

Carlos Briones

List of Publications by Year in descending order

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87
papers

3,445
citations

126907

33
h-index

149698

56
g-index

93
all docs

93
docs citations

93
times ranked

3890
citing authors

#	ARTICLE	IF	CITATIONS
1	Prebiotic Systems Chemistry: New Perspectives for the Origins of Life. <i>Chemical Reviews</i> , 2014, 114, 285-366.	47.7	674
2	Label-free detection of DNA hybridization based on hydration-induced tension in nucleic acid films. <i>Nature Nanotechnology</i> , 2008, 3, 301-307.	31.5	194
3	Synthesis of cobalt ferrite core/metallic shell nanoparticles for the development of a specific PNA/DNA biosensor. <i>Journal of Colloid and Interface Science</i> , 2008, 321, 484-492.	9.4	128
4	Applications of peptide nucleic acids (PNAs) and locked nucleic acids (LNAs) in biosensor development. <i>Analytical and Bioanalytical Chemistry</i> , 2012, 402, 3071-3089.	3.7	102
5	Role of a dipeptide insertion between codons 69 and 70 of HIV-1 reverse transcriptase in the mechanism of AZT resistance. <i>EMBO Journal</i> , 2000, 19, 5752-5761.	7.8	100
6	The dawn of the RNA World: Toward functional complexity through ligation of random RNA oligomers. <i>Rna</i> , 2009, 15, 743-749.	3.5	89
7	A DNA biosensor based on peptide nucleic acids on gold surfaces. <i>Biosensors and Bioelectronics</i> , 2007, 22, 1926-1932.	10.1	79
8	The metavirome of a hypersaline environment. <i>Environmental Microbiology</i> , 2010, 12, 2965-2976.	3.8	78
9	Instrument development to search for biomarkers on mars: Terrestrial acidophile, iron-powered chemolithoautotrophic communities as model systems. <i>Planetary and Space Science</i> , 2005, 53, 729-737.	1.7	77
10	Duration and fitness dependence of quasispecies memory. <i>Journal of Molecular Biology</i> , 2002, 315, 285-296.	4.2	74
11	High-Resolution Hepatitis C Virus Subtyping Using NS5B Deep Sequencing and Phylogeny, an Alternative to Current Methods. <i>Journal of Clinical Microbiology</i> , 2015, 53, 219-226.	3.9	74
12	Chemical roots of biological evolution: the origins of life as a process of development of autonomous functional systems. <i>Open Biology</i> , 2017, 7, 170050.	3.6	71
13	STEC-EPEC Oligonucleotide Microarray: A New Tool for Typing Genetic Variants of the LEE Pathogenicity Island of Human and Animal Shiga Toxin-producing <i>Escherichia coli</i> (STEC) and Enteropathogenic <i>E. coli</i> (EPEC) Strains. <i>Clinical Chemistry</i> , 2006, 52, 192-201.	3.2	67
14	Prebiotic Precursors of the Primordial RNA World in Space: Detection of NH_2OH . <i>Astrophysical Journal Letters</i> , 2020, 899, L28.	8.3	63
15	Introduction of HIV drug-resistance testing in clinical practice. <i>Aids</i> , 1999, 13, 1007-1014.	2.2	62
16	Primary Genotypic and Phenotypic HIV-1 Drug Resistance in Recent Seroconverters in Madrid. <i>Journal of Acquired Immune Deficiency Syndromes</i> (1999), 2001, 26, 145-150.	2.1	62
17	Discovery in space of ethanolamine, the simplest phospholipid head group. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	62
18	Structural basis for the biological relevance of the invariant apical stem in IRES-mediated translation. <i>Nucleic Acids Research</i> , 2011, 39, 8572-8585.	14.5	58

