Francesc Mas

List of Publications by Year
in descending order

95 papers	1,875 citations	257357 24 h-index	345118 36 g-index
98 all docs	98 docs citations	98 times ranked	1430 citing authors

#	Article	IF	Citations
1	Adsorption of flexible proteins in the â€˜wrong sideâ€™ of the isoelectric point: Casein macropeptide as a model system. Colloids and Surfaces B: Biointerfaces, 2022, 217, 112617.	2.5	6
2	Influence of macromolecular crowding on the charge regulation of intrinsically disordered proteins. Soft Matter, 2021, 17, 655-669.	1.2	16
3	Non-monotonic behavior of weak-polyelectrolytes adsorption on a cationic surface: A Monte Carlo simulation study. Polymer, 2021, 212, 123170.	1.8	4
4	Prediction of Partition Coefficients in SDS Micelles by DFT Calculations. Symmetry, 2021, 13, 1750.	1.1	3
5	Unravelling Constant pH Molecular Dynamics in Oligopeptides with Explicit Solvation Model. Polymers, 2021, 13, 3311.	2.0	0
6	On the Use of the Discrete Constant pH Molecular Dynamics to Describe the Conformational Space of Peptides. Polymers, 2021, 13, 99.	2.0	1
7	Unveiling the Effect of Low pH on the SARS-CoV-2 Main Protease by Molecular Dynamics Simulations. Polymers, 2021, 13, 3823.	2.0	8
8	Effect of pH on the Supramolecular Structure of Helicobacter pylori Urease by Molecular Dynamics Simulations. Polymers, 2020, 12, 2713.	2.0	8
9	Effect of Charge Regulation and Conformational Equilibria in the Stretching Properties of Weak Polyelectrolytes. Macromolecules, 2019, 52, 8017-8031.	2.2	11
10	Role of Charge Regulation and Fluctuations in the Conformational and Mechanical Properties of Weak Flexible Polyelectrolytes. Polymers, 2019, 11, 1962.	2.0	15
11	Macromolecular diffusion in crowded media beyond the hard-sphere model. Soft Matter, 2018, 14, 3105-3114.	1.2	15
12	Coupling of Charge Regulation and Conformational Equilibria in Linear Weak Polyelectrolytes: Treatment of Long-Range Interactions via Effective Short-Ranged and pH-Dependent Interaction Parameters. Polymers, 2018, 10, 811.	2.0	16
13	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.	2.4	14
14	Ionization and Conformational Equilibria of Citric Acid: Delocalized Proton Binding in Solution. Journal of Physical Chemistry A, 2017, 121, 5894-5906.	1.1	9
15	Brownian Dynamics Computational Model of Protein Diffusion in Crowded Media with Dextran Macromolecules as Obstacles. Entropy, 2017, 19, 105.	1.1	16
16	Monte Carlo simulations of enzymatic reactions in crowded media. Effect of the enzyme-obstacle relative size. Mathematical Biosciences, 2014, 251, 72-82.	0.9	16
17	Effect of crowding by Dextrans in enzymatic reactions. Biophysical Chemistry, 2014, 185, 8-13.	1.5	61
18	Macromolecular Crowding Effect upon <i>in Vitro</i> Enzyme Kinetics: Mixed Activationâ€“Diffusion Control of the Oxidation of NADH by Pyruvate Catalyzed by Lactate Dehydrogenase. Journal of Physical Chemistry B, 2014, 118, 4062-4068.	1.2	54

