Paul A Lant

List of Publications by Year
in descending order

134 papers	9,303 citations	36303 51 h-index	39675 94 g-index
135 all docs	135 docs citations	135 times ranked	8535 citing authors

#	Article	IF	Citations
1	The influence of key chemical constituents in activated sludge on surface and flocculating properties. Water Research, 2003, 37, 2127-2139.	11.3	515
2	The chemomechanical properties of microbial polyhydroxyalkanoates. Progress in Polymer Science, 2013, 38, 536-583.	24.7	372
3	Simultaneous nitrification and denitrification in bench-scale sequencing batch reactors. Water Research, 1996, 30, 277-284.	11.3	364
4	Nitrous oxide generation in full-scale biological nutrient removal wastewater treatment plants. Water Research, 2010, 44, 831-844.	11.3	352
5	Impacts of morphological, physical and chemical properties of sludge flocs on dewaterability of activated sludge. Chemical Engineering Journal, 2004, 98, 115-126.	12.7	346
6	Comprehensive life cycle inventories of alternative wastewater treatment systems. Water Research, 2010, 44, 1654-1666.	11.3	329
7	A comprehensive insight into floc characteristics and their impact on compressibility and settleability of activated sludge. Chemical Engineering Journal, 2003, 95, 221-234.	12.7	313
8	Activated sludge flocculation: on-line determination of floc size and the effect of shear. Water Research, 2000, 34, 2542-2550.	11.3	297
9	Life Cycle Assessment of High-Rate Anaerobic Treatment, Microbial Fuel Cells, and Microbial Electrolysis Cells. Environmental Science & Technology, 2010, 44, 3629-3637.	10.0	247
10	Decreasing activated sludge thermal hydrolysis temperature reduces product colour, without decreasing degradability. Water Research, 2008, 42, 4699-4709.	11.3	242
11	Enrichment of denitrifying anaerobic methane oxidizing microorganisms. Environmental Microbiology Reports, 2009, 1, 377-384.	2.4	196
12	N2O production rate of an enriched ammonia-oxidising bacteria culture exponentially correlates to its ammonia oxidation rate. Water Research, 2012, 46, 3409-3419.	11.3	190
13	Weak Links in the Chain: A Diagnosis of Health Policy in Poor Countries. World Bank Research Observer, 2000, 15, 199-224.	6.0	185
14	The chemomechanical properties of microbial polyhydroxyalkanoates. Progress in Polymer Science, 2014, 39, 397-442.	24.7	166
15	Environmental impact of biodegradable food packaging when considering food waste. Journal of Cleaner Production, 2018, 180, 325-334.	9.3	156
16	The effect of pH on N2O production under aerobic conditions in a partial nitritation system. Water Research, 2011, 45, 5934-5944.	11.3	152
17	Production of volatile fatty acids by fermentation of waste activated sludge pre-treated in full-scale thermal hydrolysis plants. Bioresource Technology, 2011, 102, 3089-3097.	9.6	149
18	Comparative life cycle assessment and financial analysis of mixed culture polyhydroxyalkanoate production. Bioresource Technology, 2007, 98, 3393-3403.	9.6	142

