopic constraints on groundwaterâ€“surface water interactions in a highly anthropized site. The Wolfen/Bitterfeld megasite (Mulde subcatchment, Germany). Environmental Pollution, 2007, 148, 707-717.	7.5	46
36	Morphological, hydrological, biogeochemical and ecological changes and challenges in river restoration â€“ the Thur River case study. Hydrology and Earth System Sciences, 2014, 18, 2449-2462.	4.9	46

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37	Implications of hydrologic connectivity between hillslopes and riparian zones on streamflow composition. Journal of Contaminant Hydrology, 2014, 169, 62-74.	3.3	46
38	Modeling the dynamics of oxygen consumption upon riverbank filtration by a stochasticâ€“convective approach. Journal of Hydrology, 2013, 505, 352-363.	5.4	45
39	Avoiding high concentrations of arsenic, manganese and salinity in deep tubewells in Munshiganj District, Bangladesh. Applied Geochemistry, 2011, 26, 1077-1085.	3.0	43
40	On the emergence of heavy-tailed streamflow distributions. Advances in Water Resources, 2015, 82, 98-105.	3.8	42
41	Biogeochemical controls on daily cycling of hydrochemistry and Î´13C of dissolved inorganic carbon in a karst spring-fed pool. Journal of Hydrology, 2013, 478, 157-168.	5.4	41
42	Evaluation of biodegradation and dispersion as natural attenuation processes of MTBE and benzene at the Borden field site. Physics and Chemistry of the Earth, 1999, 24, 557-560.	0.3	40
43	Investigating riparian groundwater flow close to a losing river using diurnal temperature oscillations at high vertical resolution. Hydrology and Earth System Sciences, 2012, 16, 473-487.	4.9	39
44	NOM degradation during river infiltration: Effects of the climate variables temperature and discharge. Water Research, 2013, 47, 6585-6595.	11.3	39
45	New methodology to investigate potential contaminant mass fluxes at the streamâ€“aquifer interface by combining integral pumping tests and streambed temperatures. Environmental Pollution, 2007, 148, 808-816.	7.5	38
46	Development and testing of multiport sock samplers for groundwater. Journal of Hydrology, 1995, 171, 239-257.	5.4	37
47	Arsenic removal with zero-valent iron filters in Burkina Faso: Field and laboratory insights. Science of the Total Environment, 2020, 737, 139466.	8.0	37
48	Using radon as an environmental tracer for estimating groundwater flow velocities in singleâ€well tests. Water Resources Research, 2011, 47, .	4.2	35
49	Who is chasing whom? A call for a more integrated approach to reduce the load of micro-pollutants in the environment. Water Science and Technology, 2008, 57, 145-150.	2.5	34
50	Diversity and expression of different forms of RubisCO genes in polluted groundwater under different redox conditions. FEMS Microbiology Ecology, 2012, 79, 649-660.	2.7	32
51	Estimation of groundwater recharge and drought severity with varying model complexity. Journal of Hydrology, 2015, 527, 844-857.	5.4	32
52	Pathline Density Distributions in a Nullâ€Space Monte Carlo Approach to Assess Groundwater Pathways. Ground Water, 2020, 58, 189-207.	1.3	32
53	Subsurface flow contribution in the hydrological cycle: lessons learned and challenges aheadâ€”a review. Environmental Earth Sciences, 2013, 69, 707-718.	2.7	31
54	Water management strategies for run-of-river power plants: Profitability and hydrologic impact between the intake and the outflow. Water Resources Research, 2013, 49, 8285-8298.	4.2	31

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55	Multi tracer test for the implementation of enhanced in-situ bioremediation at a BTEX-contaminated megasite. Journal of Contaminant Hydrology, 2006, 87, 211-236.	3.3	30
