## Luis A Cisternas

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Current Status of the Effect of Seawater lons on Copper Flotation: Difficulties, Opportunities, and Industrial Experience. Mineral Processing and Extractive Metallurgy Review, 2022, 43, 545-563.	2.6	14
2	Toward the Implementation of Circular Economy Strategies: An Overview of the Current Situation in Mineral Processing. Mineral Processing and Extractive Metallurgy Review, 2022, 43, 775-797.	2.6	25
3	Impact of seawater desalination and wastewater treatment on water stress levels and greenhouse gas emissions: The case of Chile. Science of the Total Environment, 2022, 818, 151853.	3.9	17
4	Estimating processing cost for the recovery of valuable elements from mine tailings using dimensional analysis. Minerals Engineering, 2022, 184, 107629.	1.8	17
5	Control Structure Design Using Global Sensitivity Analysis for Mineral Processes under Uncertainties. Minerals (Basel, Switzerland), 2022, 12, 736.	0.8	1
6	A short note on the application of the Cisternas-Lam vapor pressure model for liquid desiccant dehumidifier systems. International Journal of Refrigeration, 2022, , .	1.8	0
7	Modeling of the Complex Behavior through an Improved Response Surface Methodology. Mineral Processing and Extractive Metallurgy Review, 2021, 42, 285-311.	2.6	13
8	Potential of Tailing Deposits in Chile for the Sequestration of Carbon Dioxide Produced by Power Plants Using Ex-Situ Mineral Carbonation. Minerals (Basel, Switzerland), 2021, 11, 320.	0.8	10
9	Feasibility of re-processing mine tailings to obtain critical raw materials using real options analysis. Journal of Environmental Management, 2021, 284, 112060.	3.8	47
10	On the use of Na <sub>2</sub> SO <sub>3</sub> as a pyrite depressant in saline systems and the presence of kaolinite. Physicochemical Problems of Mineral Processing, 2021, 57, 168-179.	0.2	4
11	Development of a grinding model based on flotation performance. Minerals Engineering, 2021, 166, 106890.	1.8	8
12	Toward the Operability of Flotation Systems under Uncertainty. Minerals (Basel, Switzerland), 2021, 11, 646.	0.8	1
13	Use of real options to enhance water-energy nexus in mine tailings management. Applied Energy, 2021, 303, 117626.	5.1	22
14	New insights related to the flotation of covellite in porphyry ores. Minerals Engineering, 2021, 174, 107242.	1.8	6
15	Sustainable Development Goals in Mine Tailings Management: Targets and Indicators. , 2021, 5, .		6
16	Trends in Modeling, Design, and Optimization of Multiphase Systems in Minerals Processing. Minerals (Basel, Switzerland), 2020, 10, 22.	0.8	27
17	Effects of Potassium Propyl Xanthate Collector and Sodium Sulfite Depressant on the Floatability of Chalcopyrite in Seawater and KCl Solutions. Minerals (Basel, Switzerland), 2020, 10, 991.	0.8	8
18	Assessment of the Supply Chain under Uncertainty: The Case of Lithium. Minerals (Basel, Switzerland), 2020, 10, 604.	0.8	16

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19	Use of Radial Basis Function Network to Predict Optimum Calcium and Magnesium Levels in Seawater and Application of Pretreated Seawater by Biomineralization as Crucial Tools to Improve Copper Tailings Flocculation. Minerals (Basel, Switzerland), 2020, 10, 676.	0.8	5
20	Partial seawater desalination treatment for improving chalcopyrite floatability and tailing flocculation with clay content. Minerals Engineering, 2020, 151, 106307.	1.8	19
21	The effect of regrinding on the design of flotation circuits. Minerals Engineering, 2020, 156, 106524.	1.8	6
22	Partial desalination of seawater for mining processes through a fluidized bed bioreactor filled with immobilized cells of Bacillus subtilis LN8B. Desalination, 2020, 482, 114388.	4.0	15
23	Some limitations and disadvantages of linear circuit analysis. Minerals Engineering, 2020, 149, 106231.	1.8	2