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19	A spectrophotometer-based diffusivity assay reveals that diffusion hindrance of small molecules in extracellular matrix gels used in 3D cultures is dominated by viscous effects. Colloids and Surfaces B: Biointerfaces, 2014, 120, 200-207.	2.5	35
20	Molecular dynamics simulation of the spherical electrical double layer of a soft nanoparticle: Effect of the surface charge and counterion valence. Journal of Chemical Physics, 2012, 137, 174701.	1.2	24
21	Effect of Crowding by Dextrans on the Hydrolysis of <i>N</i>-Succinyl-<scp>l</scp>-phenyl-Ala-<i>p</i>-nitroanilide Catalyzed by Î±-Chymotrypsin. Journal of Physical Chemistry B, 2011, 115, 1115-1121.	1.2	60
22	New insights into diffusion in 3D crowded media by Monte Carlo simulations: effect of size, mobility and spatial distribution of obstacles. Physical Chemistry Chemical Physics, 2011, 13, 7396.	1.3	47
23	Diffusion in macromolecular crowded media: Monte Carlo simulation of obstructed diffusion vs. FRAP experiments. Theoretical Chemistry Accounts, 2011, 128, 795-805.	0.5	20
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.	1.2	16
25	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.	1.6	12
26	Diffusion of Î±-Chymotrypsin in Solution-Crowded Media. A Fluorescence Recovery after Photobleaching Study. Journal of Physical Chemistry B, 2010, 114, 4028-4034.	1.2	35
27	Ion binding to polyelectrolytes: Monte Carlo simulations versus classical mean field theories. Theoretical Chemistry Accounts, 2009, 123, 127-135.	0.5	15
28	Conditional affinity spectra underlying NICA isotherm. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2009, 347, 156-166.	2.3	9
29	Effective Affinity Distribution for the Binding of Metal Ions to a Generic Fulvic Acid in Natural Waters. Environmental Science & Technology, 2009, 43, 7184-7191.	4.6	50
30	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.	1.2	17
31	A Hierarchical Approach to Cooperativity in Macromolecular and Self-Assembling Binding Systems. Journal of Biological Physics, 2008, 34, 213-235.	0.7	11
32	Conditional Affinity Spectra of Pb²⁺â˘Humic Acid Complexation from Data Obtained with AGNES. Environmental Science & Technology, 2008, 42, 9289-9295.	4.6	36
33	Competitive Cd²⁺/H⁺ Complexation to Polyacrylic Acid Described by the Stepwise and Intrinsic Stability Constants. Journal of Physical Chemistry B, 2008, 112, 10092-10100.	1.2	10
34	Simulation of Diffusion in Two-Dimensional Crowded Media. AIP Conference Proceedings, 2007, , .	0.3	1
35	Effect of the surface charge discretization on electric double layers: A Monte Carlo simulation study. Journal of Chemical Physics, 2007, 126, 234703.	1.2	34
36	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.	1.2	12

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37	Electrostatic and specific binding to macromolecular ligands. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 306, 2-13.	2.3	32
38	Bistability from double phosphorylation in signal transduction. FEBS Journal, 2006, 273, 3915-3926.	2.2	87
39	Conditional equilibrium constants in multicomponent heterogeneous adsorption: The conditional affinity spectrum. Journal of Chemical Physics, 2006, 124, 044710.	1.2	14
40	About implementing a Monte Carlo simulation algorithm for enzymatic reactions in crowded media. Journal of the Serbian Chemical Society, 2006, 71, 75-86.	0.4	3
41	Voltammetry of heterogeneous labile metalâ€"macromolecular systems for any ligand to metal ratio: part IV. Binding curve from the polarographic waves. Journal of Electroanalytical Chemistry, 2005, 577, 311-321.	1.9	3
42	Affinity distribution functions in multicomponent heterogeneous adsorption. Analytical inversion of isotherms to obtain affinity spectra. Journal of Chemical Physics, 2004, 120, 9266-9276.	1.2	17
43	Binding Curve from Normalized Limiting Currents of Labile Heterogeneous Metal-Macromolecular Systems. The Case of Cd/Humic Acid. Electroanalysis, 2003, 15, 452-459.	1.5	7
44	Lability and mobility effects on mixtures of ligands under steady-state conditions. Physical Chemistry Chemical Physics, 2003, 5, 5091.	1.3	48
45	Product dependence and bifunctionality compromise the ultrasensitivity of signal transduction cascades. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 1170-1175.	3.3	62
46	Complexation isotherms in metal speciation studies at trace concentration levels. Voltammetric techniques in environmental samples. Physical Chemistry Chemical Physics, 2002, 4, 3764-3773.	1.3	27
47	Voltammetry of heterogeneous labile metal-macromolecular systems for any ligand-to-metal ratio.. Journal of Electroanalytical Chemistry, 2002, 530, 23-32.	1.9	5
48	Sensitivity analysis of metabolic cascades catalyzed by bifunctional enzymes. Molecular Biology Reports, 2002, 29, 211-215.	1.0	6
49	Voltammetric Analysis of Heterogeneity in Metal Ion Binding by Humics. Environmental Science & Technology, 2001, 35, 1097-1102.	4.6	30
50	Voltammetry of heterogeneous labile metalâ€"macromolecular systems for any ligand-to-metal ratio. Journal of Electroanalytical Chemistry, 2001, 514, 83-93.	1.9	5
51	Heterogeneity of Cd(II)-Macromolecule Systems: A Potentiometric Study. Electroanalysis, 2000, 12, 60-65.	1.5	6
52	Voltammetry of heterogeneous labile metalâ€"macromolecular systems for any ligand-to-metal ratio. Journal of Electroanalytical Chemistry, 2000, 484, 107-119.	1.9	16
53	Complexation to macromolecules with a large number of sites. Journal of Chemical Physics, 1999, 111, 2818-2828.	1.2	5
54	Voltammetric currents for any ligand-to-metal concentration ratio in fully labile metal-macromolecular complexation. Easy computations, analytical properties of the currents and a graphical method to estimate the stability constant. Journal of Electroanalytical Chemistry, 1999, 472, 42-52.	1.9	13