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19	Soft-sensors for process estimation and inferential control. Journal of Process Control, 1991, 1, 3-14.	3.3	140
20	The connection between water and energy in cities: a review. Water Science and Technology, 2011, 63, 1983-1990.	2.5	140
21	Public attitudes towards bioplastics â€“ knowledge, perception and end-of-life management. Resources, Conservation and Recycling, 2019, 151, 104479.	10.8	139
22	Production of polyhydroxyalkanoates in open, mixed cultures from a waste sludge stream containing high levels of soluble organics, nitrogen and phosphorus. Water Research, 2010, 44, 5196-5211.	11.3	138
23	High pressure thermal hydrolysis as pre-treatment to increase the methane yield during anaerobic digestion of microalgae. Bioresource Technology, 2013, 131, 128-133.	9.6	135
24	Simultaneous saccharification and fermentation of potato starch wastewater to lactic acid by Rhizopus oryzae and Rhizopus arrhizus. Biochemical Engineering Journal, 2005, 23, 265-276.	3.6	117
25	Energy use for water provision in cities. Journal of Cleaner Production, 2017, 143, 699-709.	9.3	109
26	Environmental Benefits and Burdens of Phosphorus Recovery from Municipal Wastewater. Environmental Science & Technology, 2015, 49, 8611-8622.	10.0	106
27	Impacts of structural characteristics on activated sludge floc stability. Water Research, 2003, 37, 3632-3645.	11.3	105
28	Effect of nitrate and nitrite on the selection of microorganisms in the denitrifying anaerobic methane oxidation process. Environmental Microbiology Reports, 2011, 3, 315-319.	2.4	103
29	Techno-economic assessment of poly-3-hydroxybutyrate (PHB) production from methaneâ€"The case for thermophilic bioprocessing. Journal of Environmental Chemical Engineering, 2016, 4, 3724-3733.	6.7	102
30	Thiocyanate degradation during activated sludge treatment of coke-ovens wastewater. Biochemical Engineering Journal, 2007, 34, 122-130.	3.6	98
31	The Opportunity for High-Performance Biomaterials from Methane. Microorganisms, 2016, 4, 11.	3.6	97
32	Fossil organic carbon in wastewater and its fate in treatment plants. Water Research, 2013, 47, 5270-5281.	11.3	96
33	Physicochemical and mechanical properties of mixed culture polyhydroxyalkanoate (PHBV). European Polymer Journal, 2013, 49, 904-913.	5.4	90
34	Modelling the activated sludge flocculation process combining laser light diffraction particle sizing and population balance modelling (PBM). Water Science and Technology, 2002, 45, 41-49.	2.5	86
35	Dissolved methane in rising main sewer systems: field measurements and simple model development for estimating greenhouse gas emissions. Water Science and Technology, 2009, 60, 2963-2971.	2.5	85
36	Eliminating non-renewable CO2 emissions from sewage treatment: An anaerobic migrating bed reactor pilot plant study. Biotechnology and Bioengineering, 2006, 95, 384-398.	3.3	80

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37	Biodegradation in a soil environment of activated sludge derived polyhydroxyalkanoate (PHBV). Polymer Degradation and Stability, 2012, 97, 2301-2312.	5.8	80
38	The Confounding Effect of Nitrite on N₂O Production by an Enriched Ammonia-Oxidizing Culture. Environmental Science & Technology, 2013, 47, 7186-7194.	10.0	77
39	Imagining an interdisciplinary doctoral pedagogy. Teaching in Higher Education, 2006, 11, 365-379.	2.6	76
40	A laboratory investigation of interactions between denitrifying anaerobic methane oxidation (DAMO) and anammox processes in anoxic environments. Scientific Reports, 2015, 5, 8706.	3.3	71
41	Food waste consequences: Environmentally extended input-output as a framework for analysis. Journal of Cleaner Production, 2017, 153, 506-514.	9.3	71
42	Rapid quantification of intracellular PHA using infrared spectroscopy: An application in mixed cultures. Journal of Biotechnology, 2010, 150, 372-379.	3.8	69
43	Biotechnological production of lactic acid integrated with potato wastewater treatment byRhizopus arrhizus. Journal of Chemical Technology and Biotechnology, 2003, 78, 899-906.	3.2	65
44	Modelling activated sludge flocculation using population balances. Powder Technology, 2002, 124, 201-211.	4.2	63
45	The degradation of dissolved organic nitrogen associated with melanoidin using a UV/H2O2 AOP. Chemosphere, 2008, 71, 1745-1753.	8.2	62
46	Water-related energy in households: A model designed to understand the current state and simulate possible measures. Energy and Buildings, 2013, 58, 378-389.	6.7	60
47	Enhanced lipid extraction from algae using free nitrous acid pretreatment. Bioresource Technology, 2014, 159, 36-40.	9.6	58
48	The diverse environmental burden of city-scale urban water systems. Water Research, 2015, 81, 398-415.	11.3	56
49	Simultaneous colour and DON removal from sewage treatment plant effluent: Alum coagulation of melanoidin. Water Research, 2009, 43, 553-561.	11.3	55
50	In situ respirometry in an SBR treating wastewater with high phenol concentrations. Water Research, 2000, 34, 239-245.	11.3	53
51	Multivariable control of nutrient-removing activated sludge systems. Water Research, 1999, 33, 2864-2878.	11.3	51
52	A systemic framework and analysis of urban water energy. Environmental Modelling and Software, 2015, 73, 272-285.	4.5	51
53	Mathematical modelling of prefermentersâ€"I. Model development and verification. Water Research, 1999, 33, 2757-2768.	11.3	50
54	Inhibition by fatty acids during fermentation of pre-treated waste activated sludge. Journal of Biotechnology, 2012, 159, 38-43.	3.8	49