24	Editorial for Special Issue "Modeling, Design and Optimization of Multiphase Systems in Minerals Processing― Minerals (Basel, Switzerland), 2020, 10, 134.	0.8	3
25	Towards mine tailings valorization: Recovery of critical materials from Chilean mine tailings. Journal of Cleaner Production, 2020, 263, 121555.	4.6	74
26	An LS-SVM classifier based methodology for avoiding unwanted responses in processes under uncertainties. Computers and Chemical Engineering, 2020, 138, 106860.	2.0	6
27	Comment on "Measurements of Vapor Pressures of Aqueous Solutions in the NaCl–KCl–H2O System from 493.15 to 693.25 K in a Fused Silica Capillary High-Pressure Optical Cell― Journal of Chemical & Engineering Data, 2020, 65, 5062-5063.	1.0	2
28	Pourbaix diagrams for copper ores processing with seawater. Physicochemical Problems of Mineral Processing, 2020, 56, 624-640.	0.2	6
29	Current and Future Global Lithium Production Till 2025. Open Chemical Engineering Journal, 2020, 14, 36-51.	0.4	2
30	Corrigendum to "Applying a multi-objective optimization approach in designing water supply systems for mining industries. The case of Chile―[J. Clean. Prod. 210 (2019) 994–1004]. Journal of Cleaner Production, 2019, 232, 1531.	4.6	0
31	The effect of clay minerals on the process of flotation of copper ores - A critical review. Applied Clay Science, 2019, 170, 57-69.	2.6	45
32	Heat-Assisted Batch Settling of Mineral Suspensions in Inclined Containers. Minerals (Basel,) Tj ETQq0 0 0 rgBT	Overlock	10 Tf 50 222 <sup>-</sup>
33	Design of Flotation Circuits Using Tabu-Search Algorithms: Multispecies, Equipment Design, and Profitability Parameters. Minerals (Basel, Switzerland), 2019, 9, 181.	0.8	14
34	Using Partial Desalination Treatment To Improve the Recovery of Copper and Molybdenum Minerals in the Chilean Mining Industry. Industrial & amp; Engineering Chemistry Research, 2019, 58, 8915-8922.	1.8	15
35	Decision-support framework for the environmental assessment of water treatment systems. Journal of Cleaner Production, 2019, 225, 599-609.	4.6	17

Applying a multi-objective optimization approach in designing water supply systems for mining 4.6 40 industries. The case of Chile. Journal of Cleaner Production, 2019, 210, 994-1004.

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37	Improving milling operation using uncertainty and global sensitivity analyses. Minerals Engineering, 2019, 131, 249-261.	1.8	15
38	Modeling the effect of air flow, impeller speed, frother dosages, and salt concentrations on the bubbles size using response surface methodology. Minerals Engineering, 2019, 132, 142-148.	1.8	12
39	Optimization Approach to Designing Water Supply Systems in Non-Coastal Areas Suffering from Water Scarcity. Water Resources Management, 2018, 32, 2457-2473.	1.9	22
40	The use of seawater in mining. Mineral Processing and Extractive Metallurgy Review, 2018, 39, 18-33.	2.6	104
41	A quasi-review of conceptual flotation design methods based on computational optimization. Minerals Engineering, 2018, 117, 24-33.	1.8	23
42	Two-phase optimization methodology for the design of mineral flotation plants, including multispecies and bank or cell models. Minerals and Metallurgical Processing, 2018, 35, 24-34.	0.7	3
43	Metal Removal from Acid Waters by an Endemic Microalga from the Atacama Desert for Water Recovery. Minerals (Basel, Switzerland), 2018, 8, 378.	0.8	6
44	A MINLP model to design desalinated water supply systems including solar energy as an energy source. Computer Aided Chemical Engineering, 2018, 44, 1687-1692.	0.3	2
45	Influence of epistemic uncertainty in the selection of flowsheet structures. Computer Aided Chemical Engineering, 2018, , 199-204.	0.3	1
46	A Posteriori Analysis of Analytical Models for Heap Leaching Using Uncertainty and Global Sensitivity Analyses. Minerals (Basel, Switzerland), 2018, 8, 44.	0.8	23
47	Design of Desalinated Water Distribution Networks: Complex Topography, Energy Production, and Parallel Pipelines. Industrial & Engineering Chemistry Research, 2018, 57, 9879-9888.	1.8	13