56	ThirtyÂyears of river restoration in Switzerland: implemented measures and lessons learned. Environmental Earth Sciences, 2014, 72, 2065-2079.	2.7	30
57	A physically based analytical model of flood frequency curves. Geophysical Research Letters, 2016, 43, 9070-9076.	4.0	30
58	Multicomponent statistical analysis to identify flow and transport processes in a highly-complex environment. Journal of Hydrology, 2016, 542, 437-449.	5.4	30
59	Combined analysis of time-varying sensitivity and identifiability indices to diagnose the response of a complex environmental model. Environmental Modelling and Software, 2017, 88, 22-34.	4.5	30
60	Use of Surfactants to Improve the Biological Degradation of Petroleum Hydrocarbons in a Field Site Study. Environmental Technology (United Kingdom), 2007, 28, 573-582.	2.2	27
61	Does river restoration affect diurnal and seasonal changes to surface water quality? A study along the Thur River, Switzerland. Science of the Total Environment, 2015, 532, 91-102.	8.0	27
62	Influence of Transient Flow on Contaminant Biodegradation. Ground Water, 2001, 39, 276-282.	1.3	26
63	River flow regimes and vegetation dynamics along a river transect. Advances in Water Resources, 2014, 73, 30-43.	3.8	26
64	Water quality deterioration as a driver for river restoration: a review of case studies from Asia, Europe and North America. Environmental Earth Sciences, 2015, 74, 3145-3158.	2.7	25
65	Groundwater recharge predictions in contrasted climate: The effect of model complexity and calibration period on recharge rates. Environmental Modelling and Software, 2018, 103, 74-89.	4.5	24
66	Assessing Restoration Effects on River Hydromorphology Using the Process-based Morphological Quality Index in Eight European River Reaches. Environmental Management, 2018, 61, 69-84.	2.7	23
67	Sanierungsforschung in regional kontaminierten Aquiferen (SAFIRA) - 1. Information zum Forschungsschwerpunkt am Standort Bitterfeld. Grundwasser, 2001, 6, 113-122.	1.4	22
68	Transport behaviour and natural attenuation of organic contaminants at spill sites. Toxicology, 2004, 205, 173-179.	4.2	22
69	Structural control of groundwater flow regimes and groundwater chemistry along the lower reaches of the Zerka River, West Jordan, using remote sensing, GIS, and field methods. Environmental Geology, 2009, 58, 1797-1810.	1.2	21
70	Patterns of streamflow regimes along the river network: The case of the Thur river. Environmental Modelling and Software, 2017, 93, 42-58.	4.5	21
71	From Flood to Drip Irrigation Under Climate Change: Impacts on Evapotranspiration and Groundwater Recharge in the Mediterranean Region of Valencia (Spain). Earth's Future, 2021, 9, e2020EF001859.	6.3	21
72	Understanding dominant controls on streamflow spatial variability to set up a semi-distributed hydrological model: the case study of the Thur catchment. Hydrology and Earth System Sciences, 2020, 24, 1319-1345.	4.9	20

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73	Investigation of sewer exfiltration using integral pumping tests and wastewater indicators. Journal of Contaminant Hydrology, 2009, 110, 118-129.	3.3	18
74	Mass fluxes of xenobiotics below cities: challenges in urban hydrogeology. Environmental Earth Sciences, 2011, 64, 607-617.	2.7	18
75	Flow dynamics at the continental scale: Streamflow correlation and hydrological similarity. Hydrological Processes, 2019, 33, 627-646.	2.6	18
76	Hydrogeochemical and multi-tracer investigations of arsenic-affected aquifers in semi-arid West Africa. Geoscience Frontiers, 2019, 10, 1685-1699.	8.4	18
