

# Joaquim Comas

## List of Publications by Year in descending order

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Version: 2024-02-01

130  
papers

4,614  
citations

87723

38  
h-index

114278

63  
g-index

130  
all docs

130  
docs citations

130  
times ranked

4936  
citing authors

#	ARTICLE	IF	CITATIONS
1	Comparison of removal of pharmaceuticals in MBR and activated sludge systems. <i>Desalination</i> , 2010, 250, 653-659.	4.0	289
2	Removal of emerging contaminants from municipal wastewater with an integrated membrane system, MBRâ€”RO. <i>Journal of Hazardous Materials</i> , 2012, 239-240, 64-69.	6.5	222
3	Pharmaceuticals occurrence in a WWTP with significant industrial contribution and its input into the river system. <i>Environmental Pollution</i> , 2014, 185, 202-212.	3.7	187
4	Designing and building real environmental decision support systems. <i>Environmental Modelling and Software</i> , 2004, 19, 857-873.	1.9	185
5	Flexural response of reinforced concrete (RC) beams strengthened with near surface mounted (NSM) fibre reinforced polymer (FRP) bars. <i>Composite Structures</i> , 2014, 109, 8-22.	3.1	166
6	Biological nutrient removal in an MBR treating municipal wastewater with special focus on biological phosphorus removal. <i>Bioresource Technology</i> , 2010, 101, 3984-3991.	4.8	129
7	Effects on activated sludge bacterial community exposed to sulfamethoxazole. <i>Chemosphere</i> , 2013, 93, 99-106.	4.2	111
8	Advanced biological activated carbon filter for removing pharmaceutically active compounds from treated wastewater. <i>Science of the Total Environment</i> , 2018, 636, 519-529.	3.9	109
9	Resilience theory incorporated into urban wastewater systems management. State of the art. <i>Water Research</i> , 2017, 115, 149-161.	5.3	94
10	Efficiently Combining Water Reuse and Desalination through Forward Osmosisâ€”Reverse Osmosis (FO-RO) Hybrids: A Critical Review. <i>Membranes</i> , 2016, 6, 37.	1.4	93
11	Water footprint assessment in wastewater treatment plants. <i>Journal of Cleaner Production</i> , 2016, 112, 4741-4748.	4.6	88
12	Removal of microbial indicators from municipal wastewater by a membrane bioreactor (MBR). <i>Bioresource Technology</i> , 2011, 102, 5004-5009.	4.8	80
13	Nature-based solutions in the urban context: terminology, classification and scoring for urban challenges and ecosystem services. <i>Science of the Total Environment</i> , 2021, 779, 146237.	3.9	80
14	Prediction of the bulking phenomenon in wastewater treatment plants. <i>Advanced Engineering Informatics</i> , 2000, 14, 307-317.	0.5	71
15	Risk assessment modelling of microbiology-related solids separation problems in activated sludge systems. <i>Environmental Modelling and Software</i> , 2008, 23, 1250-1261.	1.9	71
16	Optimized MBR for greywater reuse systems in hotel facilities. <i>Journal of Environmental Management</i> , 2017, 193, 503-511.	3.8	69
17	Instrumentation, control and automation in wastewater â€” from London 1973 to Narbonne 2013. <i>Water Science and Technology</i> , 2014, 69, 1373-1385.	1.2	68
18	A new perforated core buckling restrained brace. <i>Engineering Structures</i> , 2015, 85, 118-126.	2.6	65