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55	A systematic approach for reducing complex biological wastewater treatment models. Water Research, 1997, 31, 590-606.	11.3	45
56	Rhizopus arrhizusâ€“ a producer for simultaneous saccharification and fermentation of starch waste materials to l(+)-lactic acid. Biotechnology Letters, 2003, 25, 1983-1987.	2.2	45
57	Relationship between flocculation of activated sludge and composition of extracellular polymeric substances. Water Science and Technology, 2003, 47, 95-103.	2.5	45
58	Quantifying waterâ€“energy links and related carbon emissions in cities. Journal of Water and Climate Change, 2011, 2, 247-259.	2.9	45
59	Crystallisation and fractionation of selected polyhydroxyalkanoates produced from mixed cultures. New Biotechnology, 2014, 31, 345-356.	4.4	45
60	Hydrodynamics and mass transfer coefficient in three-phase air-lift reactors containing activated sludge. Chemical Engineering and Processing: Process Intensification, 2006, 45, 608-617.	3.6	44
61	The contribution of bacteria to algal growth by carbon cycling. Biotechnology and Bioengineering, 2015, 112, 688-695.	3.3	44
62	Understanding Australian household water-related energy use and identifying physical and human characteristics of major end uses. Journal of Cleaner Production, 2016, 135, 892-906.	9.3	44
63	Rural energy planning remains out-of-step with contemporary paradigms of energy access and development. Renewable and Sustainable Energy Reviews, 2017, 67, 1412-1419.	16.4	44
64	Flow regime, hydrodynamics, floc size distribution and sludge properties in activated sludge bubble column, air-lift and aerated stirred reactors. Chemical Engineering Science, 2004, 59, 2379-2388.	3.8	43
65	Direct fermentation of potato starch wastewater to lactic acid by Rhizopus oryzae and Rhizopus arrhizus. Bioprocess and Biosystems Engineering, 2005, 27, 229-238.	3.4	41
66	Phosphorus recovery from centralised municipal water recycling plants. Chemical Engineering Research and Design, 2012, 90, 78-85.	5.6	40
67	Balancing Curriculum Processes and Content in a Project Centred Curriculum. Education for Chemical Engineers, 2006, 1, 39-48.	4.8	38
68	Biodegradability of DOC and DON for UV/H2O2 pre-treated melanoidin based wastewater. Biochemical Engineering Journal, 2008, 42, 47-54.	3.6	36
69	Activated sludge flocculation: direct determination of the effect of calcium ions. Water Science and Technology, 2001, 43, 75-82.	2.5	35
70	Model development for simultaneous nitrification and denitrification. Water Science and Technology, 1999, 39, 235.	2.5	33
71	Modelling the effect of shear history on activated sludge flocculation. Water Science and Technology, 2003, 47, 251-257.	2.5	33
72	Bacterial growth dynamics in activated sludge batch assays. Water Research, 1998, 32, 587-596.	11.3	32