77	Spatiotemporal Modelling of Water Balance Components in Response to Climate and Landuse Changes in a Heterogeneous Mountainous Catchment. Water Resources Management, 2021, 35, 793-810.	3.9	18
78	Field trials of active and multi-port sock samplers in gravel-packed wells. Journal of Hydrology, 1995, 171, 259-289.	5.4	17
79	Pulsed gas injection: A minimum effort approach for enhanced natural attenuation of chlorobenzene in contaminated groundwater. Environmental Pollution, 2009, 157, 2011-2018.	7.5	17
80	Characterizing the spatial correlation of daily streamflows. Water Resources Research, 2017, 53, 1646-1663.	4.2	17
81	Estimating the spatial distribution of artificial groundwater recharge using multiple tracers. Isotopes in Environmental and Health Studies, 2017, 53, 484-499.	1.0	17
82	Quantification of large-scale urban mass fluxes of xenobiotics and of the riverâ€“groundwater interaction in the city of Halle, Germany. Physics and Chemistry of the Earth, 2009, 34, 574-579.	2.9	16
83	Moving Targets, Long-Lived Infrastructure, and Increasing Needs for Integration and Adaptation in Water Management: An Illustration from Switzerland. Environmental Science & Technology, 2012, 46, 112-118.	10.0	16
84	Hydrological modelling of a heterogeneous catchment using an integrated approach of remote sensing, a geographic information system and hydrologic response units: the case study of Wadi Zerka Maâ€™in catchment area, north east of the Dead Sea. Environmental Earth Sciences, 2015, 73, 3309-3326.	2.7	16
85	Interaction of water components in the semi-arid Huasco and LimarÃ-river basins, North Central Chile. Advances in Geosciences, 0, 22, 51-57.	12.0	15
86	Estimation of kinetic Monod parameters for anaerobic degradation of benzene in groundwater. Environmental Geology, 2008, 55, 423-431.	1.2	14
87	How effective is river restoration in re-establishing groundwaterâ€“surface water interactions? â€“ A case study. Hydrology and Earth System Sciences, 2015, 19, 2663-2672.	4.9	14
88	Impact of a transformation from flood to drip irrigation on groundwater recharge and nitrogen leaching under variable climatic conditions. Science of the Total Environment, 2022, 825, 153805.	8.0	14
89	Simulation of a reactive tracer experiment using stochastic hydraulic conductivity fields. Environmental Geology, 2008, 55, 1255-1261.	1.2	13
90	An integrated spatial snap-shot monitoring method for identifying seasonal changes and spatial changes in surface water quality. Journal of Hydrology, 2016, 539, 567-576.	5.4	13

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91	Topsoil structure stability in a restored floodplain: Impacts of fluctuating water levels, soil parameters and ecosystem engineers. Science of the Total Environment, 2018, 639, 1610-1622.	8.0	13
92	Estimating surface runoff and groundwater recharge in an urban catchment using a water balance approach. Hydrogeology Journal, 2021, 29, 2411-2428.	2.1	13
93	Strï¿½mungs- und Tracer-Transportmodellierung am Natural Attenuation-Standort Zeitz. Grundwasser, 2004, 9, 3-11.	1.4	12
94	Evaluation of xenobiotic impact on urban receiving waters by means of statistical methods. Water Science and Technology, 2010, 62, 684-692.	2.5	12
95	Assessing the effect of different river water level interpolation schemes on modeled groundwater residence times. Journal of Hydrology, 2014, 510, 393-402.	5.4	12
96	Sanierungsforschung in regional kontaminierten Aquiferen. Grundwasser, 2002, 7, 133-133.	1.4	11
97	Interplay between oxygen demand reactions and kinetic gasâ€“water transfer in porous media. Water Research, 2008, 42, 3579-3590.	11.3	11