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19	Cracking and deflections in GFRP RC beams: An experimental study. <i>Composites Part B: Engineering</i> , 2013, 55, 580-590.	5.9	63
20	A hybrid supervisory system to support WWTP operation: implementation and validation. <i>Water Science and Technology</i> , 2002, 45, 289-297.	1.2	62
21	Automatic control systems for submerged membrane bioreactors: A state-of-the-art review. <i>Water Research</i> , 2012, 46, 3421-3433.	5.3	62
22	Removal of ibuprofen and its transformation products: Experimental and simulation studies. <i>Science of the Total Environment</i> , 2012, 433, 296-301.	3.9	60
23	Fate of pharmaceuticals and their transformation products in integrated membrane systems for wastewater reclamation. <i>Chemical Engineering Journal</i> , 2018, 331, 450-461.	6.6	59
24	Integrated assessment of sulfate-based AOPs for pharmaceutical active compound removal from wastewater. <i>Journal of Cleaner Production</i> , 2020, 260, 121014.	4.6	58
25	A comparative study on the use of similarity measures in case-based reasoning to improve the classification of environmental system situations. <i>Environmental Modelling and Software</i> , 2004, 19, 809-819.	1.9	57
26	Including the environmental criteria when selecting a wastewater treatment plant. <i>Environmental Modelling and Software</i> , 2014, 56, 74-82.	1.9	57
27	Retrofitting membrane bioreactor (MBR) into osmotic membrane bioreactor (OMBR): A pilot scale study. <i>Chemical Engineering Journal</i> , 2018, 339, 268-277.	6.6	57
28	Multi-criteria selection of optimum WWTP control setpoints based on microbiology-related failures, effluent quality and operating costs. <i>Chemical Engineering Journal</i> , 2012, 188, 23-29.	6.6	51
29	Using a detailed inventory of a large wastewater treatment plant to estimate the relative importance of construction to the overall environmental impacts. <i>Water Research</i> , 2017, 122, 614-623.	5.3	50
30	Optimization of biological nutrient removal in a pilot plant UCT-MBR treating municipal wastewater during start-up. <i>Desalination</i> , 2010, 250, 592-597.	4.0	49
31	Benchmark simulation models, quo vadis?. <i>Water Science and Technology</i> , 2013, 68, 1-15.	1.2	49
32	Comparison of a deterministic and a data driven model to describe MBR fouling. <i>Chemical Engineering Journal</i> , 2015, 260, 300-308.	6.6	49
33	UV/H <sub>2</sub> O <sub>2</sub> degradation of the antidepressants venlafaxine and O-desmethylenlafaxine: Elucidation of their transformation pathway and environmental fate. <i>Journal of Hazardous Materials</i> , 2016, 311, 70-80.	6.5	46
34	Management of Urban Waters with Nature-Based Solutions in Circular Cities—Exemplified through Seven Urban Circularity Challenges. <i>Water (Switzerland)</i> , 2021, 13, 3334.	1.2	46
35	The impact of wastewater matrix on the degradation of pharmaceutically active compounds by oxidation processes including ultraviolet radiation and sulfate radicals. <i>Journal of Hazardous Materials</i> , 2019, 380, 120869.	6.5	45
36	Energy Saving in a Wastewater Treatment Process: an Application of Fuzzy Logic Control. <i>Environmental Technology (United Kingdom)</i> , 2005, 26, 1263-1270.	1.2	43