48	Scaling problems and control technologies in industrial operations: Technology assessment. Separation and Purification Technology, 2018, 207, 20-27.	3.9	15
49	Bioprospecting of Ureolytic Bacteria From Laguna Salada for Biomineralization Applications. Frontiers in Bioengineering and Biotechnology, 2018, 6, 209.	2.0	20
50	A Methodology For Design And Operation Of Heap Leaching Systems. Mineral Processing and Extractive Metallurgy Review, 2017, 38, 180-192.	2.6	8
51	Application of House of Quality in assessment of seawater pretreatment technologies. Journal of Cleaner Production, 2017, 148, 223-232.	4.6	24
52	The impact of seawater with calcium and magnesium removal for the flotation of copper-molybdenum sulphide ores. Minerals Engineering, 2017, 109, 10-13.	1.8	71
53	A methodology for the conceptual design of flotation circuits by combining group contribution, local/global sensitivity analysis, and reverse simulation. International Journal of Mineral Processing, 2017, 164, 56-66.	2.6	13
54	Dissolution Model of Multiple Species: Leaching of Highly Soluble Minerals. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 1817-1826.	1.0	3

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55	Biomineralization of calcium and magnesium crystals from seawater by halotolerant bacteria isolated from Atacama Salar (Chile). Desalination, 2017, 405, 1-9.	4.0	48
56	Heap Leaching of Caliche Ore. Modeling of a Multicomponent System with Particle Size Distribution. Minerals (Basel, Switzerland), 2017, 7, 180.	0.8	9
57	Biomineralization Mediated by Ureolytic Bacteria Applied to Water Treatment: A Review. Crystals, 2017, 7, 345.	1.0	40
58	Design of desalinated water distribution networks including energy recovery devices. Computer Aided Chemical Engineering, 2017, 40, 925-930.	0.3	7
59	LEACHING OF COARSE CALICHE ORE. EXPERIMENT AND MODELLING. Brazilian Journal of Chemical Engineering, 2016, 33, 105-114.	0.7	2
60	Mineral Concentration Plants Design Using Rigorous Models. Computer Aided Chemical Engineering, 2016, , 1461-1466.	0.3	5
61	Conceptual process design for Boric Acid: A case study for engineering education. Computer Aided Chemical Engineering, 2016, 38, 1437-1442.	0.3	2
62	Effect of Seawater on Sulfide Ore Flotation: A Review. Mineral Processing and Extractive Metallurgy Review, 2016, 37, 369-384.	2.6	88
63	Modeling of liquid-liquid equilibrium for binary and ternary systems containing ionic liquids with the hexafluorophosphate anion using the ASOC method. Fluid Phase Equilibria, 2016, 429, 119-126.	1.4	2
64	A strategy for the identification of optimal flotation circuits. Minerals Engineering, 2016, 96-97, 157-167.	1.8	22
65	SeaÂwater vapor pressure based on the Cisternas–Lam model. Desalination and Water Treatment, 2016, 57, 23651-23660.	1.0	3
66	Global Sensitivity Analysis of Reverse Osmosis Processes. Computer Aided Chemical Engineering, 2016, 38, 1443-1448.	0.3	0
67	Study of the natural floatability of molybdenite fines in saline solutions and effect of gypsum precipitation. Mining, Metallurgy and Exploration, 2015, 32, 203-208.	0.4	16
68	Isolation and Selection of Halophilic Ureolytic Bacteria for Biocementation of Calcium and Magnesium from Seawater. Advanced Materials Research, 2015, 1130, 489-492.	0.3	3
69	A new group contribution method for mineral concentration processes. Computers and Chemical Engineering, 2015, 74, 28-33.	2.0	3
70	Simultaneous Design of Desalination Plants and Distribution Water Network. Computer Aided Chemical Engineering, 2015, 37, 1193-1198.	0.3	9
71	Correlation of liquid–liquid equilibrium for binary and ternary systems containing ionic liquids with the tetrafluoroborate anion using ASOG. Fluid Phase Equilibria, 2015, 404, 42-48.	1.4	3
72	Prediction of (liquid+liquid) equilibrium for binary and ternary systems containing ionic liquids with the bis[(trifluoromethyl)sulfonyl]imide anion using the ASOG method. Journal of Chemical Thermodynamics, 2015, 90, 1-7.	1.0	4