98	The effect of model complexity in simulating unsaturated zone flow processes on recharge estimation at varying time scales. Journal of Hydrology, 2015, 529, 1173-1184.	5.4	11
99	What Do They Have in Common? Drivers of Streamflow Spatial Correlation and Prediction of Flow Regimes in Ungauged Locations. Water Resources Research, 2017, 53, 10354-10373.	4.2	11
100	Data Assimilation and Online Parameter Optimization in Groundwater Modeling Using Nested Particle Filters. Water Resources Research, 2019, 55, 9724-9747.	4.2	11
101	Hydrological Modeling of the Effect of the Transition From Flood to Drip Irrigation on Groundwater Recharge Using Multiâ€Objective Calibration. Water Resources Research, 2021, 57, e2021WR029677.	4.2	11
102	Sanierungsforschung in regional kontaminierten Aquiferen (SAFIRA) â€“ 2. ProjektÃ¼berblick und Pilotanlage. Grundwasser, 2002, 7, 135-139.	1.4	10
103	Application of integral pumping tests to investigate the influence of a losing stream on groundwater quality. Hydrology and Earth System Sciences, 2009, 13, 1765-1774.	4.9	10
104	A socio-ecological adaptive approach to contaminated mega-site management: From 'control and correct' to 'coping with change'. Journal of Contaminant Hydrology, 2012, 127, 101-109.	3.3	10
105	Water quality investigation in Brunei Darussalam: investigation of the influence of climate change. Environmental Earth Sciences, 2020, 79, 1.	2.7	10
106	Autonomous distributed temperature sensing for long-term heated applications in remote areas. Geoscientific Instrumentation, Methods and Data Systems, 2013, 2, 71-77.	1.6	9
107	Improved water resource management for a highly complex environment using three-dimensional groundwater modelling. Hydrogeology Journal, 2018, 26, 133-146.	2.1	9
108	Nonâ€Gaussian Parameter Inference for Hydrogeological Models Using Stein Variational Gradient Descent. Water Resources Research, 2021, 57, e2020WR029339.	4.2	9

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109	Das Verhalten des Benzininhaltsstoffes MethyltertiÃrbutylether (MTBE) in Grundwasser. Grundwasser, 1999, 4, 95-102.	1.4	8
110	Comparative assessment of regionalisation methods of monitored atmospheric deposition loads. Atmospheric Environment, 2005, 39, 3661-3674.	4.1	8
111	Modeling the Impact of a Benzene Source Zone on the Transport Behavior of PAHs in Groundwater. Environmental Science & Technology, 2006, 40, 3565-3571.	10.0	8
112	Groundwater chemistry of strike slip faulted aquifers: the case study of Wadi Zerka Maâ€™in aquifers, north east of the Dead Sea. Environmental Earth Sciences, 2013, 70, 393-406.	2.7	8
113	Comment on Schriks, M., Heringa, M.B., van der Kooi, M.M.E., de Voogt, P., van Wezel, A.P., 2010. Toxicological relevance of emerging contaminants for drinking water quality. Water Research 44, 461â€“476. Water Research, 2011, 45, 1512-1514.	11.3	6
114	Quasiâ€Online Groundwater Model Optimization Under Constraints of Geological Consistency Based on Iterative Importance Sampling. Water Resources Research, 2020, 56, e2019WR026777.	4.2	6
115	Hyporheic exchange in recirculating flumes under heterogeneous bacterial and morphological conditions. Environmental Earth Sciences, 2021, 80, 1.	2.7	6
116	Soil and Groundwater Investigation for Sustainable Agricultural Development: A Case Study from Brunei Darussalam. Sustainability, 2022, 14, 1388.	3.2	6
117	GQ10 â€œGroundwater quality management in a rapidly changing worldâ€• Journal of Contaminant Hydrology, 2012, 127, 1-2.	3.3	5
118	Trace elements and their correlations in hand-dug wells in a laterite environment in a semi-arid region: case study of TikarÃ©, Northern Burkina Faso. Environmental Earth Sciences, 2013, 69, 2393-2414.	2.7	5