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19	Self-Assembled Monolayers of Peptide Nucleic Acids on Gold Surfaces: A Spectroscopic Study. <i>Langmuir</i> , 2005, 21, 9510-9517.	3.5	54
20	Prevalence of genotypic resistance to nucleoside analogues and protease inhibitors in Spain. <i>Aids</i> , 2000, 14, 727-732.	2.2	53
21	End-to-end crosstalk within the hepatitis C virus genome mediates the conformational switch of the 3' X-tail region. <i>Nucleic Acids Research</i> , 2014, 42, 567-582.	14.5	53
22	Memory in Retroviral Quasispecies: Experimental Evidence and Theoretical Model for Human Immunodeficiency Virus. <i>Journal of Molecular Biology</i> , 2003, 331, 213-229.	4.2	52
23	The GTPase Center Protein L12 Is Required for Correct Ribosomal Stalk Assembly but Not for <i>Saccharomyces cerevisiae</i> Viability. <i>Journal of Biological Chemistry</i> , 1998, 273, 31956-31961.	3.4	51
24	Minority report: hidden memory genomes in HIV-1 quasispecies and possible clinical implications. <i>AIDS Reviews</i> , 2008, 10, 93-109.	1.0	51
25	Structural analysis provides insights into the modular organization of picornavirus IRES. <i>Virology</i> , 2011, 409, 251-261.	2.4	46
26	Modular evolution and increase of functional complexity in replicating RNA molecules. <i>Rna</i> , 2006, 13, 97-107.	3.5	44
27	On the structural repertoire of pools of short, random RNA sequences. <i>Journal of Theoretical Biology</i> , 2008, 252, 750-763.	1.7	43
28	Ordered Self-Assembled Monolayers of Peptide Nucleic Acids with DNA Recognition Capability. <i>Physical Review Letters</i> , 2004, 93, 208103.	7.8	42
29	The folding of the hepatitis C virus internal ribosome entry site depends on the 3' end of the viral genome. <i>Nucleic Acids Research</i> , 2012, 40, 11697-11713.	14.5	37
30	The systems perspective at the crossroads between chemistry and biology. <i>Journal of Theoretical Biology</i> , 2015, 381, 11-22.	1.7	37
31	Collective properties of evolving molecular quasispecies. <i>BMC Evolutionary Biology</i> , 2007, 7, 110.	3.2	36
32	Primary Genotypic and Phenotypic HIV-1 Drug Resistance in Recent Seroconverters in Madrid. <i>Journal of Acquired Immune Deficiency Syndromes (1999)</i> , 2001, 26, 145-150.	2.1	35
33	Minority memory genomes can influence the evolution of HIV-1 quasispecies in vivo. <i>Gene</i> , 2006, 384, 129-138.	2.2	35
34	Dynamics of dominance of a dipeptide insertion in reverse transcriptase of HIV-1 from patients subjected to prolonged therapy. <i>Virus Research</i> , 2000, 66, 13-26.	2.2	34
35	Efficient HIV-1 inhibition by a 16 nt-long RNA aptamer designed by combining in vitro selection and in silico optimisation strategies. <i>Scientific Reports</i> , 2014, 4, 6242.	3.3	34
36	Deep subsurface sulfate reduction and methanogenesis in the Iberian Pyrite Belt revealed through geochemistry and molecular biomarkers. <i>Geobiology</i> , 2014, 12, 34-47.	2.4	33

