

# Raimundo Gargallo

## List of Publications by Year in descending order

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107  
papers

3,363  
citations

159585

30  
h-index

155660

55  
g-index

114  
all docs

114  
docs citations

114  
times ranked

3655  
citing authors

#	ARTICLE	IF	CITATIONS
1	A graphical user-friendly interface for MCR-ALS: a new tool for multivariate curve resolution in MATLAB. <i>Chemometrics and Intelligent Laboratory Systems</i> , 2005, 76, 101-110.	3.5	964
2	Fundamental aspects of the nucleic acid i-motif structures. <i>RSC Advances</i> , 2014, 4, 26956-26980.	3.6	151
3	Experimental Methods for Studying the Interactions between G-Quadruplex Structures and Ligands. <i>Current Pharmaceutical Design</i> , 2012, 18, 1900-1916.	1.9	115
4	Novel impedimetric aptasensor for label-free detection of Escherichia coli O157:H7. <i>Sensors and Actuators B: Chemical</i> , 2018, 255, 2988-2995.	7.8	90
5	The RNA Stem-Loop to G-Quadruplex Equilibrium Controls Mature MicroRNA Production inside the Cell. <i>Biochemistry</i> , 2015, 54, 7067-7078.	2.5	76
6	Multivariate curve resolution: a powerful tool for the analysis of conformational transitions in nucleic acids. <i>Nucleic Acids Research</i> , 2002, 30, 92e-92.	14.5	66
7	Chemometrics: An important tool for monitoring interactions of vitamin B7 with bovine serum albumin with the aim of developing an efficient biosensing system for the analysis of protein. <i>Talanta</i> , 2015, 132, 354-365.	5.5	59
8	Study of the Intercalation Equilibrium between the Polynucleotide Poly(adenylic)-Poly(uridylic) Acid and the Ethidium Bromide Dye by Means of Multivariate Curve Resolution and the Multivariate Extension of the Continuous Variation and Mole Ratio Methods. <i>Analytical Chemistry</i> , 1999, 71, 4328-4337.	6.5	57
9	Multivariate Curve Resolution Applied to the Analysis and Resolution of Two-Dimensional [1H,15N] NMR Reaction Spectra. <i>Analytical Chemistry</i> , 2004, 76, 7094-7101.	6.5	55
10	Nucleic Acid i-Motif Structures in Analytical Chemistry. <i>Critical Reviews in Analytical Chemistry</i> , 2016, 46, 443-454.	3.5	55
11	Solution equilibria of the i-motif-forming region upstream of the B-cell lymphoma-2 P1 promoter. <i>Biochimie</i> , 2007, 89, 1562-1572.	2.6	51
12	Application of multivariate resolution methods to the study of biochemical and biophysical processes. <i>Analytical Biochemistry</i> , 2004, 327, 1-13.	2.4	50
13	Noise propagation and error estimations in multivariate curve resolution alternating least squares using resampling methods. <i>Journal of Chemometrics</i> , 2004, 18, 327-340.	1.3	50
14	Validation of alternating least-squares multivariate curve resolution for chromatographic resolution and quantitation. <i>TrAC - Trends in Analytical Chemistry</i> , 1996, 15, 279-286.	11.4	49
15	Influence of pH, temperature and the cationic porphyrin TMPyP4 on the stability of the i-motif formed by the 5-(C3TA)4-3 sequence of the human telomere. <i>International Journal of Biological Macromolecules</i> , 2011, 49, 729-736.	7.5	49
16	Multivariate extension of the continuous variation and mole-ratio methods for the study of the interaction of intercalators with polynucleotides. <i>Analytica Chimica Acta</i> , 2000, 424, 105-114.	5.4	47
17	Combination of electrochemistry with chemometrics to introduce an efficient analytical method for simultaneous quantification of five opium alkaloids in complex matrices. <i>Talanta</i> , 2015, 131, 26-37.	5.5	47
18	Study of the interaction between the G-quadruplex-forming thrombin-binding aptamer and the porphyrin 5,10,15,20-tetrakis-(N-methyl-4-pyridyl)-21,23H-porphyrin tetratosylate. <i>Analytical Biochemistry</i> , 2008, 379, 8-15.	2.4	46