119	Structural control on drainage network and catchment area geomorphology in the Dead Sea area: an evaluation using remote sensing and geographic information systems in the Wadi Zerka Maâ€™in catchment area (Jordan). Environmental Earth Sciences, 2016, 75, 1.	2.7	5
120	Enhanced Natural Attenuation of MTBE. Handbook of Environmental Chemistry, 2007, , 139-158.	0.4	5
121	ZukÃ¼nftige Grundwasserforschung â€“ Was sind unsere Aufgaben?. Grundwasser, 2008, 13, 131-132.	1.4	4
122	Correlative and comparative characterization of main ion concentrations in laterite groundwater in semi-arid northern Burkina Faso. Environmental Earth Sciences, 2010, 61, 11-26.	2.7	4
123	New Methods to Estimate 2D Water Level Distributions of Dynamic Rivers. Ground Water, 2013, 51, 847-854.	1.3	4
124	The impact of hillslope groundwater dynamics and landscape functioning in event-flow generation: a field study in the Rietholzbach catchment, Switzerland. Hydrogeology Journal, 2015, 23, 935-948.	2.1	4
125	Xenobiotics in urban water systems â€šÃ„Ã¬ investigation and estimation of chemical fluxes. , 2006, , 145-159.		4
126	Towards optimal sampling schedules for integral pumping tests. Journal of Contaminant Hydrology, 2011, 124, 25-34.	3.3	3

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127	Combined method of 3H/3He apparent age and on-site helium analysis to identify groundwater flow processes and transport of perchloroethylene (PCE) in an urban area. Journal of Contaminant Hydrology, 2021, 238, 103773.	3.3	3
128	Iron and manganese mobilisation due to dam height increase for a tropical reservoir in South East Asia. Environmental Monitoring and Assessment, 2022, 194, 358.	2.7	3
129	Untersuchungen zum StrÃ¶mungsverhalten und zur LÃ¶sungskinetik von Gasen im Mehrphasensystem "Aquifer". Grundwasser, 2002, 7, 146-155.	1.4	2
130	Exploration of Wadi Zerka Ma'in rotational fault and its drainage pattern, Eastern of Dead Sea, by means of remote sensing, GIS and 3D geological modeling. , 2009, , .		2
131	Sustainable Technologies and Social Costs for Eliminating Contamination of an Aquifer. Sustainability, 2010, 2, 2219-2231.	3.2	2
132	MANAGEMENT OPTIONS FOR REGIONALLY CONTAMINATED AQUIFERS: A CASE STUDY AT BITTERFELD, GERMANY. , 2006, , 579-589.		2
133	Groundwater recharge rate estimation using remotely sensed and ground-based data: A method application in the mesoscale Thur catchment. Journal of Hydrology: Regional Studies, 2021, 38, 100972.	2.4	2
134	Benzenabbau im Grundwasser unter verschiedenen Redox- Bedingungen. Grundwasser, 2003, 8, 232-237.	1.4	1
135	Herausforderung Urbane Hydrogeologie. Grundwasser, 2007, 12, 177-177.	1.4	1
136	Development of New Modeling Tools for Simulating and Designing Reactive Gas Walls. , 2003, , 192.		0
137	Wasserrahmenrichtlinie?neue Wege in der Wasserwirtschaft. Grundwasser, 2004, 9, 219-219.	1.4	0
138	Ab 2007 ein neues Layout fÃ¼r Grundwasser. Grundwasser, 2006, 11, 245-246.	1.4	0
139	Enhanced Natural Attenuation of MTBE. , 2007, , .		0
140	Grundwasser â€“ Online-Submission. Grundwasser, 2008, 13, 2-3.	1.4	0
141	Editorenschaft â€“ Weitergabe des Staffelstabes. Grundwasser, 2009, 14, 253-254.	1.4	0
142	Entropy, Water and Resources. , 2010, , .		0
143	Hydrogeological Uncertainty Estimation With the Analytic Element Method. Water Resources Research, 2021, 57, e2020WR029509.	4.2	0
144	Transport and Fate of Xenobiotics in the Urban Water Cycle: Studies in Halle/Saale and Leipzig (Germany). Environmental Pollution, 2010, , 213-226.	0.4	0