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37	Assessment of energy-saving strategies and operational costs in full-scale membrane bioreactors. <i>Journal of Environmental Management</i> , 2014, 134, 8-14.	3.8	40
38	Selection of industrial (food, drink and milk sector) wastewater treatment technologies: A multi-criteria assessment. <i>Journal of Cleaner Production</i> , 2017, 143, 180-190.	4.6	40
39	Placing ecosystem services at the heart of urban water systems management. <i>Science of the Total Environment</i> , 2016, 563-564, 1078-1085.	3.9	39
40	Towards a model of input–output behaviour of wastewater treatment plants using soft computing techniques. <i>Environmental Modelling and Software</i> , 1999, 14, 409-419.	1.9	38
41	A knowledge-based approach to the deflocculation problem: integrating on-line, off-line, and heuristic information. <i>Water Research</i> , 2003, 37, 2377-2387.	5.3	37
42	Validation of a decision support tool for wastewater treatment selection. <i>Journal of Environmental Management</i> , 2016, 184, 409-418.	3.8	37
43	Online monitoring of membrane fouling in submerged MBRs. <i>Desalination</i> , 2011, 277, 414-419.	4.0	36
44	Towards integrated operation of membrane bioreactors: Effects of aeration on biological and filtration performance. <i>Bioresource Technology</i> , 2014, 171, 103-112.	4.8	36
45	Optimization of full-scale membrane bioreactors for wastewater treatment through a model-based approach. <i>Chemical Engineering Journal</i> , 2015, 267, 34-42.	6.6	36
46	Automatic control system for energy optimization in membrane bioreactors. <i>Desalination</i> , 2011, 268, 276-280.	4.0	35
47	A new modular buckling restrained brace for seismic resistant buildings. <i>Engineering Structures</i> , 2013, 56, 1967-1975.	2.6	35
48	Advanced oxidation of the antibiotic sulfapyridine by UV/H <sub>2</sub> O <sub>2</sub> : Characterization of its transformation products and ecotoxicological implications. <i>Chemosphere</i> , 2016, 147, 451-459.	4.2	35
49	Scenario analysis for the role of sanitation infrastructures in integrated urban wastewater management. <i>Environmental Modelling and Software</i> , 2009, 24, 371-380.	1.9	34
50	Do machine learning methods used in data mining enhance the potential of decision support systems? A review for the urban water sector. <i>AI Communications</i> , 2016, 29, 747-756.	0.8	34
51	Model development and simulation for predicting risk of foaming in anaerobic digestion systems. <i>Bioresource Technology</i> , 2010, 101, 4306-4314.	4.8	32
52	Including the effects of filamentous bulking sludge during the simulation of wastewater treatment plants using a risk assessment model. <i>Water Research</i> , 2009, 43, 4527-4538.	5.3	31
53	Assessing stormwater control measures using modelling and a multi-criteria approach. <i>Journal of Environmental Management</i> , 2019, 243, 257-268.	3.8	29
54	Optimal maintenance of constructed wetlands using an environmental decision support system. <i>Water Science and Technology</i> , 2005, 51, 109-117.	1.2	28

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55	Full-scale validation of an air scour control system for energy savings in membrane bioreactors. <i>Water Research</i> , 2015, 79, 1-9.	5.3	28
56	Volatile fatty acids concentration in real wastewater by forward osmosis. <i>Journal of Membrane Science</i> , 2019, 575, 60-70.	4.1	28
57	Nature-based solutions coupled with advanced technologies: An opportunity for decentralized water reuse in cities. <i>Journal of Cleaner Production</i> , 2022, 340, 130660.	4.6	28
58	Constructed wetland clogging: A proposal for the integration and reuse of existing knowledge. <i>Ecological Engineering</i> , 2009, 35, 1710-1718.	1.6	27
59	Fate of NDMA precursors through an MBR-NF pilot plant for urban wastewater reclamation and the effect of changing aeration conditions. <i>Water Research</i> , 2016, 102, 383-393.	5.3	26
60	Development of a decision tree for the integrated operation of nutrient removal MBRs based on simulation studies and expert knowledge. <i>Chemical Engineering Journal</i> , 2013, 217, 174-184.	6.6	25
61	An integrated knowledge-based and optimization tool for the sustainable selection of wastewater treatment process concepts. <i>Environmental Modelling and Software</i> , 2016, 84, 177-192.	1.9	25
62	Development of a knowledge-based decision support system for identifying adequate wastewater treatment for small communities. <i>Water Science and Technology</i> , 2004, 48, 393-400.	1.2	24
63	Application of multivariable statistical techniques in plant-wide WWTP control strategies analysis. <i>Water Science and Technology</i> , 2007, 56, 75-83.	1.2	24
64	Evaluation of different practices to estimate construction inventories for life cycle assessment of small to medium wastewater treatment plants. <i>Journal of Cleaner Production</i> , 2020, 245, 118768.	4.6	21
65	A new rule generation method to develop a decision support system for integrated management at river basin scale. <i>Water Science and Technology</i> , 2009, 60, 2035-2040.	1.2	20
66	Life cycle assessment of construction and renovation of sewer systems using a detailed inventory tool. <i>International Journal of Life Cycle Assessment</i> , 2016, 21, 1121-1133.	2.2	20
67	Connection of neighboring wastewater treatment plants: economic and environmental assessment. <i>Journal of Cleaner Production</i> , 2015, 90, 34-42.	4.6	19
68	Can osmotic membrane bioreactor be a realistic solution for water reuse?. <i>Npj Clean Water</i> , 2018, 1, .	3.1	19
69	Environmental decision support systems: A new approach to support the operation and maintenance of horizontal subsurface flow constructed wetlands. <i>Ecological Engineering</i> , 2007, 30, 362-372.	1.6	18
70	Assessing Urban Wastewater System Upgrades Using Integrated Modeling, Life Cycle Analysis, and Shadow Pricing. <i>Environmental Science &amp; Technology</i> , 2016, 50, 12548-12556.	4.6	18
71	Ragging phenomenon characterisation and impact in a full-scale MBR. <i>Water Science and Technology</i> , 2013, 67, 810-816.	1.2	17
72	Biogas purification through membrane bioreactors: Experimental study on siloxane separation and biodegradation. <i>Separation and Purification Technology</i> , 2020, 238, 116440.	3.9	17