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19	pH-Modulated Watson-Crick Duplex-Quadruplex Equilibria of Guanine-Rich and Cytosine-Rich DNA Sequences 140 Base Pairs Upstream of the <i>c-kit</i> Transcription Initiation Site. <i>Chemistry - A European Journal</i> , 2009, 15, 12663-12671.	3.3	42
20	Targeting the G-quadruplex-forming region near the P1 promoter in the human BCL-2 gene with the cationic porphyrin TMPyP4 and with the complementary C-rich strand. <i>Biochimie</i> , 2009, 91, 894-902.	2.6	42
21	Molecular dynamics simulation of highly charged proteins: Comparison of the particle-particle particle-mesh and reaction field methods for the calculation of electrostatic interactions. <i>Protein Science</i> , 2009, 12, 2161-2172.	7.6	42
22	Application of a Multivariate Curve Resolution Procedure to the Analysis of Second-Order Melting Data of Synthetic and Natural Polynucleotides. <i>Analytical Chemistry</i> , 1997, 69, 1785-1792.	6.5	41
23	Understanding the effect of the nature of the nucleobase in the loops on the stability of the i-motif structure. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 7997-8004.	2.8	41
24	The human mitochondrial transcription factor A is a versatile G-quadruplex binding protein. <i>Scientific Reports</i> , 2017, 7, 43992.	3.3	40
25	Classification of nucleic acids structures by means of the chemometric analysis of circular dichroism spectra. <i>Analytica Chimica Acta</i> , 2009, 642, 117-126.	5.4	39
26	Solution equilibria of cytosine- and guanine-rich sequences near the promoter region of the n-myc gene that contain stable hairpins within lateral loops. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2014, 1840, 41-52.	2.4	39
27	Resolution of a structural competition involving dimeric G-quadruplex and its C-rich complementary strand. <i>Nucleic Acids Research</i> , 2006, 34, 206-216.	14.5	37
28	Application of an evolving factor analysis-based procedure to speciation analysis in the copper(II)-polyuridylic acid system. <i>Analytica Chimica Acta</i> , 1993, 283, 538-547.	5.4	34
29	Indications towards a stereoselectivity of the salt-induced peptide formation reaction. <i>Inorganica Chimica Acta</i> , 2004, 357, 649-656.	2.4	32
30	Exploratory data analysis of DNA microarrays by multivariate curve resolution. <i>Analytical Biochemistry</i> , 2006, 358, 76-89.	2.4	32
31	Tetraplex DNA Transitions within the Human c-myc Promoter Detected by Multivariate Curve Resolution of Fluorescence Resonance Energy Transfer. <i>Biochemistry</i> , 2005, 44, 16426-16434.	2.5	29
32	Spectrometric study of the folding process of i-motif-forming DNA sequences upstream of the <i>c-kit</i> transcription initiation site. <i>Analytica Chimica Acta</i> , 2010, 683, 69-77.	5.4	27
33	Chemical equilibria studies using multivariate analysis methods. <i>Analytical and Bioanalytical Chemistry</i> , 2011, 399, 1983-1997.	3.7	25
34	Specific loop modifications of the thrombin-binding aptamer trigger the formation of parallel structures. <i>FEBS Journal</i> , 2014, 281, 1085-1099.	4.7	25
35	Application of a multivariate curve resolution procedure for the study of the acid-base and copper(II) complexation equilibria of polycytidylic acid. <i>Reactive and Functional Polymers</i> , 1995, 27, 1-14.	4.1	24
36	Application of multivariate data analysis methods to comparative molecular field analysis (CoMFA) data: proton affinities and pKa prediction for nucleic acids components. <i>Journal of Computer-Aided Molecular Design</i> , 1999, 13, 611-623.	2.9	24