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73	Solution strategies to the stochastic design of mineral flotation plants. Chemical Engineering Science, 2015, 134, 850-860.	1.9	23
74	Global sensitivity analysis for identifying critical process design decisions. Chemical Engineering Research and Design, 2015, 103, 74-83.	2.7	21
75	Retrofitting of Concentration Plants Using Global Sensitivity Analysis. Computer Aided Chemical Engineering, 2015, 37, 311-316.	0.3	1
76	Use of discharged brine from reverse osmosis plant in heap leaching: Opportunity for caliche mining industry. Hydrometallurgy, 2015, 155, 61-68.	1.8	10
77	Approximate recovery values for each stage are sufficient to select the concentration circuit structures. Minerals Engineering, 2015, 83, 175-184.	1.8	18
78	The effects of stage recovery uncertainty in the performance of concentration circuits. International Journal of Mineral Processing, 2015, 143, 12-17.	2.6	7
79	The Effect of Stage Recovery Uncertainties on the Selection of Process Structures. Computer Aided Chemical Engineering, 2014, , 315-320.	0.3	3
80	Solution Strategies to Stochastic Design of Mineral Flotation Plants. Computer Aided Chemical Engineering, 2014, , 339-344.	0.3	0
81	Effect of the objective function in the design of concentration plants. Minerals Engineering, 2014, 63, 16-24.	1.8	33
82	Technical–economic feasibility study of the installation of biodiesel from microalgae crops in the Atacama Desert of Chile. Fuel Processing Technology, 2014, 125, 267-276.	3.7	20
83	The use of global sensitivity analysis for improving processes: Applications to mineral processing. Computers and Chemical Engineering, 2014, 66, 221-232.	2.0	31
84	A methodology for the conceptual design of concentration circuits: Group contribution method. Computers and Chemical Engineering, 2014, 63, 173-183.	2.0	12
85	Optimal design and planning of heap leaching process. Application to copper oxide leaching. Chemical Engineering Research and Design, 2014, 92, 308-317.	2.7	19
86	Optimization of dewatering systems for mineral processing. Minerals Engineering, 2014, 63, 110-117.	1.8	33
87	Modeling validation of caliche ore leaching using seawater. International Journal of Mineral Processing, 2014, 126, 10-17.	2.6	9
88	International Programming Committee. Computer Aided Chemical Engineering, 2014, 34, xvi-xvii.	0.3	0
89	Seawater leaching of caliche mineral in column experiments. Hydrometallurgy, 2013, 139, 79-87.	1.8	26
90	Global sensitivity analysis of a mineral processing flowsheet. Computer Aided Chemical Engineering, 2013, 32, 913-918.	0.3	10

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91	Methodology for process analysis and design with multiple objectives under uncertainty: Application to flotation circuits. International Journal of Mineral Processing, 2013, 118, 15-27.	2.6	18
92	Arsenic-rejection flotation circuit design and selection based on a multiple-objective evaluation. Minerals Engineering, 2013, 45, 22-31.	1.8	13
93	Particle Size Effect on the Efficient Use of Water and Energy in Mineral Concentration Processes. Industrial & Engineering Chemistry Research, 2013, 52, 17686-17690.	1.8	13
94	Optimal design of a solid-liquid separation system. Computer Aided Chemical Engineering, 2013, 32, 907-912.	0.3	1
95	A Novel Method for Designing Flotation Circuits. Computer Aided Chemical Engineering, 2012, , 622-626.	0.3	0
96	DENSITY ESTIMATION OF AMMONIUM-BASED IONIC LIQUIDS. Chemical Engineering Communications, 2012, 199, 283-289.	1.5	5
97	Design of Flotation Circuits Including Uncertainty and Water Efficiency. Computer Aided Chemical Engineering, 2012, , 1277-1281.	0.3	10
98	Stochastic analysis of heap leaching process via analytical models. Minerals Engineering, 2012, 33, 93-98.	1.8	15