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73	Evaluating the application of a decision support system in identifying adequate wastewater treatment for small communities. A case study: the Fluvia River Basin. <i>Water Science and Technology</i> , 2005, 51, 179-186.	1.2	16
74	Incorporating model uncertainty into the evaluation of interventions to reduce microcontaminant loads in rivers. <i>Water Research</i> , 2017, 124, 415-424.	5.3	16
75	Balancing environmental quality standards and infrastructure upgrade costs for the reduction of microcontaminant loads in rivers. <i>Water Research</i> , 2018, 143, 632-641.	5.3	16
76	An Approach for Temporal Case-Based Reasoning: Episode-Based Reasoning. <i>Lecture Notes in Computer Science</i> , 2005, , 465-476.	1.0	15
77	Demonstration of a tool for automatic learning and re-use of knowledge in the activated sludge process. <i>Water Science and Technology</i> , 2006, 53, 303-311.	1.2	15
78	A knowledge-based control system for air-scour optimisation in membrane bioreactors. <i>Water Science and Technology</i> , 2011, 63, 2025-2031.	1.2	15
79	Exploring the potential of applying proteomics for tracking bisphenol A and nonylphenol degradation in activated sludge. <i>Chemosphere</i> , 2013, 90, 2309-2314.	4.2	15
80	Evaluation of plant-wide WWTP control strategies including the effects of filamentous bulking sludge. <i>Water Science and Technology</i> , 2009, 60, 2093-2103.	1.2	14
81	Knowledge-based control module for start-up of flat sheet MBRs. <i>Bioresource Technology</i> , 2012, 106, 50-54.	4.8	14
82	Chapter Twelve Data Mining for Environmental Systems. <i>Developments in Integrated Environmental Assessment</i> , 2008, , 205-228.	0.0	13
83	Knowledge-based system for automatic MBR control. <i>Water Science and Technology</i> , 2010, 62, 2829-2836.	1.2	13
84	Model-based knowledge acquisition in environmental decision support system for wastewater integrated management. <i>Water Science and Technology</i> , 2012, 65, 1123-1129.	1.2	13
85	Characterisation of RO fouling in an integrated MBR/RO system for wastewater reuse. <i>Water Science and Technology</i> , 2013, 67, 780-788.	1.2	13
86	Automatic Knowledge Acquisition from Complex Processes for the Development of Knowledge-Based Systems. <i>Industrial &amp; Engineering Chemistry Research</i> , 2001, 40, 3353-3360.	1.8	12
87	Development of a Case-Based System for the Supervision of an Activated Sludge Process. <i>Environmental Technology (United Kingdom)</i> , 2001, 22, 477-486.	1.2	12
88	Influence of microalgae wastewater treatment culturing conditions on forward osmosis concentration process. <i>Environmental Science and Pollution Research</i> , 2020, 27, 1234-1245.	2.7	12
89	Advanced control system for reverse osmosis optimization in water reuse systems. <i>Desalination</i> , 2021, 518, 115284.	4.0	12
90	Exploring the ecological status of human altered streams through Generative Topographic Mapping. <i>Environmental Modelling and Software</i> , 2007, 22, 1053-1065.	1.9	11