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37	Protonation Studies and Multivariate Curve Resolution on Oligodeoxynucleotides Carrying the Mutagenic Base 2-Aminopurine. <i>Biophysical Journal</i> , 2001, 81, 2886-2896.	0.5	24
38	Study of the acid-base behavior and copper(II) complexing properties of uracil- and hypoxanthine-derived nucleotides in aqueous solution. <i>Journal of Inorganic Biochemistry</i> , 1994, 56, 187-199.	3.5	23
39	Resolution of Parallel and Antiparallel Oligonucleotide Triple Helices Formation and Melting Processes by Multivariate Curve Resolution. <i>Journal of Biomolecular Structure and Dynamics</i> , 2003, 21, 267-278.	3.5	23
40	Application of Eigenstructure Tracking Analysis and SIMPLISMA to the Study of the Protonation Equilibria of cCMP and Several Polynucleotides. <i>Analytical Chemistry</i> , 1996, 68, 2241-2247.	6.5	21
41	Acid-base and copper (II) complexation equilibria of poly(inosinic)-poly(cytidylic). <i>Biopolymers</i> , 1997, 42, 271-283.	2.4	21
42	Structure and Stability of Human Telomeric G-Quadruplex with Preclinical 9-Amino Acridines. <i>PLoS ONE</i> , 2013, 8, e57701.	2.5	21
43	Influence of selectivity and polyelectrolyte effects on the performance of soft-modelling and hard-modelling approaches applied to the study of acid-base equilibria of polyelectrolytes by spectrometric titrations. <i>Analytica Chimica Acta</i> , 1996, 331, 195-205.	5.4	20
44	Destabilization of Quadruplex DNA by 8-Aminoguanine. <i>ChemBioChem</i> , 2006, 7, 46-48.	2.6	20
45	Porphyrin binding mechanism is altered by protonation at the loops in G-quadruplex DNA formed near the transcriptional activation site of the human c-kit gene. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2012, 1820, 1987-1996.	2.4	19
46	Multivariate resolution of NMR labile signals by means of hard- and soft-modelling methods. <i>Analytica Chimica Acta</i> , 2003, 490, 253-264.	5.4	18
47	Stabilization of c-KIT G-Quadruplex DNA Structures by the RNA Polymerase I Inhibitors BMH-21 and BA-41. <i>International Journal of Molecular Sciences</i> , 2019, 20, 4927.	4.1	18
48	Study of conformational transitions of i-motif DNA using time-resolved fluorescence and multivariate analysis methods. <i>Nucleic Acids Research</i> , 2019, 47, 6590-6605.	14.5	18
49	Hard/Soft hybrid modeling of temperature-induced unfolding processes involving G-quadruplex and i-motif nucleic acid structures. <i>Analytical Biochemistry</i> , 2014, 466, 4-15.	2.4	17
50	Resolution of temperature dependent conformational multiequilibria processes. <i>Chemometrics and Intelligent Laboratory Systems</i> , 1999, 46, 275-295.	3.5	16
51	Study of alkaloid berberine and its interaction with the human telomeric i-motif DNA structure. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2021, 248, 119185.	3.9	16
52	G-quadruplex binding properties of a potent PARP-1 inhibitor derived from 7-azaindole-1-carboxamide. <i>Scientific Reports</i> , 2021, 11, 3869.	3.3	16
53	The effect on quadruplex stability of North-nucleoside derivatives in the loops of the thrombin-binding aptamer. <i>Bioorganic and Medicinal Chemistry</i> , 2012, 20, 4186-4193.	3.0	15
54	Modulation of the stability of i-motif structures using an acyclic threoninol cytidine derivative. <i>RSC Advances</i> , 2015, 5, 63278-63281.	3.6	15

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55	i-motif structures in long cytosine-rich sequences found upstream of the promoter region of the SMARCA4 gene. <i>Biochimie</i> , 2017, 140, 20-33.	2.6	14
56	Naturally occurring quaternary benzo[ <i>a</i> ]phenanthridine alkaloids selectively stabilize G-quadruplexes. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 21772-21782.	2.8	14
57	Study of the interaction of cis-dichloro-(1,2 diethyl-3-aminopyrrolidine)Pt(II) complex with poly(I), poly(C) and poly(I)-poly(C). <i>Journal of Inorganic Biochemistry</i> , 2001, 85, 279-290.	3.5	13
58	Synthesis, stability, and protonation studies of a self-complementary dodecamer containing the modified nucleoside 2'-deoxyzebularine. <i>Biopolymers</i> , 2004, 73, 27-43.	2.4	13
59	Spectroscopic study of the interaction of actinomycin D with oligonucleotides carrying the central base sequences -XGCY- and -XGCCY- using multivariate methods. <i>Analytical and Bioanalytical Chemistry</i> , 2007, 387, 311-320.	3.7	13
60	Study of the interaction of a cis-dichloroaminopyrrolidine Pt(II) complex and the polynucleotide poly(I)-poly(C) acid by means of -NMR and multivariate curve resolution. <i>Analytica Chimica Acta</i> , 2001, 446, 437-448.	5.4	12
61	Stabilization of Telomeric i-motif Structures by (S)-Deoxy-C-Methylcytidine Residues. <i>ChemBioChem</i> , 2017, 18, 1123-1128.	2.6	12
62	A pH-dependent bolt involving cytosine bases located in the lateral loops of antiparallel G-quadruplex structures within the SMARCA4 gene promotor. <i>Scientific Reports</i> , 2019, 9, 15807.	3.3	12
63	Synthesis and Triplex-Forming Properties of Cyclic Oligonucleotides with (G,A)-Antiparallel Strands. <i>Chemistry and Biodiversity</i> , 2005, 2, 275-285.	2.1	11
64	Combination of chromatographic and chemometric methods to study the interactions between DNA strands. <i>Analytica Chimica Acta</i> , 2012, 722, 34-42.	5.4	11
65	Effect of the reaction field electrostatic term on the molecular dynamics simulation of the activation domain of procarboxypeptidase B. <i>Protein Engineering, Design and Selection</i> , 2000, 13, 21-26.	2.1	10
66	Analytical Characterization of the Conformational Transitions of Polynucleotides by Means of Different Molecular Spectroscopies and Multivariate Curve Resolution. <i>Analytical Biochemistry</i> , 2001, 291, 1-10.	2.4	10
67	Spectrometric study of the oligodeoxyribonucleotide protonation in aqueous solution. <i>Russian Journal of General Chemistry</i> , 2010, 80, 485-492.	0.8	10
68	The effect of l-thymidine, acyclic thymine and 8-bromoguanine on the stability of model G-quadruplex structures. <i>Biochimica Et Biophysica Acta - General Subjects</i> , 2017, 1861, 1205-1212.	2.4	10
69	Evaluation of the effect of polymorphism on G-quadruplex-ligand interaction by means of spectroscopic and chromatographic techniques. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018, 196, 185-195.	3.9	10
70	Study of the acid-base equilibria and conformational changes of double stranded polyadenylic-polyuridylic acid in aqueous solution. <i>Analytica Chimica Acta</i> , 1998, 363, 119-132.	5.4	9
71	Exploring the Interaction of Curaxin CBL0137 with G-Quadruplex DNA Oligomers. <i>International Journal of Molecular Sciences</i> , 2021, 22, 6476.	4.1	9
72	Three-Way Curve Resolution Applied to the Study of Solvent Effect on the Thermodynamic and Conformational Transitions Related to the Protonation of Polycytidylic Acid. <i>Analytical Biochemistry</i> , 1997, 249, 174-183.	2.4	8