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73	Focused beam reflectance technique forin situ particle sizing in wastewater treatment settling tanks. Journal of Chemical Technology and Biotechnology, 2004, 79, 610-618.	3.2	32
74	In-line monitoring of thermal degradation of PHA during melt-processing by Near-Infrared spectroscopy. New Biotechnology, 2014, 31, 357-363.	4.4	31
75	Comparison of water-energy trajectories of two major regions experiencing water shortage. Journal of Environmental Management, 2016, 181, 403-412.	7.8	31
76	Enhanced methane production from algal digestion using free nitrous acid pre-treatment. Renewable Energy, 2016, 88, 383-390.	8.9	31
77	Bioprocess applications of model-based estimation techniques. Journal of Chemical Technology and Biotechnology, 2007, 53, 265-277.	3.2	30
78	Evaluating industry-based doctoral research programs: perspectives and outcomes of Australian Cooperative Research Centre graduates. Studies in Higher Education, 2012, 37, 843-858.	4.5	30
79	Waste Activated Sludge as Biomass for Production of Commercial-Grade Polyhydroxyalkanoate (PHA). Waste and Biomass Valorization, 2013, 4, 117-127.	3.4	30
80	Thermal properties and crystallization behavior of fractionated blocky and random polyhydroxyalkanoate copolymers from mixed microbial cultures. Journal of Applied Polymer Science, 2014, 131, .	2.6	29
81	Developing professional researchers: research studentsâ€™ graduate attributes. Studies in Continuing Education, 2007, 29, 19-36.	1.9	28
82	Defection, recruitment and social change in cooking practices: Energy poverty through a social practice lens. Energy Research and Social Science, 2017, 34, 272-280.	6.4	27
83	Microaerophilic conditions support elevated mixed culture polyhydroxyalkanoate (PHA) yields, but result in decreased PHA production rates. Water Science and Technology, 2012, 65, 243-246.	2.5	23
84	Value-added bioplastics from services of wastewater treatment. Water Practice and Technology, 2015, 10, 546-555.	2.0	23
85	Including N2O in ozone depletion models for LCA. International Journal of Life Cycle Assessment, 2012, 17, 252-257.	4.7	21
86	The challenge of characterising food waste at a national levelâ€”An Australian example. Environmental Science and Policy, 2017, 78, 157-166.	4.9	21
87	Polyhydroxyalkanoate coatings restrict moisture uptake and associated loss of barrier properties of thermoplastic starch films. Journal of Applied Polymer Science, 2018, 135, 46379.	2.6	21
88	The effect of water demand management in showers on household energy use. Journal of Cleaner Production, 2017, 157, 177-189.	9.3	20
89	Household analysis identifies water-related energy efficiency opportunities. Energy and Buildings, 2016, 131, 21-34.	6.7	19
90	Biodegradation of high strength phenolic wastewater using SBR. Water Science and Technology, 2001, 43, 299-306.	2.5	18

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91	How Do We Ensure Good PhD Student Outcomes?. Education for Chemical Engineers, 2006, 1, 72-81.	4.8	18
92	City-scale analysis of water-related energy identifies more cost-effective solutions. Water Research, 2017, 109, 287-298.	11.3	17
93	Thermophilic production of poly(3-hydroxybutyrate-co-3-hydrovalerate) by a mixed methane-utilizing culture. New Biotechnology, 2019, 53, 49-56.	4.4	16
94	Solids characterisation in an anaerobic migrating bed reactor (AMBR) sewage treatment system. Water Research, 2007, 41, 2437-2448.	11.3	15
95	Balancing Curriculum Processes and Content in a Project Centred Curriculum. Chemical Engineering Research and Design, 2006, 84, 619-628.	5.6	14
96	Characterising bioreactor mixing with residence time distribution (RTD) tests. Water Science and Technology, 1998, 37, 43.	2.5	13
97	Life-cycle energy impacts for adapting an urban water supply system to droughts. Water Research, 2017, 127, 139-149.	11.3	13
98	The influence of high phenol concentration on microbial growth. Water Science and Technology, 1997, 36, 75.	2.5	12
99	Regional normalisation figures for Australia 2005/2006â€"inventory and characterisation data from a production perspective. International Journal of Life Cycle Assessment, 2009, 14, 215-224.	4.7	11
100	On the applicability of adaptive bioprocess state estimators. Biotechnology and Bioengineering, 1993, 42, 1311-1321.	3.3	10
101	Output strutural controllability: a tool for integrated process design and control. Journal of Process Control, 1998, 8, 57-68.	3.3	10
102	Sequencing batch reactor technology: the key to a BP refinery (Bulwer Island) upgraded environmental protection system - a low cost lagoon based retro-fit. Water Science and Technology, 2001, 43, 339-346.	2.5	10
103	Direct fermentation of potato starch in wastewater to lactic acid byRhizopus oryzae. Biotechnology and Bioprocess Engineering, 2004, 9, 245-251.	2.6	10
104	Mathematical modelling of prefermentersâ€"II. Model applications. Water Research, 1999, 33, 2844-2854.	11.3	9
105	Using the flexibility index to compare batch and continuous activated sludge processes. Water Science and Technology, 2001, 43, 35-43.	2.5	9
106	Microbial community analysis during continuous fermentation of thermally hydrolysed waste activated sludge. Water Science and Technology, 2012, 65, 7-14.	2.5	9
107	Modelling microalgal activity as a function of inorganic carbon concentration: accounting for the impact of pH on the bicarbonate system. Journal of Applied Phycology, 2014, 26, 1343-1350.	2.8	9
108	Enhanced triacylglyceride extraction from microalgae using free nitrous acid pre-treatment. Applied Energy, 2015, 154, 183-189.	10.1	9