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91	Development of a control algorithm for air scour reduction in membrane bioreactors for wastewater treatment. <i>Journal of Chemical Technology and Biotechnology</i> , 2011, 86, 784-789.	1.6	11
92	Feasibility of vertical ecosystem for sustainable water treatment and reuse in touristic resorts. <i>Journal of Environmental Management</i> , 2021, 294, 112968.	3.8	11
93	Pilot Plant Evaluation for Hydrogen Sulphide Biological Treatment: Determination of Optimal Conditions Linking Experimental and Mathematical Modelling. <i>Environmental Technology (United Kingdom)</i> , 2021, 42(10), 1141-1150.	1.0	1
94	Extension of the IWA/COST simulation benchmark to include expert reasoning for system performance evaluation. <i>Water Science and Technology</i> , 2006, 53, 331-339.	1.2	10
95	Submerged Osmotic Processes: Design and Operation to Mitigate Mass Transfer Limitations. <i>Membranes</i> , 2018, 8, 72.	1.4	10
96	Integrated membrane bioreactors modelling: A review on new comprehensive modelling framework. <i>Bioresource Technology</i> , 2021, 329, 124828.	4.8	10
97	Case-based reasoning, a promising tool to face solids separation problems in the activated sludge process. <i>Water Science and Technology</i> , 2006, 53, 209-216.	1.2	9
98	Multidimensional research on university engagement using a mixed method approach. <i>Educación XXI</i> , 2021, 24, .	0.3	9
99	ENVIRONMENTAL DECISION SUPPORT SYSTEMS BASED ON MODELS AND MODEL-BASED REASONING. <i>Environmental Engineering and Management Journal</i> , 2010, 9, 189-195.	0.2	9
100	Role playing games: a methodology to acquire knowledge for integrated wastewater infrastructures management in a river basin scale. <i>Water Science and Technology</i> , 2009, 59, 1809-1816.	1.2	8
101	Validation of a Simple Fouling Model for a Submerged Membrane Bioreactor. <i>IFAC-PapersOnLine</i> , 2015, 48, 737-742.	0.5	8
102	Can source control of pharmaceuticals decrease the investment needs in urban wastewater infrastructure?. <i>Journal of Hazardous Materials</i> , 2021, 407, 124375.	6.5	8
103	Ragging in MBR: Effects of Operational Conditions, Chemical Cleaning, and Pre-Treatment Improvements. <i>Separation Science and Technology</i> , 2014, 49, 2115-2123.	1.3	7
104	Exploring the limitations of forward osmosis for direct hydroponic fertigation: Impact of ion transfer and fertilizer composition on effective dilution. <i>Journal of Environmental Management</i> , 2022, 305, 114339.	3.8	7
105	Chapter Eight Intelligent Environmental Decision Support Systems. <i>Developments in Integrated Environmental Assessment</i> , 2008, 3, 119-144.	0.0	6
106	Selecting the Most Relevant Variables for Anaerobic Digestion Imbalances: Two Case Studies. <i>Water Environment Research</i> , 2010, 82, 492-498.	1.3	6
107	Position paper " progress towards standards in integrated (aerobic) MBR modelling. <i>Water Science and Technology</i> , 2020, 81, 1-9.	1.2	6
108	Integrating empirical and heuristic knowledge in a KBS to approach stream eutrophication. <i>Ecological Modelling</i> , 2009, 220, 2162-2172.	1.2	5