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37	Topology of evolving, mutagenized viral populations: quasispecies expansion, compression, and operation of negative selection. <i>BMC Evolutionary Biology</i> , 2008, 8, 207.	3.2	31
38	Nucleic Acids and Their Analogs as Nanomaterials for Biosensor Development. <i>Current Nanoscience</i> , 2006, 2, 257-273.	1.2	24
39	A magnesium-induced RNA conformational switch at the internal ribosome entry site of hepatitis C virus genome visualized by atomic force microscopy. <i>Nucleic Acids Research</i> , 2015, 43, 565-580.	14.5	23
40	Silicon Surface Nanostructuring for Covalent Immobilization of Biomolecules. <i>Journal of Physical Chemistry C</i> , 2008, 112, 9308-9314.	3.1	22
41	Structural and functional characterization of self-assembled monolayers of peptide nucleic acids and its interaction with complementary DNA. <i>Journal of Molecular Catalysis A</i> , 2005, 228, 131-136.	4.8	20
42	Broad and Dynamic Diversification of Infectious Hepatitis C Virus in a Cell Culture Environment. <i>Journal of Virology</i> , 2020, 94, .	3.4	20
43	A new implication of quasispecies dynamics: Broad virus diversification in absence of external perturbations. <i>Infection, Genetics and Evolution</i> , 2020, 82, 104278.	2.3	20
44	Nucleic acid interactions with pyrite surfaces. <i>Chemical Physics</i> , 2008, 352, 11-18.	1.9	19
45	A novel representation of genomic sequences for taxonomic clustering and visualization by means of self-organizing maps. <i>Bioinformatics</i> , 2015, 31, 736-744.	4.1	19
46	Emergence of Zidovudine Resistance in HIV-Infected Patients Receiving Stavudine. <i>Journal of Acquired Immune Deficiency Syndromes</i> (1999), 2000, 23, 279-281.	2.1	18
47	Iberian Pyrite Belt Subsurface Life (IPBSL), a Drilling Project of Biohydrometallurgical Interest. <i>Advanced Materials Research</i> , 0, 825, 15-18.	0.3	18
48	Direct visualization of the native structure of viroid RNAs at single-molecule resolution by atomic force microscopy. <i>RNA Biology</i> , 2019, 16, 295-308.	3.1	17
49	Structural analysis of hepatitis C RNA genome using DNA microarrays. <i>Nucleic Acids Research</i> , 2004, 32, e90-e90.	14.5	16
50	Microarray-based identification of antigenic variants of foot-and-mouth disease virus: a bioinformatics quality assessment. <i>BMC Genomics</i> , 2006, 7, 117.	2.8	16
51	The Complex Molecules Detector (CMOLD): A Fluidic-Based Instrument Suite to Search for (Bio)chemical Complexity on Mars and Icy Moons. <i>Astrobiology</i> , 2020, 20, 1076-1096.	3.0	16
52	Reconstructing evolutionary relationships from functional data: a consistent classification of organisms based on translation inhibition response. <i>Molecular Phylogenetics and Evolution</i> , 2005, 34, 371-381.	2.7	15
53	Amino Acid Substitutions Associated with Treatment Failure for Hepatitis C Virus Infection. <i>Journal of Clinical Microbiology</i> , 2020, 58, .	3.9	15
54	Experimental conditions affecting the kinetics of aqueous HCN polymerization as revealed by UV-vis spectroscopy. <i>Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy</i> , 2018, 191, 389-397.	3.9	14

