

Peter S Mikkelsen

List of Publications by Year in descending order

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134
papers

5,727
citations

117453

34
h-index

88477

70
g-index

141
all docs

141
docs citations

141
times ranked

5143
citing authors

#	ARTICLE	IF	CITATIONS
1	Using multi-event hydrologic and hydraulic signatures from water level sensors to diagnose locations of uncertainty in integrated urban drainage models used in living digital twins. <i>Water Science and Technology</i> , 2022, 85, 1981-1998.	1.2	5
2	Classifying pollutant flush signals in stormwater using functional data analysis on TSS MV curves. <i>Water Research</i> , 2022, 217, 118394.	5.3	4
3	Living and Prototyping Digital Twins for Urban Water Systems: Towards Multi-Purpose Value Creation Using Models and Sensors. <i>Water (Switzerland)</i> , 2021, 13, 592.	1.2	47
4	Prioritize effluent quality, operational costs or global warming? – Using predictive control of wastewater aeration for flexible management of objectives in WRRFs. <i>Water Research</i> , 2021, 196, 116960.	5.3	14
5	Feasibility of using smart meter water consumption data and in-sewer flow observations for sewer system analysis: a case study. <i>Journal of Hydroinformatics</i> , 2021, 23, 795-812.	1.1	5
6	Soft sensing of water depth in combined sewers using LSTM neural networks with missing observations. <i>Journal of Hydro-Environment Research</i> , 2021, 38, 106-116.	1.0	17
7	Data assimilation in hydrodynamic models for system-wide soft sensing and sensor validation for urban drainage tunnels. <i>Journal of Hydroinformatics</i> , 2021, 23, 438-452.	1.1	5
8	Approaches for unsupervised identification of data-driven models for flow forecasting in urban drainage systems. <i>Journal of Hydroinformatics</i> , 2021, 23, 1368-1381.	1.1	0
9	The Belling data set: open data and models for community-wide urban drainage systems research. <i>Earth System Science Data</i> , 2021, 13, 4779-4798.	3.7	9
10	Integrated model predictive control of water resource recovery facilities and sewer systems in a smart grid: example of full-scale implementation in Kolding. <i>Water Science and Technology</i> , 2020, 81, 1766-1777.	1.2	13
11	From EU Directives to Local Stormwater Discharge Permits: A Study of Regulatory Uncertainty and Practice Gaps in Denmark. <i>Sustainability</i> , 2020, 12, 6317.	1.6	11
12	Evaluating the performance of a simple phenomenological model for online forecasting of ammonium concentrations at WWTP inlets. <i>Water Science and Technology</i> , 2020, 81, 109-120.	1.2	5
13	CSO Reduction by Integrated Model Predictive Control of Stormwater Inflows: A Simulated Proof of Concept Using Linear Surrogate Models. <i>Water Resources Research</i> , 2020, 56, e2019WR026272.	1.7	28
14	Robust model for estimating pumping station characteristics and sewer flows from standard pumping station data. <i>Water Science and Technology</i> , 2019, 79, 1739-1745.	1.2	5
15	Integrated stormwater inflow control for sewers and green structures in urban landscapes. <i>Nature Sustainability</i> , 2019, 2, 1003-1010.	11.5	39
16	Model Predictive Control of Stochastic Wastewater Treatment Process for Smart Power, Cost-Effective Aeration. <i>IFAC-PapersOnLine</i> , 2019, 52, 622-627.	0.5	6
17	Towards model predictive control: online predictions of ammonium and nitrate removal by using a stochastic ASM. <i>Water Science and Technology</i> , 2019, 79, 51-62.	1.2	17
18	Framing professional climate risk knowledge: Extreme weather events as drivers of adaptation innovation in Copenhagen, Denmark. <i>Environmental Science and Policy</i> , 2019, 98, 30-38.	2.4	21