99	Heap leaching of caliche minerals: Phenomenological and analytical models – Some comparisons. Minerals Engineering, 2012, 33, 46-53.	1.8	17
100	Water and Energy Use in Mineral Processing. Computer Aided Chemical Engineering, 2012, 30, 627-631.	0.3	1
101	A posteriori analysis of analytical models for heap leaching. Mining, Metallurgy and Exploration, 2012, 29, 103-112.	0.4	1
102	Sensitivity analysis of separation circuits. International Journal of Mineral Processing, 2012, 110-111, 30-45.	2.6	16
103	Melting-Point Estimation of Ionic Liquids by a Group Contribution Method. International Journal of Thermophysics, 2012, 33, 34-46.	1.0	40
104	On the optimization of flow rates on copper heap leaching operations. International Journal of Mineral Processing, 2011, 101, 75-80.	2.6	19
105	On scalable analytical models for heap leaching. Computers and Chemical Engineering, 2011, 35, 220-225.	2.0	32
106	A method for the design and planning operations of heap leaching circuits. Computer Aided Chemical Engineering, 2011, , 306-310.	0.3	1
107	Separation Circuits Analysis and Design, Using Sensitivity Analysis. Computer Aided Chemical Engineering, 2011, 29, 246-250.	0.3	3
108	Planning and scheduling of salt harvest in solar evaporation ponds. Computers and Chemical Engineering, 2010, 34, 620-630.	2.0	13

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109	A Group Contribution Method for Mineral Flotation Circuit Design. Computer Aided Chemical Engineering, 2009, 27, 1065-1070.	0.3	0
110	State of the art in the conceptual design of flotation circuits. International Journal of Mineral Processing, 2009, 90, 1-15.	2.6	46
111	An analytical model approach to heap leaching. Hydrometallurgy, 2009, 95, 33-38.	1.8	38
112	Modeling of grinding and classification circuits as applied to the design of flotation processes. Computers and Chemical Engineering, 2009, 33, 97-111.	2.0	29
113	Planning and Scheduling of Solar Salt Harvest. Computer Aided Chemical Engineering, 2009, 26, 417-422.	0.3	1
114	Mineral Processing Flow Sheet Design Through A Group Contribution Method. Computer Aided Chemical Engineering, 2009, 26, 213-218.	0.3	4
115	Sensitivity Assessment of Flotation Circuit to Uncertainty Using Monte Carlo Simulation. , 2009, , 679-687.		0
116	Thermodynamics of salt lake system: Representation, experiments, and visualization. AICHE Journal, 2008, 54, 706-727.	1.8	21
117	An analytical–numerical method for solving a heap leaching problem of one or more solid reactants from porous pellets. Computers and Chemical Engineering, 2008, 32, 2395-2402.	2.0	14
118	Saltpeter extraction and modelling of caliche mineral heap leaching. Hydrometallurgy, 2008, 90, 103-114.	1.8	36
119	On the optimization of heap leaching. Minerals Engineering, 2008, 21, 673-678.	1.8	47
120	An analytical-numerical method for solving a heap leaching problem of one or more solid reactants from porous pellets. Computer Aided Chemical Engineering, 2008, , 877-882.	0.3	1
121	Applications of grey programming to process design. Computer Aided Chemical Engineering, 2008, , 671-676.	0.3	6
122	A model of grinding-classification circuit including particles size distribution and liberation of material: Application to the design and retrofit of flotation circuit. Computer Aided Chemical Engineering, 2007, 24, 491-496.	0.3	2
123	Nature of Chemical Products. Computer Aided Chemical Engineering, 2007, , 459-472.	0.3	4
124	Process Design for Drowning-Out Crystallization of Lithium Hydroxide Monohydrate. Chemical Engineering Research and Design, 2007, 85, 1325-1330.	2.7	9
125	Principles for chemical products design. Computer Aided Chemical Engineering, 2006, 21, 1107-1112.	0.3	4
126	A MILP model for design of flotation circuits with bank/column and regrind/no regrind selection. International Journal of Mineral Processing, 2006, 79, 253-263.	2.6	35

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127	On the design of crystallization-based separation processes: Review and extension. AICHE Journal, 2006, 52, 1754-1769.	1.8	41
