

Francesc Mas

List of Publications by Year in descending order

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257357

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98
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times ranked

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#	ARTICLE	IF	CITATIONS
1	Bistability from double phosphorylation in signal transduction. <i>FEBS Journal</i> , 2006, 273, 3915-3926.	2.2	87
2	Pattern morphologies in zinc electrodeposition. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1991, 312, 219-235.	0.3	83
3	Product dependence and bifunctionality compromise the ultrasensitivity of signal transduction cascades. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2002, 99, 1170-1175.	3.3	62
4	Effect of crowding by Dextran in enzymatic reactions. <i>Biophysical Chemistry</i> , 2014, 185, 8-13.	1.5	61
5	Effect of Crowding by Dextran on the Hydrolysis of N-Succinyl-L-phenyl-Ala-p-nitroanilide Catalyzed by $\hat{\pm}$ -Chymotrypsin. <i>Journal of Physical Chemistry B</i> , 2011, 115, 1115-1121.	1.2	60
6	Two representations in multifractal analysis. <i>Journal of Physics A</i> , 1995, 28, 5607-5622.	1.6	54
7	Macromolecular Crowding Effect upon <i>in Vitro</i> Enzyme Kinetics: Mixed Activation of Diffusion Control of the Oxidation of NADH by Pyruvate Catalyzed by Lactate Dehydrogenase. <i>Journal of Physical Chemistry B</i> , 2014, 118, 4062-4068.	1.2	54
8	Effective Affinity Distribution for the Binding of Metal Ions to a Generic Fulvic Acid in Natural Waters. <i>Environmental Science & Technology</i> , 2009, 43, 7184-7191.	4.6	50
9	Lability and mobility effects on mixtures of ligands under steady-state conditions. <i>Physical Chemistry Chemical Physics</i> , 2003, 5, 5091.	1.3	48
10	New insights into diffusion in 3D crowded media by Monte Carlo simulations: effect of size, mobility and spatial distribution of obstacles. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 7396.	1.3	47
11	Physical Constraints in the Synthesis of Glycogen That Influence Its Structural Homogeneity: A Two-Dimensional Approach. <i>Biophysical Journal</i> , 1998, 75, 106-114.	0.2	44
12	Induced reactant adsorption in metal-polyelectrolyte systems: pulse polarographic study. <i>Analytica Chimica Acta</i> , 1992, 268, 261-274.	2.6	43
13	Conditional Affinity Spectra of Pb^{2+} -Humic Acid Complexation from Data Obtained with AGNES. <i>Environmental Science & Technology</i> , 2008, 42, 9289-9295.	4.6	36
14	Diffusion of $\hat{\pm}$ -Chymotrypsin in Solution-Crowded Media. A Fluorescence Recovery after Photobleaching Study. <i>Journal of Physical Chemistry B</i> , 2010, 114, 4028-4034.	1.2	35
15	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. <i>Colloids and Surfaces B: Biointerfaces</i> , 2014, 120, 200-207.	2.5	35
16	Effect of the surface charge discretization on electric double layers: A Monte Carlo simulation study. <i>Journal of Chemical Physics</i> , 2007, 126, 234703.	1.2	34
17	Reverse pulse polarography of labile metal + macromolecule systems with induced reactant adsorption: theoretical analysis and determination of complexation and adsorption parameters. <i>Journal of Electroanalytical Chemistry</i> , 1994, 375, 307-318.	1.9	33
18	Electrostatic and specific binding to macromolecular ligands. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2007, 306, 2-13.	2.3	32