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109	Crossing the Death Valley to Transfer Environmental Decision Support Systems to the Water Market. <i>Global Challenges</i> , 2017, 1, 1700009.	1.8	5
110	A hybrid supervisory system to support WWTP operation: implementation and validation. <i>Water Science and Technology</i> , 2002, 45, 289-97.	1.2	5
111	Development of a knowledge-based decision support system for identifying adequate wastewater treatment for small communities. <i>Water Science and Technology</i> , 2003, 48, 393-400.	1.2	5
112	DEVELOPMENT AND IMPLEMENTATION OF AN EXPERT SYSTEM TO IMPROVE THE CONTROL OF NITRIFICATION AND DENITRIFICATION IN THE VIC WASTEWATER TREATMENT PLANT. <i>Environmental Technology (United Kingdom)</i> , 2002, 23, 1007-1014.	0.0	0
113	Improvement of Sand Filter and Constructed Wetland Design using an Environmental Decision Support System. <i>Journal of Environmental Quality</i> , 2008, 37, 1644-1647.	1.0	4
114	Dynamic reasoning to solve complex problems in activated sludge processes: a step further in decision support systems. <i>Water Science and Technology</i> , 2006, 53, 191-198.	1.2	3
115	Model-based methodology for the design of optimal control strategies in MBR plants. <i>Water Science and Technology</i> , 2017, 75, 2546-2553.	1.2	3
116	IMPROVEMENTS OF THE DECISION SUPPORT SYSTEM AT THE GRANOLLERS WWTP. <i>Proceedings of the Water Environment Federation</i> , 2002, 2002, 416-424.	0.0	2
117	Environmental sciences and artificial intelligence. <i>Environmental Modelling and Software</i> , 2004, 19, 761-762.	1.9	2
118	Developing an artificial intelligence-based WRRF nitrous oxide mitigation road map: The Eindhoven N2O mitigation case study. <i>Proceedings of the Water Environment Federation</i> , 2017, 2017, 1703-1715.	0.0	2
119	Building an integrated AI and mathematical modeling framework for online supervision and control of water resource recovery facilities. <i>Proceedings of the Water Environment Federation</i> , 2018, 2018, 4025-4028.	0.0	2
120	Improving the Efficiency of Case-Based Reasoning to deal with Activated Sludge Solids Separation Problems. <i>Environmental Technology (United Kingdom)</i> , 2006, 27, 585-596.	1.2	1
121	Decision Support Systems for Integrated Water Resources Management Under Water Scarcity. <i>Handbook of Environmental Chemistry</i> , 2009, , 129-146.	0.2	1
122	Potential and Challenges of Osmotic Membrane Bioreactor (OMBR) for (Potable) Water Reuse: A Pilot Scale Study. <i>Lecture Notes in Civil Engineering</i> , 2017, , 188-192.	0.3	1
123	Multi-criteria Evaluation of Sustainable Urban Drainage Systems. <i>Green Energy and Technology</i> , 2019, , 269-274.	0.4	1
124	Development of an algorithm for air-scour optimization in membrane bioreactors. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011, 44, 3795-3799.	0.4	0
125	The Use of a Sewers-WWTPs-River Integrated Model Allows the Efficient Minimization of Ammonia Peaks and Oxygen Dips in a River. <i>Proceedings of the Water Environment Federation</i> , 2011, 2011, 279-288.	0.0	0
126	Proteomics reliability for micropollutants degradation insight into activated sludge systems. <i>Water Science and Technology</i> , 2015, 72, 882-888.	1.2	0



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127	VALIDATION OF A KNOWLEDGE-BASED RISK MODEL FOR BIOLOGICAL FOAMING IN ANAEROBIC DIGESTION SIMULATION. Environmental Engineering and Management Journal, 2010, 9, 223-229.	0.2	0
128	Reshaping the Activated Sludge Model ASM2d for Better Manageability and Higher Integration Potential. Lecture Notes in Civil Engineering, 2017, , 583-587.	0.3	0
129	Removal of Pharmaceuticals from WWTP Secondary Effluent with Biofilters. Lecture Notes in Civil Engineering, 2017, , 281-286.	0.3	0
130	INNOVATIVE EDUCATION FOR NEW LEADING PROFESSIONALS REQUIRED IN THE WATER SECTOR. , 0, , .		0