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55	Amalgamation effects in reverse pulse polarography at spherical electrodes. Influence on speciation measurements. Journal of Electroanalytical Chemistry, 1998, 442, 151-167.	1.9	17
56	Influence of the adsorption phenomena on the NPP and RPP limiting currents for labile metal-macromolecule systems. Journal of Electroanalytical Chemistry, 1998, 457, 229-246.	1.9	15
57	A computer simulation model for the diffusion controlled nucleation and growth processes on electrode surfacesâ€"a two-dimensional study. Journal of Electroanalytical Chemistry, 1998, 458, 55-72.	1.9	13
58	Use of activity coefficients for bound and free sites to describe metalâ€"macromolecule complexation. Journal of the Chemical Society, Faraday Transactions, 1998, 94, 2783-2794.	1.7	24
59	Application of Maximum Entropy Formalism in the Determination of the Affinity Spectrum in Macromolecular Complexation. Environmental Science & Technology, 1998, 32, 539-548.	4.6	11
60	Physical Constraints in the Synthesis of Glycogen That Influence Its Structural Homogeneity: A Two-Dimensional Approach. Biophysical Journal, 1998, 75, 106-114.	0.2	44
61	Interpretation of speciation measurements on labile metalâ€"macromolecular systems by voltammetric techniques. Analyst, The, 1996, 121, 1855-1861.	1.7	17
62	Influence of adsorption on calibration curves in normal pulse polarography. Analytica Chimica Acta, 1995, 305, 273-284.	2.6	11
63	Quasi-twodimensional electrodeposition: a summarized review on morphology and growth mechanisms. Chaos, Solitons and Fractals, 1995, 6, 287-294.	2.5	13
64	Basis of the voltammetric analysis of labile metalâ€"homofunctional macromolecule complexation. Journal of Electroanalytical Chemistry, 1995, 391, 29-40.	1.9	11
65	Two representations in multifractal analysis. Journal of Physics A, 1995, 28, 5607-5622.	1.6	54
66	Laplacian Multifractality of the Growth Probability Distribution in Electrodeposition. Europhysics Letters, 1994, 25, 271-276.	0.7	16
67	Numerical procedures in electrochemical simulation. International Journal of Quantum Chemistry, 1994, 51, 357-367.	1.0	9
68	Disordered grown systems: Generation and fractal analysis. Electrodeposition. International Journal of Quantum Chemistry, 1994, 52, 375-394.	1.0	3
69	Voltammetry of labile metal-macromolecular systems for any ligand-to-metal ratio, including adsorption phenomena. The role of the stability constant. Journal of Electroanalytical Chemistry, 1994, 374, 223-234.	1.9	24
70	Reverse pulse polarography of labile metal + macromolecule systems with induced reactant adsorption: theoretical analysis and determination of complexation and adsorption parameters. Journal of Electroanalytical Chemistry, 1994, 375, 307-318.	1.9	33
71	Semi-empirical full-wave expression for induced reactant adsorption in normal pulse polarography of labile metalâ€"polyelectrolyte systems. Analytica Chimica Acta, 1993, 273, 297-304.	2.6	9
72	Monte Carlo simulation of diffusion-controlled response functions at 2D experimental rough electrodes. Journal of Electroanalytical Chemistry, 1993, 348, 221-246.	1.9	14