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19	Greenhouse gas emissions from integrated urban drainage systems: Where do we stand?. <i>Journal of Hydrology</i> , 2018, 559, 307-314.	2.3	31
20	Distinguishing high and low flow domains in urban drainage systems 2 days ahead using numerical weather prediction ensembles. <i>Journal of Hydrology</i> , 2018, 556, 1013-1025.	2.3	9
21	Technical Note on the Dynamic Changes in Kalman Gain when Updating Hydrodynamic Urban Drainage Models. <i>Geosciences (Switzerland)</i> , 2018, 8, 416.	1.0	4
22	Model predictive control of urban drainage systems: A review and perspective towards smart real-time water management. <i>Critical Reviews in Environmental Science and Technology</i> , 2018, 48, 279-339.	6.6	111
23	Coordinating Rule-Based and System-Wide Model Predictive Control Strategies to Reduce Storage Expansion of Combined Urban Drainage Systems: The Case Study of Lundtofte, Denmark. <i>Water (Switzerland)</i> , 2018, 10, 76.	1.2	29
24	Definitions of event magnitudes, spatial scales, and goals for climate change adaptation and their importance for innovation and implementation. <i>Water Research</i> , 2018, 144, 192-203.	5.3	10
25	Controlling sewer systems – a critical review based on systems in three EU cities. <i>Urban Water Journal</i> , 2017, 14, 435-442.	1.0	29
26	Social construction of stormwater control measures in Melbourne and Copenhagen: A discourse analysis of technological change, embedded meanings and potential mainstreaming. <i>Technological Forecasting and Social Change</i> , 2017, 115, 198-209.	6.2	20
27	Hydrologic impact of urbanization with extensive stormwater infiltration. <i>Journal of Hydrology</i> , 2017, 544, 524-537.	2.3	100
28	Integrated Hydrological Model-Based Assessment of Stormwater Management Scenarios in Copenhagen’s First Climate Resilient Neighbourhood Using the Three Point Approach. <i>Water (Switzerland)</i> , 2017, 9, 883.	1.2	7
29	A gain-loss framework based on ensemble flow forecasts to switch the urban drainage wastewater system management towards energy optimization during dry periods. <i>Hydrology and Earth System Sciences</i> , 2017, 21, 2531-2544.	1.9	3
30	Downscaling future precipitation extremes to urban hydrology scales using a spatio-temporal Neyman-Scott weather generator. <i>Hydrology and Earth System Sciences</i> , 2016, 20, 1387-1403.	1.9	23
31	Evaluation of Maximum a Posteriori Estimation as Data Assimilation Method for Forecasting Infiltration-Inflow Affected Urban Runoff with Radar Rainfall Input. <i>Water (Switzerland)</i> , 2016, 8, 381.	1.2	7
32	Effect of climate change on stormwater runoff characteristics and treatment efficiencies of stormwater retention ponds: a case study from Denmark using TSS and Cu as indicator pollutants. SpringerPlus, 2016, 5, 1984.	1.2	23
33	A methodological approach to the design of optimising control strategies for sewer systems. <i>Environmental Modelling and Software</i> , 2016, 83, 103-115.	1.9	20
34	Simultaneous removal of As, Cd, Cr, Cu, Ni and Zn from stormwater using high-efficiency industrial sorbents: Effect of pH, contact time and humic acid. <i>Science of the Total Environment</i> , 2016, 566-567, 76-85.	3.9	64
35	Efficiency of stormwater control measures for combined sewer retrofitting under varying rain conditions: Quantifying the Three Points Approach (3PA). <i>Environmental Science and Policy</i> , 2016, 63, 19-26.	2.4	19
36	Dynamic gauge adjustment of high-resolution X-band radar data for convective rain storms: Model-based evaluation against measured combined sewer overflow. <i>Journal of Hydrology</i> , 2016, 539, 687-699.	2.3	17