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73	Application of multivariate curve resolution for the study of folding processes of DNA monitored by fluorescence resonance energy transfer. <i>Analytica Chimica Acta</i> , 2005, 536, 135-143.	5.4	8
74	Application of a self-modeling curve resolution approach to the study of solvent effects on the acid-base and copper(II)-complexing behavior of polyuridylic acid. <i>Journal of Inorganic Biochemistry</i> , 1996, 63, 155-173.	3.5	7
75	Photocleavage of Peptides and Oligodeoxynucleotides Carrying 2-Nitrobenzyl Groups. <i>Helvetica Chimica Acta</i> , 2009, 92, 613-622.	1.6	7
76	Synthesis and G-Quadruplex-Binding Properties of Defined Acridine Oligomers. <i>Journal of Nucleic Acids</i> , 2010, 2010, 1-10.	1.2	7
77	Interaction of oligonucleotides with benzo[c]phenanthridine alkaloid sanguilutine. <i>Chemical Papers</i> , 2013, 67, .	2.2	7
78	Influence of pH and a porphyrin ligand on the stability of a G-quadruplex structure within a duplex segment near the promoter region of the SMARCA4 gene. <i>International Journal of Biological Macromolecules</i> , 2020, 159, 383-393.	7.5	7
79	Application of a new multivariate curve resolution procedure to the simultaneous analysis of several spectroscopic titrations of the copper(II)-polyinosinic acid system. <i>Chemometrics and Intelligent Laboratory Systems</i> , 1995, 27, 163-174.	3.5	6
80	A comparative study of polyelectrolyte effects and conformational changes in several purine and pyrimidine homopolyribonucleotides. <i>Reactive and Functional Polymers</i> , 1996, 28, 127-137.	4.1	6
81	Study of the influence of metal ions on tRNAPhe thermal unfolding equilibria by UV spectroscopy and multivariate curve resolution. <i>Journal of Inorganic Biochemistry</i> , 2002, 89, 115-122.	3.5	6
82	Using principal component analysis to find correlations between loop-related and thermodynamic variables for G-quadruplex-forming sequences. <i>Biochimie</i> , 2010, 92, 1016-1023.	2.6	6
83	Cellular uptake studies of antisense oligonucleotides using G-quadruplex-nanostructures. The effect of cationic residue on the biophysical and biological properties. <i>RSC Advances</i> , 2016, 6, 76099-76109.	3.6	6
84	Structural Effects of Incorporation of 2'-Deoxy-2'-difluorodeoxycytidine (Gemcitabine) in A- and B-Form Duplexes. <i>Chemistry - A European Journal</i> , 2021, 27, 7351-7355.	3.3	5
85	Three-way multivariate curve resolution applied to speciation of acid-base and thermal unfolding transitions of an alternating polynucleotide. <i>Biopolymers</i> , 2001, 59, 477-488.	2.4	4
86	Study of the influence of temperature on the dynamics of the catalytic cleft in 1,3-1,4- $\beta$ -glucanase by molecular dynamics simulations. <i>Journal of Molecular Modeling</i> , 2006, 12, 835-845.	1.8	4
87	Structural Properties of G,T-Parallel Duplexes. <i>Journal of Nucleic Acids</i> , 2010, 2010, 1-11.	1.2	4
88	Investigation of the Complexes Formed between PARP1 Inhibitors and PARP1 G-Quadruplex at the Gene Promoter Region. <i>International Journal of Molecular Sciences</i> , 2021, 22, 8737.	4.1	4
89	Tuning G-Quadruplex Nanostructures with Lipids. Towards Designing Hybrid Scaffolds for Oligonucleotide Delivery. <i>International Journal of Molecular Sciences</i> , 2021, 22, 121.	4.1	4
90	Study of the interaction of the palmatine alkaloid with hybrid G-quadruplex/duplex and i-motif/duplex DNA structures. <i>Biophysical Chemistry</i> , 2022, 281, 106715.	2.8	4