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19	Voltammetric Analysis of Heterogeneity in Metal Ion Binding by Humics. <i>Environmental Science & Technology</i> , 2001, 35, 1097-1102.	4.6	30
20	Some effects of cell dimensions on zinc electrodeposits. <i>Journal of Electroanalytical Chemistry</i> , 1992, 328, 165-178.	1.9	29
21	Fractal electrodeposits of zinc and copper. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1990, 278, 351-360.	0.3	28
22	Complexation isotherms in metal speciation studies at trace concentration levels. Voltammetric techniques in environmental samples. <i>Physical Chemistry Chemical Physics</i> , 2002, 4, 3764-3773.	1.3	27
23	Potentiostatic reversible reaction when both reactant and product are adsorbed at the dropping mercury electrode. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1983, 158, 217-230.	0.3	26
24	Induced reactant adsorption in normal pulse polarography of labile metal polyelectrolyte systems part 1. Study of current-potential relationship assuming potential-independent adsorption parameters. <i>Journal of Electroanalytical Chemistry</i> , 1992, 326, 299-316.	1.9	25
25	Voltammetry of labile metal-macromolecular systems for any ligand-to-metal ratio, including adsorption phenomena. The role of the stability constant. <i>Journal of Electroanalytical Chemistry</i> , 1994, 374, 223-234.	1.9	24
26	Use of activity coefficients for bound and free sites to describe metal-macromolecule complexation. <i>Journal of the Chemical Society, Faraday Transactions</i> , 1998, 94, 2783-2794.	1.7	24
27	Molecular dynamics simulation of the spherical electrical double layer of a soft nanoparticle: Effect of the surface charge and counterion valence. <i>Journal of Chemical Physics</i> , 2012, 137, 174701.	1.2	24
28	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. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1985, 183, 27-39.	0.3	21
29	A theoretical approach to describe monolayer-liposome lipid interaction. <i>Biophysical Chemistry</i> , 1990, 36, 47-55.	1.5	20
30	Diffusion in macromolecular crowded media: Monte Carlo simulation of obstructed diffusion vs. FRAP experiments. <i>Theoretical Chemistry Accounts</i> , 2011, 128, 795-805.	0.5	20
31	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. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1985, 183, 73-89.	0.3	19
32	Induced reactant adsorption in normal pulse polarography of labile metal + polyelectrolyte systems. <i>Journal of Electroanalytical Chemistry</i> , 1992, 328, 271-285.	1.9	19
33	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. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1985, 183, 41-56.	0.3	18
34	Voltammetry of labile metal-complex systems with induced reactant adsorption. Theoretical analysis for any ligand-to-metal ratio. <i>Journal of Electroanalytical Chemistry</i> , 1993, 360, 1-25.	1.9	17
35	Interpretation of speciation measurements on labile metal-macromolecular systems by voltammetric techniques. <i>Analyst</i> , 1996, 121, 1855-1861.	1.7	17
36	Amalgamation effects in reverse pulse polarography at spherical electrodes. Influence on speciation measurements. <i>Journal of Electroanalytical Chemistry</i> , 1998, 442, 151-167.	1.9	17

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37	Affinity distribution functions in multicomponent heterogeneous adsorption. Analytical inversion of isotherms to obtain affinity spectra. <i>Journal of Chemical Physics</i> , 2004, 120, 9266-9276.	1.2	17
38	Model-Independent Link between the Macroscopic and Microscopic Descriptions of Multidentate Macromolecular Binding: Relationship between Stepwise, Intrinsic, and Microscopic Equilibrium Constants. <i>Journal of Physical Chemistry B</i> , 2009, 113, 15145-15155.	1.2	17
39	Potentiostatic reversible reaction when both reactant and product are adsorbed at the dropping mercury electrode. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1983, 158, 231-252.	0.3	16
40	Laplacian Multifractality of the Growth Probability Distribution in Electrodeposition. <i>Europhysics Letters</i> , 1994, 25, 271-276.	0.7	16
41	Voltammetry of heterogeneous labile metal-macromolecular systems for any ligand-to-metal ratio. <i>Journal of Electroanalytical Chemistry</i> , 2000, 484, 107-119.	1.9	16
42	A semi-grand canonical Monte Carlo simulation model for ion binding to ionizable surfaces: Proton binding of carboxylated latex particles as a case study. <i>Journal of Chemical Physics</i> , 2011, 135, 184103.	1.2	16
43	Monte Carlo simulations of enzymatic reactions in crowded media. Effect of the enzyme-obstacle relative size. <i>Mathematical Biosciences</i> , 2014, 251, 72-82.	0.9	16
44	Brownian Dynamics Computational Model of Protein Diffusion in Crowded Media with Dextran Macromolecules as Obstacles. <i>Entropy</i> , 2017, 19, 105.	1.1	16
45	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. <i>Polymers</i> , 2018, 10, 811.	2.0	16
46	Influence of macromolecular crowding on the charge regulation of intrinsically disordered proteins. <i>Soft Matter</i> , 2021, 17, 655-669.	1.2	16
47	Influence of the adsorption phenomena on the NPP and RPP limiting currents for labile metal-macromolecule systems. <i>Journal of Electroanalytical Chemistry</i> , 1998, 457, 229-246.	1.9	15
48	Ion binding to polyelectrolytes: Monte Carlo simulations versus classical mean field theories. <i>Theoretical Chemistry Accounts</i> , 2009, 123, 127-135.	0.5	15
49	Macromolecular diffusion in crowded media beyond the hard-sphere model. <i>Soft Matter</i> , 2018, 14, 3105-3114.	1.2	15
50	Role of Charge Regulation and Fluctuations in the Conformational and Mechanical Properties of Weak Flexible Polyelectrolytes. <i>Polymers</i> , 2019, 11, 1962.	2.0	15
51	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. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1985, 183, 57-72.	0.3	14
52	Monte Carlo simulation of diffusion-controlled response functions at 2D experimental rough electrodes. <i>Journal of Electroanalytical Chemistry</i> , 1993, 348, 221-246.	1.9	14
53	Conditional equilibrium constants in multicomponent heterogeneous adsorption: The conditional affinity spectrum. <i>Journal of Chemical Physics</i> , 2006, 124, 044710.	1.2	14
54	Dealing with long-range interactions in the determination of polyelectrolyte ionization properties. Extension of the transfer matrix formalism to the full range of ionic strengths. <i>Journal of Polymer Science, Part B: Polymer Physics</i> , 2017, 55, 275-284.	2.4	14

