Carlos Rey-Castro

List of Publications by Year
in descending order

46 papers	1,681 citations	394421 19 h-index	276875 41 g-index
49 all docs	49 docs citations	49 times ranked	2287 citing authors

#	Article	IF	Citations
1	Al(III) and Fe(III) binding by humic substances in freshwaters, and implications for trace metal speciation. Geochimica Et Cosmochimica Acta, 2002, 66, 3211-3224.	3.9	339
2	Transport Properties of the Ionic Liquid 1-Ethyl-3-Methylimidazolium Chloride from Equilibrium Molecular Dynamics Simulation. The Effect of Temperature. Journal of Physical Chemistry B, 2006, 110, 14426-14435.	2.6	188
3	Dissolution Kinetics and Solubility of ZnO Nanoparticles Followed by AGNES. Journal of Physical Chemistry C, 2012, 116, 11758-11767.	3.1	152
4	Removal of inorganic mercury from aqueous solutions by biomass of the marine macroalga Cystoseira baccata. Water Research, 2005, 39, 3199-3210.	11.3	130
5	Interactions of cadmium(II) and protons with dead biomass of marine algae Fucus sp.. Marine Chemistry, 2006, 99, 106-116.	2.3	73
6	Systematic Investigation of the Physicochemical Factors That Contribute to the Toxicity of ZnO Nanoparticles. Chemical Research in Toxicology, 2014, 27, 558-567.	3.3	70
7	Effect of the flexibility and the anion in the structural and transport properties of ethyl-methyl-imidazolium ionic liquids. Fluid Phase Equilibria, 2007, 256, 62-69.	2.5	65
8	Effective Affinity Distribution for the Binding of Metal Ions to a Generic Fulvic Acid in Natural Waters. Environmental Science & Technology, 2009, 43, 7184-7191.	10.0	50
9	Acidâ˘'Base Properties of Brown Seaweed Biomass Considered As a Donnan Gel. A Model Reflecting Electrostatic Effects and Chemical Heterogeneity. Environmental Science & Technology, 2003, 37, 5159-5167.	10.0	48
10	Experimental evidences for a new model in the description of the adsorption-coupled reduction of Cr(VI) by protonated banana skin. Bioresource Technology, 2013, 139, 181-189.	9.6	42
11	Gibbsâ€“Donnan and specific-ion interaction theory descriptions of the effect of ionic strength on proton dissociation of alginic acid. Journal of Electroanalytical Chemistry, 2004, 564, 223-230.	3.8	39
12	Biosorption of cadmium by the protonated macroalga Sargassum muticum: Binding analysis with a nonideal, competitive, and thermodynamically consistent adsorption (NICCA) model. Journal of Colloid and Interface Science, 2005, 289, 352-358.	9.4	34
13	Cation binding by acid-washed peat, interpreted with Humic Ion-Binding Model VI-FD. European Journal of Soil Science, 2004, 55, 433-447.	3.9	28
14	Suitability of analytical methods to measure solubility for the purpose of nanoregulation. Nanotoxicology, 2016, 10, 1-12.	3.0	25
15	Effect of polymer coating composition on the aggregation rates of Ag nanoparticles in NaCl solutions and seawaters. Science of the Total Environment, 2018, 631-632, 1153-1162.	8.0	24
16	Interaction of acrylic-maleic copolymers with H+, Na+, Mg2+ and Ca2+: Thermodynamic parameters and their dependence on medium. Reactive and Functional Polymers, 2005, 65, 329-342.	4.1	22
17	Acid-base properties of dissolved organic matter extracted from the marine environment. Science of the Total Environment, 2020, 729, 138437.	8.0	22
18	Limits of the Linear Accumulation Regime of DGT Sensors. Environmental Science & Technology, 2013, 47, 10438-10445.	10.0	21