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37	Probabilistic runoff volume forecasting in risk-based optimization for RTC of urban drainage systems. <i>Environmental Modelling and Software</i> , 2016, 80, 143-158.	1.9	35
38	A Mapping of Tools for Informing Water Sensitive Urban Design Planning Decisionsâ€”Questions, Aspects and Context Sensitivity. <i>Water (Switzerland)</i> , 2015, 7, 993-1012.	1.2	50
39	Effect of Disc Filtration with and without Addition of Flocculent on Nano- and Micro-Particles and Their Associated Polycyclic Aromatic Hydrocarbons in Stormwater. <i>Water (Switzerland)</i> , 2015, 7, 1306-1323.	1.2	8
40	Using ensemble weather forecast in a risk based real time optimization of urban drainage systems. <i>Houille Blanche</i> , 2015, 101, 101-107.	0.3	11
41	Determining the extent of groundwater interference on the performance of infiltration trenches. <i>Journal of Hydrology</i> , 2015, 529, 1360-1372.	2.3	40
42	Modelling the impact of retentionâ€”detention units on sewer surcharge and peak and annual runoff reduction. <i>Water Science and Technology</i> , 2015, 71, 898-903.	1.2	16
43	Comparison of two stochastic techniques for reliable urban runoff prediction by modeling systematic errors. <i>Water Resources Research</i> , 2015, 51, 5004-5022.	1.7	21
44	Regulatory control analysis and design for sewer systems. <i>Environmental Modelling and Software</i> , 2015, 66, 153-166.	1.9	14
45	SUDS, LID, BMPs, WSUD and more â€” The evolution and application of terminology surrounding urban drainage. <i>Urban Water Journal</i> , 2015, 12, 525-542.	1.0	1,134
46	Evaluation of stormwater micropollutant source control and end-of-pipe control strategies using an uncertainty-calibrated integrated dynamic simulation model. <i>Journal of Environmental Management</i> , 2015, 151, 56-64.	3.8	11
47	A partial ensemble Kalman filtering approach to enable use of range limited observations. <i>Stochastic Environmental Research and Risk Assessment</i> , 2015, 29, 119-129.	1.9	16
48	Flow Forecasting using Deterministic Updating of Water Levels in Distributed Hydrodynamic Urban Drainage Models. <i>Water (Switzerland)</i> , 2014, 6, 2195-2211.	1.2	17
49	Modelling of green roof hydrological performance for urban drainage applications. <i>Journal of Hydrology</i> , 2014, 519, 3237-3248.	2.3	120
50	Stochastic rainfall-runoff forecasting: parameter estimation, multi-step prediction, and evaluation of overflow risk. <i>Stochastic Environmental Research and Risk Assessment</i> , 2014, 28, 505-516.	1.9	19
51	A critical review of integrated urban water modelling â€” Urban drainage and beyond. <i>Environmental Modelling and Software</i> , 2014, 54, 88-107.	1.9	229
52	Influence of selecting secondary settling tank sub-models on the calibration of WWTP models â€” A global sensitivity analysis using BSM2. <i>Chemical Engineering Journal</i> , 2014, 241, 28-34.	6.6	23
53	A new settling velocity model to describe secondary sedimentation. <i>Water Research</i> , 2014, 66, 447-458.	5.3	69
54	Significance of settling model structures and parameter subsets in modelling WWTPs under wet-weather flow and filamentous bulking conditions. <i>Water Research</i> , 2014, 63, 209-221.	5.3	15