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73	Voltammetry of labile metalâ€”complex systems with induced reactant adsorption. Theoretical analysis for any ligand-to-metal ratio. Journal of Electroanalytical Chemistry, 1993, 360, 1-25.	1.9	17
74	FRACTAL ELECTRODEPOSITS: MORPHOLOGY, GROWTH DYNAMICS AND DIFFUSION-LIMITED RESPONSE FUNCTIONS. Fractals, 1993, 01, 439-450.	1.8	5
75	Growth Patterns in Zinc Electrodeposition. NATO ASI Series Series B: Physics, 1993, , 173-182.	0.2	0
76	Scaling Properties of the Growth Probability Distribution in Electrochemical Deposition. Europhysics Letters, 1992, 17, 541-546.	0.7	11
77	Aggregation under a forced convective flow. Physical Review B, 1992, 46, 11495-11500.	1.1	10
78	Effect of drift on segregation in two-component diffusion-limited aggregation. Physical Review A, 1992, 45, 3896-3902.	1.0	5
79	Some effects of cell dimensions on zinc electrodeposits. Journal of Electroanalytical Chemistry, 1992, 328, 165-178.	1.9	29
80	Induced reactant adsorption in normal pulse polarography of labile metal + polyelectrolyte systems. Journal of Electroanalytical Chemistry, 1992, 328, 271-285.	1.9	19
81	Induced reactant adsorption in normal pulse polarography of labile metal polyelectrolyte systems part 1. Study of current-potential relationship assuming potential-independent adsorption parameters. Journal of Electroanalytical Chemistry, 1992, 326, 299-316.	1.9	25
82	Induced reactant adsorption in metalâ€”polyelectrolyte systems: pulse polarographic study. Analytica Chimica Acta, 1992, 268, 261-274.	2.6	43
83	Pattern morphologies in zinc electrodeposition. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1991, 312, 219-235.	0.3	83
84	Electrodeposition: Fractal and Multifractal Measures. NATO ASI Series Series B: Physics, 1991, , 557-562.	0.2	0
85	A theoretical approach to describe monolayer-liposome lipid interaction. Biophysical Chemistry, 1990, 36, 47-55.	1.5	20
86	Fractal electrodeposits of zinc and copper. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1990, 278, 351-360.	0.3	28
87	Comment on: Deuterium nuclear fusion at room temperature: A pertinent inequality on barrier penetration. Journal of Chemical Physics, 1990, 93, 6118-6119.	1.2	1
88	Adsorption in double potential step chronocoulometry. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1988, 241, 89-104.	0.3	7
89	A formalism for performing chronocoulometry at a stationary planar or spherical electrode. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1987, 224, 1-26.	0.3	12
90	Study of a simple redox system with adsorption of both reactant and product at the DME when a time dependent potential is applied. Pulse polarography. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1985, 183, 27-39.	0.3	21

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91	Study of a simple redox system with adsorption of both reactant and product at the DME when a time dependent potential is applied. Pulse polarography. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1985, 183, 57-72.	0.3	14
92	Study of a simple redox system with adsorption of both reactant and product at the DME when a time dependent potential is applied. Pulse polarography. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1985, 183, 73-89.	0.3	19
93	Study of a simple redox system with adsorption of both reactant and product at the DME when a time dependent potential is applied. Pulse polarography. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1985, 183, 41-56.	0.3	18
94	Potentiostatic reversible reaction when both reactant and product are adsorbed at the dropping mercury electrode. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1983, 158, 231-252.	0.3	16
95	Potentiostatic reversible reaction when both reactant and product are adsorbed at the dropping mercury electrode. Journal of Electroanalytical Chemistry and Interfacial Electrochemistry, 1983, 158, 217-230.	0.3	26