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19	The impact of electrodic adsorption on Zn, Cd and Pb speciation measurements with AGNES. Journal of Electroanalytical Chemistry, 2014, 722-723, 110-118.	3.8	19
20	Extending the Use of Diffusive Gradients in Thin Films (DGT) to Solutions Where Competition, Saturation, and Kinetic Effects Are Not Negligible. Analytical Chemistry, 2017, 89, 6567-6574.	6.5	19
21	Surface charge and permeable gel descriptions of the ionic strength influence on proton binding to seaweed biomass. Chemical Speciation and Bioavailability, 2004, 16, 61-69.	2.0	18
22	Full description of copper uptake by algal biomass combining an equilibrium NICA model with a kinetic intraparticle diffusion driving force approach. Bioresource Technology, 2011, 102, 2990-2997.	9.6	18
23	Model-Independent Link between the Macroscopic and Microscopic Descriptions of Multidentate Macromolecular Binding: Relationship between Stepwise, Intrinsic, and Microscopic Equilibrium Constants. Journal of Physical Chemistry B, 2009, 113, 15145-15155.	2.6	17
24	A semi-grand canonical Monte Carlo simulation model for ion binding to ionizable surfaces: Proton binding of carboxylated latex particles as a case study. Journal of Chemical Physics, 2011, 135, 184103.	3.0	16
25	Ion binding to polyelectrolytes: Monte Carlo simulations versus classical mean field theories. Theoretical Chemistry Accounts, 2009, 123, 127-135.	1.4	15
26	Time weighted average concentrations measured with Diffusive Gradients in Thin films (DGT). Analytica Chimica Acta, 2019, 1060, 114-124.	5.4	15
27	Acidâ€“base equilibria of phthalic acid in saline media: ion association from Pitzer equations. Talanta, 2003, 60, 93-101.	5.5	14
28	Dealing with longâ€range interactions in the determination of polyelectrolyte ionization properties. Extension of the transfer matrix formalism to the full range of ionic strengths. Journal of Polymer Science, Part B: Polymer Physics, 2017, 55, 275-284.	2.1	14
29	Competitive Ion Complexation to Polyelectrolytes:â€‰ Determination of the Stepwise Stability Constants. The Ca²⁺/H⁺/Polyacrylate System. Journal of Physical Chemistry B, 2007, 111, 10421-10430.	2.6	12
30	Competition effects in cation binding to humic acid: Conditional affinity spectra for fixed total metal concentration conditions. Geochimica Et Cosmochimica Acta, 2010, 74, 5216-5227.	3.9	12
31	Surface Tension of 1-Ethyl-3-methylimidazolium Ethyl Sulfate or 1-Butyl-3-methylimidazolium Hexafluorophosphate with Argon and Carbon Dioxide. Journal of Chemical & Engineering Data, 2013, 58, 1203-1211.	1.9	12
32	Dissolution and Phosphate-Induced Transformation of ZnO Nanoparticles in Synthetic Saliva Probed by AGNES without Previous Solidâ€“Liquid Separation. Comparison with UF-ICP-MS. Environmental Science & Technology, 2019, 53, 3823-3831.	10.0	12
33	Influence of the settling of the resin beads on diffusion gradients in thin films measurements. Analytica Chimica Acta, 2015, 885, 148-155.	5.4	11
34	Accumulation of Mg to Diffusive Gradients in Thin Films (DGT) Devices: Kinetic and Thermodynamic Effects of the Ionic Strength. Analytical Chemistry, 2016, 88, 10245-10251.	6.5	11
35	Dynamics of trace metal sorption by an ion-exchange chelating resin described by a mixed intraparticle/film diffusion transport model. The Cd/Chelex case. Chemical Engineering Journal, 2017, 317, 810-820.	12.7	11
36	Competitive Cd²⁺/H⁺ Complexation to Polyacrylic Acid Described by the Stepwise and Intrinsic Stability Constants. Journal of Physical Chemistry B, 2008, 112, 10092-10100.	2.6	10

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37	Conditional affinity spectra underlying NICA isotherm. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2009, 347, 156-166.	4.7	9
38	Speciation of Inorganic Compounds in Aquatic Systems Using Diffusive Gradients in Thin-Films: A Review. Frontiers in Chemistry, 2021, 9, 624511.	3.6	9
39	Effects of a mixture of ligands on metal accumulation in diffusive gradients in thin films (DGT). Environmental Chemistry, 2018, 15, 183.	1.5	7
40	Seasonal Variations in Proton Binding Characteristics of Dissolved Organic Matter Isolated from the Southwest Baltic Sea. Environmental Science & Technology, 2021, 55, 16215-16223.	10.0	6
41	Developments in the diffusive gradients in thin-films technique for the speciation of oxyanions and platinum group elements in aquatic systems. TrAC - Trends in Analytical Chemistry, 2022, 147, 116513.	11.4	6
42	Interpreting the DGT Measurement. , 2016, , 93-122.		4
43	Potentiometric Study of Acetylsalicylic Acid:â€‰ Solubility and Acidâˆ’Base Equilibria in Different Saline Media at 298 K. Journal of Chemical & Engineering Data, 2002, 47, 1432-1435.	1.9	3
44	Assessment of labilities of metal complexes with the dynamic ion exchange technique. Environmental Chemistry, 2019, 16, 151.	1.5	2
45	Editorial: Advances in Analytical Techniques and Methodology for Chemical Speciation Study. Frontiers in Chemistry, 2021, 9, 692144.	3.6	1
46	Foreword to the Special Issue from the Interfaces Against Pollution 2016 Conference: Environmental Challenges and Opportunities. Environmental Chemistry, 2017, 14, i.	1.5	0