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55	Probabilistic online runoff forecasting for urban catchments using inputs from rain gauges as well as statically and dynamically adjusted weather radar. <i>Journal of Hydrology</i> , 2014, 512, 397-407.	2.3	22
56	Water Quality-based Real Time Control of Integrated Urban Drainage Systems: A Preliminary Study from Copenhagen, Denmark. <i>Procedia Engineering</i> , 2014, 70, 1707-1716.	1.2	33
57	A model library for dynamic transport and fate of micropollutants in integrated urban wastewater and stormwater systems. <i>Environmental Modelling and Software</i> , 2014, 53, 98-111.	1.9	33
58	Assessing future climatic changes of rainfall extremes at small spatio-temporal scales. <i>Climatic Change</i> , 2013, 118, 783-797.	1.7	61
59	Modelling and monitoring of integrated urban wastewater systems: review on status and perspectives. <i>Water Science and Technology</i> , 2013, 68, 1203-1215.	1.2	62
60	Velocity Dependent Passive Sampling for Monitoring of Micropollutants in Dynamic Stormwater Discharges. <i>Environmental Science & Technology</i> , 2013, 47, 12958-12965.	4.6	9
61	A simplified model of soakaway infiltration interaction with a shallow groundwater table. <i>Journal of Hydrology</i> , 2013, 497, 165-175.	2.3	25
62	Comparison of short-term rainfall forecasts for model-based flow prediction in urban drainage systems. <i>Water Science and Technology</i> , 2013, 68, 472-478.	1.2	13
63	Aeration tank settling and real time control as a tool to improve the hydraulic capacity and treatment efficiency during wet weather: results from 7 years' full-scale operational data. <i>Water Science and Technology</i> , 2013, 67, 2169-2176.	1.2	10
64	Comparing the impact of time displaced and biased precipitation estimates for online updated urban runoff models. <i>Water Science and Technology</i> , 2013, 68, 109-116.	1.2	5
65	Model-based monitoring of stormwater runoff quality. <i>Water Science and Technology</i> , 2013, 68, 1063-1071.	1.2	2
66	Urban drainage models – simplifying uncertainty analysis for practitioners. <i>Water Science and Technology</i> , 2013, 68, 2136-2143.	1.2	14
67	State-space adjustment of radar rainfall and skill score evaluation of stochastic volume forecasts in urban drainage systems. <i>Water Science and Technology</i> , 2013, 68, 584-590.	1.2	3
68	Validating data quality during wet weather monitoring of wastewater treatment plant influents. <i>Proceedings of the Water Environment Federation</i> , 2013, 2013, 4507-4520.	0.0	6
69	Informal uncertainty analysis (GLUE) of continuous flow simulation in a hybrid sewer system with infiltration inflow – consistency of containment ratios in calibration and validation?. <i>Hydrology and Earth System Sciences</i> , 2013, 17, 4159-4176.	1.9	10
70	On the importance of observational data properties when assessing regional climate model performance of extreme precipitation. <i>Hydrology and Earth System Sciences</i> , 2013, 17, 4323-4337.	1.9	34
71	A conceptual framework for addressing complexity and unfolding transition dynamics when developing sustainable adaption strategies in urban water management. <i>Water Science and Technology</i> , 2012, 66, 2393-2401.	1.2	16
72	Evaluation of probabilistic flow predictions in sewer systems using grey box models and a skill score criterion. <i>Stochastic Environmental Research and Risk Assessment</i> , 2012, 26, 1151-1162.	1.9	19

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73	Quantification of uncertainty in modelled partitioning and removal of heavy metals (Cu, Zn) in a stormwater retention pond and a biofilter. <i>Water Research</i> , 2012, 46, 6891-6903.	5.3	31
74	Partitioning of fluoranthene between free and bound forms in stormwater runoff and other urban discharges using passive dosing. <i>Water Research</i> , 2012, 46, 6002-6012.	5.3	7
75	Three Points Approach (3PA) for urban flood risk management: A tool to support climate change adaptation through transdisciplinarity and multifunctionality. <i>Urban Water Journal</i> , 2012, 9, 317-331.	1.0	105
76	Integrated modelling of Priority Pollutants in stormwater systems. <i>Physics and Chemistry of the Earth</i> , 2012, 42-44, 42-51.	1.2	13
77	A formal statistical approach to representing uncertainty in rainfall-runoff modelling with focus on residual analysis and probabilistic output evaluation - Distinguishing simulation and prediction. <i>Journal of Hydrology</i> , 2012, 472-473, 36-52.	2.3	20
78	A source classification framework supporting pollutant source mapping, pollutant release prediction, transport and load forecasting, and source control planning for urban environments. <i>Environmental Science and Pollution Research</i> , 2012, 19, 1119-1130.	2.7	12
79	Application of global sensitivity analysis and uncertainty quantification in dynamic modelling of micropollutants in stormwater runoff. <i>Environmental Modelling and Software</i> , 2012, 27-28, 40-51.	1.9	58
80	Climate change-induced impacts on urban flood risk influenced by concurrent hazards. <i>Journal of Flood Risk Management</i> , 2012, 5, 203-214.	1.6	17
81	Representing soakaways in a physically distributed urban drainage model - Upscaling individual allotments to an aggregated scale. <i>Journal of Hydrology</i> , 2012, 414-415, 530-538.	2.3	17
82	Framework for economic pluvial flood risk assessment considering climate change effects and adaptation benefits. <i>Journal of Hydrology</i> , 2012, 414-415, 539-549.	2.3	277
83	Modelling the impact of soakaway retrofits on combined sewage overflows in a 3km ² urban catchment in Copenhagen, Denmark. <i>Journal of Hydrology</i> , 2012, 452-453, 64-75.	2.3	34
84	Uncertainty-based calibration and prediction with a stormwater surface accumulation-washoff model based on coverage of sampled Zn, Cu, Pb and Cd field data. <i>Water Research</i> , 2011, 45, 3823-3835.	5.3	28
85	Modelling the fate of organic micropollutants in stormwater ponds. <i>Science of the Total Environment</i> , 2011, 409, 2597-2606.	3.9	26
86	Grey-box modelling of flow in sewer systems with state-dependent diffusion. <i>Environmetrics</i> , 2011, 22, 946-961.	0.6	21
87	Water management in cities of the future using emission control strategies for priority hazardous substances. <i>Water Science and Technology</i> , 2011, 64, 2109-2118.	1.2	13
88	Micropollutants in stormwater runoff and combined sewer overflow in the Copenhagen area, Denmark. <i>Water Science and Technology</i> , 2011, 64, 485-493.	1.2	49
89	Evaluation of two stormwater infiltration trenches in central Copenhagen after 15 years of operation. <i>Water Science and Technology</i> , 2011, 63, 2279-2286.	1.2	38
90	Effects of rainwater harvesting on centralized urban water supply systems. <i>Water Science and Technology: Water Supply</i> , 2010, 10, 570-576.	1.0	5