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91	The Effect of Small Cosolutes that Mimic Molecular Crowding Conditions on the Stability of Triplexes Involving Duplex DNA. <i>International Journal of Molecular Sciences</i> , 2016, 17, 211.	4.1	3
92	Study of light-induced formation of photodimers in the i-motif nucleic acid structure by rapid-scan FTIR difference spectroscopy and hybrid hard- and soft-modelling. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 19635-19646.	2.8	3
93	Triplex Formation Using Oligonucleotide Clamps Carrying 8-Aminopurines. <i>Nucleosides, Nucleotides and Nucleic Acids</i> , 2007, 26, 979-983.	1.1	2
94	Studies on the interactions of Ag(i) with DNA and their implication on the DNA-templated synthesis of silver nanoclusters and on the interaction with complementary DNA and RNA sequences. <i>RSC Advances</i> , 2021, 11, 9029-9042.	3.6	2
95	Variable-Temperature Size Exclusion Chromatography for the Study of the Structural Changes in G-Quadruplex. , 2013, 2013, 1-7.		1
96	Alkaloid Escholidine and Its Interaction with DNA Structures. <i>Biology</i> , 2021, 10, 1225.	2.8	1
97	Properties of Parallel Tetramolecular G-Quadruplex Carrying N-Acetylgalactosamine as Potential Enhancer for Oligonucleotide Delivery to Hepatocytes. <i>Molecules</i> , 2022, 27, 3944.	3.8	1
98	6 Nucleic acids quadruplex. , 2021, , 231-272.		0
99	Frontispiece: Structural Effects of Incorporation of 2'-Deoxy-2'-difluorodeoxycytidine (Gemcitabine) in A- and B-Form Duplexes. <i>Chemistry - A European Journal</i> , 2021, 27, .	3.3	0
100	RESEARCH ON THE SPATIO-GEOMETRIC REASONING COMPETENCE OF UNDERGRADUATE CHEMISTRY STUDENTS AT THE UNIVERSITY OF BARCELONA. <i>EDULEARN Proceedings</i> , 2017, , .	0.0	0
101	RESEARCH ON THE MATHEMATICAL REASONING COMPETENCE OF STUDENTS AT THE CHEMISTRY DEGREE OF THE UNIVERSITY OF BARCELONA. , 2017, , .		0
102	LOGICAL REASONING: RESEARCH ON THE INFLUENCE OF THIS SKILL ON THE ACADEMIC GRADES OF THE STUDENTS AT THE CHEMISTRY DEGREE OF THE UNIVERSITY OF BARCELONA. , 2017, , .		0
103	RESEARCH ON THE CRITICAL THINKING COMPETENCE OF UNDERGRADUATE CHEMISTRY STUDENTS AT THE UNIVERSITY OF BARCELONA. , 2017, , .		0
104	CONTINUOUS ASSESSMENT METHODOLOGY: SIMPLY AN EVALUATION TOOL?. , 2019, , .		0
105	CONTINUOUS ASSESSMENT METHOD FROM CHEMISTRY STUDENTS'S POINT OF VIEW. , 2019, , .		0
106	CONTINUOUS ASSESSMENT IN STUDY: OPINION OF THE TEACHERS OF THE CHEMISTRY BACHELOR'S DEGREE OF THE UNIVERSITY OF BARCELONA. , 2019, , .		0
107	Nivell en competències bàsiques dels estudiants del grau de Química de la Universitat de Barcelona. Correspondència amb les qualificacions d'accreditació i del grau. <i>Revista D'Innovació I Recerca En Educació</i> , 2020, 13, .	0.4	0