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55	Quasi-twodimensional electrodeposition: a summarized review on morphology and growth mechanisms. <i>Chaos, Solitons and Fractals</i> , 1995, 6, 287-294.	2.5	13
56	A computer simulation model for the diffusion controlled nucleation and growth processes on electrode surfaces—a two-dimensional study. <i>Journal of Electroanalytical Chemistry</i> , 1998, 458, 55-72.	1.9	13
57	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. <i>Journal of Electroanalytical Chemistry</i> , 1999, 472, 42-52.	1.9	13
58	A formalism for performing chronocoulometry at a stationary planar or spherical electrode. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1987, 224, 1-26.	0.3	12
59	Competitive Ion Complexation to Polyelectrolytes: Determination of the Stepwise Stability Constants. The $\text{Ca}^{2+}/\text{H}^{+}/\text{Polyacrylate}$ System. <i>Journal of Physical Chemistry B</i> , 2007, 111, 10421-10430.	1.2	12
60	Competition effects in cation binding to humic acid: Conditional affinity spectra for fixed total metal concentration conditions. <i>Geochimica Et Cosmochimica Acta</i> , 2010, 74, 5216-5227.	1.6	12
61	Scaling Properties of the Growth Probability Distribution in Electrochemical Deposition. <i>Europhysics Letters</i> , 1992, 17, 541-546.	0.7	11
62	Influence of adsorption on calibration curves in normal pulse polarography. <i>Analytica Chimica Acta</i> , 1995, 305, 273-284.	2.6	11
63	Basis of the voltammetric analysis of labile metal-homofunctional macromolecule complexation. <i>Journal of Electroanalytical Chemistry</i> , 1995, 391, 29-40.	1.9	11
64	Application of Maximum Entropy Formalism in the Determination of the Affinity Spectrum in Macromolecular Complexation. <i>Environmental Science & Technology</i> , 1998, 32, 539-548.	4.6	11
65	A Hierarchical Approach to Cooperativity in Macromolecular and Self-Assembling Binding Systems. <i>Journal of Biological Physics</i> , 2008, 34, 213-235.	0.7	11
66	Effect of Charge Regulation and Conformational Equilibria in the Stretching Properties of Weak Polyelectrolytes. <i>Macromolecules</i> , 2019, 52, 8017-8031.	2.2	11
67	Aggregation under a forced convective flow. <i>Physical Review B</i> , 1992, 46, 11495-11500.	1.1	10
68	Competitive $\text{Cd}^{2+}/\text{H}^{+}$ Complexation to Polyacrylic Acid Described by the Stepwise and Intrinsic Stability Constants. <i>Journal of Physical Chemistry B</i> , 2008, 112, 10092-10100.	1.2	10
69	Semi-empirical full-wave expression for induced reactant adsorption in normal pulse polarography of labile metal-polyelectrolyte systems. <i>Analytica Chimica Acta</i> , 1993, 273, 297-304.	2.6	9
70	Numerical procedures in electrochemical simulation. <i>International Journal of Quantum Chemistry</i> , 1994, 51, 357-367.	1.0	9
71	Conditional affinity spectra underlying NICA isotherm. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2009, 347, 156-166.	2.3	9
72	Ionization and Conformational Equilibria of Citric Acid: Delocalized Proton Binding in Solution. <i>Journal of Physical Chemistry A</i> , 2017, 121, 5894-5906.	1.1	9