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91	Dynamic stormwater treatment unit model for micropollutants (STUMP) based on substance inherent properties. <i>Water Science and Technology</i> , 2010, 62, 622-629.	1.2	20
92	Combining multimedia models with integrated urban water system models for micropollutants. <i>Water Science and Technology</i> , 2010, 62, 1614-1622.	1.2	18
93	Passive Dosing to Determine the Speciation of Hydrophobic Organic Chemicals in Aqueous Samples. <i>Analytical Chemistry</i> , 2010, 82, 1142-1146.	3.2	62
94	Potential future increase in extreme one-hour precipitation events over Europe due to climate change. <i>Water Science and Technology</i> , 2009, 60, 2205-2216.	1.2	78
95	Dynamic experiments with high bisphenol-A concentrations modelled with an ASM model extended to include a separate XOC degrading microorganism. <i>Water Research</i> , 2009, 43, 3169-3176.	5.3	29
96	Update of regional intensity-duration-frequency curves in Denmark: Tendency towards increased storm intensities. <i>Atmospheric Research</i> , 2009, 92, 343-349.	1.8	178
97	Quantifying Releases of Priority Pollutants from Urban Sources. <i>Proceedings of the Water Environment Federation</i> , 2009, 2009, 5873-5891.	0.0	6
98	Simultaneous removal of As, Cd, Cr, Cu, Ni and Zn from stormwater: Experimental comparison of 11 different sorbents. <i>Water Research</i> , 2007, 41, 591-602.	5.3	187
99	How uncertain is model-based prediction of copper loads in stormwater runoff?. <i>Water Science and Technology</i> , 2007, 56, 65-72.	1.2	23
100	Comparative uncertainty analysis of copper loads in stormwater systems using GLUE and grey-box modeling. <i>Water Science and Technology</i> , 2007, 56, 11-18.	1.2	27
101	Risk assessment of xenobiotics in stormwater discharged to Harrestrup Å., Denmark. <i>Desalination</i> , 2007, 215, 187-197.	4.0	89
102	Artificial neural networks for rapid WWTP performance evaluation: Methodology and case study. <i>Environmental Modelling and Software</i> , 2007, 22, 1208-1216.	1.9	105
103	Selected stormwater priority pollutants – a European perspective. <i>Science of the Total Environment</i> , 2007, 383, 41-51.	3.9	229
104	Indicators of hazard, vulnerability and risk in urban drainage. <i>Water Science and Technology</i> , 2006, 54, 441-450.	1.2	6
105	Integrated modelling of two xenobiotic organic compounds. <i>Water Science and Technology</i> , 2006, 54, 213-221.	1.2	15
106	Transfer of hydrophobic contaminants in urban runoff particles to benthic organisms estimated by an in vitro bioaccessibility test. <i>Water Science and Technology</i> , 2006, 54, 323-330.	1.2	8
107	A methodology for ranking and hazard identification of xenobiotic organic compounds in urban stormwater. <i>Science of the Total Environment</i> , 2006, 370, 29-38.	3.9	54
108	Selection of regional historical rainfall time series as input to urban drainage simulations at ungauged locations. <i>Atmospheric Research</i> , 2005, 77, 4-17.	1.8	24