128	An ASCEND library for the modeling, simulation and optimization of solvent extraction for metal recovery. Computer Aided Chemical Engineering, 2005, 20, 403-408.	0.3	1
129	Design of Alternative Purification Processes for Potassium Sulfate. Industrial & Engineering Chemistry Research, 2005, 44, 5845-5851.	1.8	5
130	A MILP model for the design of mineral flotation circuits. International Journal of Mineral Processing, 2004, 74, 121-131.	2.6	26
131	Design of solvent extraction circuit schemes. Hydrometallurgy, 2004, 74, 19-38.	1.8	8
132	Flowsheet synthesis of fractional crystallization processes with cake washing. Computers and Chemical Engineering, 2004, 28, 613-623.	2.0	11
133	Sodium Carbonate Extractive Crystallization with Poly(ethylene glycol) Equilibrium Data and Conceptual Process Design. Industrial & Engineering Chemistry Research, 2004, 43, 835-838.	1.8	8
134	Design of separation schemes for fractional crystallization of metathetical salts. AICHE Journal, 2003, 49, 1731-1742.	1.8	11
135	Complete separation system synthesis of fractional crystallization processes. Computer Aided Chemical Engineering, 2003, 14, 83-88.	0.3	0
136	Separation system synthesis of fractional crystallization processes with heat integration. Computers and Chemical Engineering, 2001, 25, 595-602.	2.0	11
137	Optimal design of crystallization-based separation schemes. AICHE Journal, 1999, 45, 1477-1487.	1.8	32
138	On the synthesis of inorganic chemical and metallurgical processes, review and extension. Minerals Engineering, 1999, 12, 15-41.	1.8	13
139	Separation System Synthesis for Fractional Crystallization from Solution Using a Network Flow Model. Industrial & Engineering Chemistry Research, 1998, 37, 2761-2769.	1.8	22
140	Process designs for fractional crystallization from solution. Industrial & Engineering Chemistry Research, 1993, 32, 1993-2005.	1.8	51
141	An analytic correlation for the vapour pressure of aqueous and non-aqueous solutions of single and mixed electrolytes. Part II. Application and extension. Fluid Phase Equilibria, 1991, 62, 11-27.	1.4	68
142	Binary interaction parameters in cubic equations of state for hydrogen—hydrocarbon mixtures. Chemical Engineering Science, 1990, 45, 49-54.	1.9	21
143	Temperature-dependent interaction parameters in cubic equations of state for nitrogen-containing mixtures. Fluid Phase Equilibria, 1990, 59, 195-205.	1.4	10
144	A analytic correlation of vapour pressure of aqueous and non-aqueous solutions of single and mixed electrolytes. Fluid Phase Equilibria, 1989, 53, 243-249.	1.4	42

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145	Effects of temperature on activity coefficients in aqueous electrolyte solutions. AICHE Journal, 1989, 35, 1215-1218.	1.8	2
146	A simple and accurate technique to obtain pure component parameters for three-parameter equations of state. Fluid Phase Equilibria, 1988, 39, 75-87.	1.4	1
147	Generalized interaction parameters in cubic equations of state for CO2—n-alkane mixtures. Fluid Phase Equilibria, 1988, 40, 217-233.	1.4	25
148	On the choice of a third (and fourth) generalizing parameter for equations of state. Chemical Engineering Science, 1987, 42, 2957-2961.	1.9	14
149	Application of a new cubic equation of state to hydrogen sulfide mixtures. Chemical Engineering Science, 1987, 42, 2935-2940.	1.9	11
150	A cubic equation of state for polar and other complex mixtures. Fluid Phase Equilibria, 1986, 29, 431-438.	1.4	41
151	Innovative Solutions for Seawater Use in Mining Operations. , 0, , .		2
152	Modeling the calcium and magnesium removal from seawater by immobilized biomass of ureolytic bacteria Bacillus subtilis through response surface methodology and artificial neural networks. , 0, 118, 294-303.		4
153	Current situation and major challenges of desalination in Chile. , 0, 171, 93-104.		27