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73	Effect of pH on the Supramolecular Structure of Helicobacter pylori Urease by Molecular Dynamics Simulations. <i>Polymers</i> , 2020, 12, 2713.	2.0	8
74	Unveiling the Effect of Low pH on the SARS-CoV-2 Main Protease by Molecular Dynamics Simulations. <i>Polymers</i> , 2021, 13, 3823.	2.0	8
75	Adsorption in double potential step chronocoulometry. <i>Journal of Electroanalytical Chemistry and Interfacial Electrochemistry</i> , 1988, 241, 89-104.	0.3	7
76	Binding Curve from Normalized Limiting Currents of Labile Heterogeneous Metal-Macromolecular Systems. The Case of Cd/Humic Acid. <i>Electroanalysis</i> , 2003, 15, 452-459.	1.5	7
77	Heterogeneity of Cd(II)-Macromolecule Systems: A Potentiometric Study. <i>Electroanalysis</i> , 2000, 12, 60-65.	1.5	6
78	Sensitivity analysis of metabolic cascades catalyzed by bifunctional enzymes. <i>Molecular Biology Reports</i> , 2002, 29, 211-215.	1.0	6
79	Adsorption of flexible proteins in the "wrong side" of the isoelectric point: Casein macropeptide as a model system. <i>Colloids and Surfaces B: Biointerfaces</i> , 2022, 217, 112617.	2.5	6
80	Effect of drift on segregation in two-component diffusion-limited aggregation. <i>Physical Review A</i> , 1992, 45, 3896-3902.	1.0	5
81	FRactal Electrodeposits: Morphology, Growth Dynamics and Diffusion-Limited Response Functions. <i>Fractals</i> , 1993, 01, 439-450.	1.8	5
82	Complexation to macromolecules with a large number of sites. <i>Journal of Chemical Physics</i> , 1999, 111, 2818-2828.	1.2	5
83	Voltammetry of heterogeneous labile metal-macromolecular systems for any ligand-to-metal ratio. <i>Journal of Electroanalytical Chemistry</i> , 2001, 514, 83-93.	1.9	5
84	Voltammetry of heterogeneous labile metal-macromolecular systems for any ligand-to-metal ratio.. <i>Journal of Electroanalytical Chemistry</i> , 2002, 530, 23-32.	1.9	5
85	Non-monotonic behavior of weak-polyelectrolytes adsorption on a cationic surface: A Monte Carlo simulation study. <i>Polymer</i> , 2021, 212, 123170.	1.8	4
86	Disordered grown systems: Generation and fractal analysis. <i>Electrodeposition. International Journal of Quantum Chemistry</i> , 1994, 52, 375-394.	1.0	3
87	Voltammetry of heterogeneous labile metal-macromolecular systems for any ligand to metal ratio: part IV. Binding curve from the polarographic waves. <i>Journal of Electroanalytical Chemistry</i> , 2005, 577, 311-321.	1.9	3
88	Prediction of Partition Coefficients in SDS Micelles by DFT Calculations. <i>Symmetry</i> , 2021, 13, 1750.	1.1	3
89	About implementing a Monte Carlo simulation algorithm for enzymatic reactions in crowded media. <i>Journal of the Serbian Chemical Society</i> , 2006, 71, 75-86.	0.4	3
90	Comment on: Deuterium nuclear fusion at room temperature: A pertinent inequality on barrier penetration. <i>Journal of Chemical Physics</i> , 1990, 93, 6118-6119.	1.2	1

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91	Simulation of Diffusion in Two-Dimensional Crowded Media. AIP Conference Proceedings, 2007, , .	0.3	1
92	On the Use of the Discrete Constant pH Molecular Dynamics to Describe the Conformational Space of Peptides. Polymers, 2021, 13, 99.	2.0	1
93	Unravelling Constant pH Molecular Dynamics in Oligopeptides with Explicit Solvation Model. Polymers, 2021, 13, 3311.	2.0	0
94	Electrodeposition: Fractal and Multifractal Measures. NATO ASI Series Series B: Physics, 1991, , 557-562.	0.2	0
95	Growth Patterns in Zinc Electrodeposition. NATO ASI Series Series B: Physics, 1993, , 173-182.	0.2	0