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109	Retrofitting Urban Drainage Systems Using Best Stormwater Management Practices – Some Scandinavian Experiences. , 2004, , 1-12.		0
110	Regional estimation of rainfall intensity-duration-frequency curves using generalized least squares regression of partial duration series statistics. Water Resources Research, 2002, 38, 21-1-21-11.	1.7	126
111	BMPs in Urban Stormwater Management in Denmark and Sweden. , 2002, , 354.		3
112	Development of Methodology for Hazard Identification of Rainwater Collected for Reuse. , 2002, , 1.		0
113	Risk Assessment of Stormwater Contaminants Following Discharge to Soil, Groundwater or Surface Water. , 2001, , 69-80.		5
114	Assessing the sustainability of small wastewater systems A context-oriented planning approach. Environmental Impact Assessment Review, 2000, 20, 347-357.	4.4	18
115	Hydrologic behaviour of stormwater infiltration trenches in a central urban area during 2 3/4 years of operation. Water Science and Technology, 1999, 39, 217.	1.2	35
116	Collected rainfall as a water source in danish households – what is the potential and what are the costs?. Water Science and Technology, 1999, 39, 49.	1.2	20
117	Hydrologic behaviour of stormwater infiltration trenches in a central urban area during 2 1/4 years of operation. Water Science and Technology, 1999, 39, 217-224.	1.2	19
118	A rationale for using local and regional point rainfall data for design and analysis of urban storm drainage systems. Water Science and Technology, 1998, 37, 7.	1.2	17
119	Estimation of regional intensity-duration-frequency curves for extreme precipitation. Water Science and Technology, 1998, 37, 29.	1.2	30
120	Quality control of rain data used for urban runoff systems. Water Science and Technology, 1998, 37, 113.	1.2	53
121	Quality control of rain data used for urban runoff systems. Water Science and Technology, 1998, 37, 113-120.	1.2	78
122	A rationale for using local and regional point rainfall data for design and analysis of urban storm drainage systems. Water Science and Technology, 1998, 37, 7-14.	1.2	22
123	Estimation of regional intensity-duration-frequency curves for extreme precipitation. Water Science and Technology, 1998, 37, 29-36.	1.2	16
124	Pollution of soil and groundwater from infiltration of highly contaminated stormwater - a case study. Water Science and Technology, 1997, 36, 325-330.	1.2	37
125	Pollution of soil and groundwater from infiltration of highly contaminated stormwater – A case study. Water Science and Technology, 1997, 36, 325.	1.2	48
126	Consequences for established design practice from geographical variation of historical rainfall data. Water Science and Technology, 1997, 36, 1.	1.2	5

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127	Consequences for established design practice from geographical variation of historical rainfall data. <i>Water Science and Technology</i> , 1997, 36, 1-6.	1.2	11
128	Experimental assessment of soil and groundwater contamination from two old infiltration systems for road run-off in Switzerland. <i>Science of the Total Environment</i> , 1996, 189-190, 341-347.	3.9	50
129	Properties of extreme point rainfall III: Identification of spatial inter-site correlation structure. <i>Atmospheric Research</i> , 1996, 40, 77-98.	1.8	26
130	Infiltration practice for control of urban storm water. <i>Journal of Hydraulic Research/De Recherches Hydrauliques</i> , 1996, 34, 827-840.	0.7	33
131	Properties of extreme point rainfall I: Results from a rain gauge system in Denmark. <i>Atmospheric Research</i> , 1995, 37, 277-286.	1.8	21
132	Properties of extreme point rainfall II: Parametric data interpretation and regional uncertainty assessment. <i>Atmospheric Research</i> , 1995, 37, 287-304.	1.8	8
133	DESIGN OF STORMWATER INFILTRATION FOR REDUCTION OF COMBINED SEWER OVERFLOW (CSO). <i>Water Science and Technology</i> , 1994, 30, 53-61.	1.2	48
134	Pollution from Urban Stormwater Infiltration. <i>Water Science and Technology</i> , 1994, 29, 293-302.	1.2	58