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109	Optimization and Control of Nitrogen Removal Activated Sludge Processes: A Review of Recent Developments. Focus on Biotechnology, 2003, , 187-227.	0.4	9
110	Benchmarking for process control: â€œShould I invest in improved process control?â€• Water Science and Technology, 1998, 37, 49.	2.5	8
111	Development of a novel electrochemical system for oxygen control (ESOC) to examine dissolved oxygen inhibition on algal activity. Biotechnology and Bioengineering, 2013, 110, 2405-2411.	3.3	8
112	Producing a CO2-neutral clean cooking fuel in IndiaÂâ€“ Where and at what cost?. International Journal of Hydrogen Energy, 2017, 42, 19067-19078.	7.1	8
113	Control relevant model reduction: a reduced order model for â€˜model IVâ€™ fluid catalytic cracking units. Journal of Process Control, 1994, 4, 3-14.	3.3	5
114	Increasing Flexibility in the Design of Wastewater Treatment Processes. Water Environment Research, 2001, 73, 486-493.	2.7	5
115	Introduction to Chemical Product Design. Education for Chemical Engineers, 2006, 1, 66-71.	4.8	5
116	Can coal-derived DME reduce the dependence on solid cooking fuels in India?. Energy for Sustainable Development, 2017, 37, 51-59.	4.5	5
117	Energy implications of the millennium drought on urban water cycles in Southeast Australian cities. Water Science and Technology: Water Supply, 2018, 18, 214-221.	2.1	5
118	Is MSW derived DME a viable clean cooking fuel in Kolkata, India?. Renewable Energy, 2018, 124, 50-60.	8.9	5
119	Direct and indirect water use within the Australian economy. Water Policy, 2018, 20, 1227-1239.	1.5	5
120	Advanced process control for biological nutrient removal. Water Science and Technology, 1999, 39, 97.	2.5	3
121	Hydrodynamics and mass transfer coefficient in activated sludge aerated stirred column reactor: experimental analysis and modeling. Biotechnology and Bioengineering, 2005, 91, 406-417.	3.3	3
122	Regional-scale variability of cold water temperature: Implications for household water-related energy demand. Resources, Conservation and Recycling, 2017, 124, 107-115.	10.8	3
123	The Transition to Improved Water-Related Energy Management: Enabling Contexts for Policy Innovation. Water (Switzerland), 2020, 12, 557.	2.7	3
124	Estimating the immeasurable without mechanistic models. Trends in Biotechnology, 1990, 8, 82-83.	9.3	2
125	Advanced process control for biological nutrient removal. Water Science and Technology, 1999, 39, 97-103.	2.5	2
126	Operating space diagrams: a tool for designers of wastewater treatment plants. Water Science and Technology, 2001, 44, 69-76.	2.5	2

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127	Life Cycle Assessment Of An Urban Water System On the East Coast Of Australia. Proceedings of the Water Environment Federation, 2012, 2012, 5278-5307.	0.0	2
128	How Does Energy Efficiency Affect Urban Water Systems?. Global Issues in Water Policy, 2015, , 615-631.	0.1	2
129	Learning from experience in the water sector to improve access to energy services. Utilities Policy, 2018, 51, 41-50.	4.0	2
130	A lumped parameter model for â€˜Model IVâ€™ fluid catalytic cracking units. Computers and Chemical Engineering, 1994, 18, S177-S181.	3.8	1
131	The impact of microbiological tools on mathematical modelling of biological wastewater treatment. Water Science and Technology, 1997, 36, 97.	2.5	1
132	Using the World Wide Web to revolutionise technology transfer and training in the water and wastewater industries. Water Science and Technology, 2001, 44, 127-134.	2.5	1
133	Reply to comment by Denny S. Parker on â€œImpact of structural characteristics on activated sludge floc stabilityâ€•by Britt-Marie WilÃ©n, Bo Jin and Paul Lant, published in Water Research (2003) 37, p. 3632â€“3645.. Water Research, 2005, 39, 738-740.	11.3	1
134	Erratum to â€œThe chemomechanical properties of microbial polyhydroxyalkanoatesâ€•[Prog. Polym. Sci. 38 (2013) 536â€“583]. Progress in Polymer Science, 2014, 39, 396.	24.7	0