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55	A Combined ELONA-(RT)qPCR Approach for Characterizing DNA and RNA Aptamers Selected against PCBP-2. <i>Molecules</i> , 2019, 24, 1213.	3.8	14
56	In vitro Selection of High Affinity DNA and RNA Aptamers that Detect Hepatitis C Virus Core Protein of Genotypes 1 to 4 and Inhibit Virus Production in Cell Culture. <i>Journal of Molecular Biology</i> , 2022, 434, 167501.	4.2	13
57	Can Early Failure With Nevirapine Be Rescued With Efavirenz?. <i>Journal of Acquired Immune Deficiency Syndromes (1999)</i> , 2000, 24, 76-78.	2.1	12
58	Dissimilar Conservation Pattern in Hepatitis C Virus Mutant Spectra, Consensus Sequences, and Data Banks. <i>Journal of Clinical Medicine</i> , 2020, 9, 3450.	2.4	12
59	Can Early Failure With Nevirapine Be Rescued With Efavirenz?. <i>Journal of Acquired Immune Deficiency Syndromes (1999)</i> , 2000, 24, 76-78.	2.1	11
60	Characterization of minority subpopulations in the mutant spectrum of HIV-1 quasispecies by successive specific amplifications. <i>Virus Research</i> , 2007, 129, 123-134.	2.2	11
61	Do peptide nucleic acids form self-assembled monolayers on pyrite surfaces?. <i>Surface Science</i> , 2007, 601, 4195-4199.	1.9	11
62	Different Outcome in the First Two Patients with an HIV-1 Multinucleoside Drug-Resistant T69SSS Insertion in Spain. <i>Antiviral Therapy</i> , 1999, 4, 125-127.	1.0	11
63	Prevalence and Genetic Heterogeneity of the Reverse Transcriptase T69S-S-X Insertion in Pretreated HIV-Infected Patients. <i>Intervirology</i> , 2001, 44, 339-343.	2.8	10
64	The archaeology of coding RNA. <i>Annals of the New York Academy of Sciences</i> , 2019, 1447, 119-134.	3.8	10
65	Emergence of Zidovudine Resistance in HIV-Infected Patients Receiving Stavudine. <i>Journal of Acquired Immune Deficiency Syndromes (1999)</i> , 2000, 23, 279-281.	2.1	9
66	Versatile Graphene-Based Platform for Robust Nanobiohybrid Interfaces. <i>ACS Omega</i> , 2019, 4, 3287-3297.	3.5	9
67	Nucleotide Sequence of the 23S rRNA from <i>Haloferax mediterranei</i> and Phylogenetic Analysis of Halophilic Archaea Based on LSU rRNA. <i>Systematic and Applied Microbiology</i> , 2000, 23, 124-131.	2.8	8
68	Conformational changes induced in the <i>Saccharomyces cerevisiae</i> GTPase-associated rRNA by ribosomal stalk components and a translocation inhibitor. <i>Nucleic Acids Research</i> , 2000, 28, 4497-4505.	14.5	8
69	Prevalence of Novel Lamivudine-Resistant Genotypes (E44D/A, V118I) in Naive and Pretreated HIV-Infected Individuals. <i>Journal of Acquired Immune Deficiency Syndromes (1999)</i> , 2000, 25, 95-96.	2.1	8
70	Population Disequilibrium as Promoter of Adaptive Explorations in Hepatitis C Virus. <i>Viruses</i> , 2021, 13, 616.	3.3	7
71	An Efficient Microarray-Based Genotyping Platform for the Identification of Drug-Resistance Mutations in Majority and Minority Subpopulations of HIV-1 Quasispecies. <i>PLoS ONE</i> , 2016, 11, e0166902.	2.5	7
72	Prevalence of Novel Lamivudine-Resistant Genotypes (E44D/A, V118I) in Naive and Pretreated HIV-Infected Individuals. <i>Journal of Acquired Immune Deficiency Syndromes (1999)</i> , 2000, 25, 95-96.	2.1	6

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73	Protein evolution in viral quasispecies under selective pressure: A thermodynamic and phylogenetic analysis. <i>Gene</i> , 2005, 347, 237-246.	2.2	6
74	Structural modifications of gold thin films produced by thiol-derivatized single-stranded DNA immobilization. <i>Journal of Physics Condensed Matter</i> , 2014, 26, 055010.	1.8	6
75	Genomics of Viruses. , 2006, , 367-388.		5
76	Prevalence of drug-resistant HIV-1 genotypes in heavily pre-treated patients on current virological failure. <i>Aids</i> , 2000, 14, 1659-1660.	2.2	5
77	Detection and Biological Implications of Genetic Memory in Viral Quasispecies. <i>Developments in Cardiovascular Medicine</i> , 2003, , 259-276.	0.1	4
78	Different outcome in the first two patients with an HIV-1 multinucleoside drug-resistant T69SSS insertion in Spain. <i>Antiviral Therapy</i> , 1999, 4, 125-7.	1.0	4
79	Functional phylogeny: the use of the sensitivity of ribosomes to protein synthesis inhibitors as a tool to study the evolution of organisms. <i>Origins of Life and Evolution of Biospheres</i> , 1998, 28, 571-582.	1.9	3
80	Usefulness of Genotypic Analysis of Resistance to Nucleoside Analogues in the Clinical Setting. <i>European Journal of Clinical Microbiology and Infectious Diseases</i> , 1999, 18, 448-449.	2.9	3
81	Morphology Clustering Software for AFM Images, Based on Particle Isolation and Artificial Neural Networks. <i>IEEE Access</i> , 2019, 7, 160304-160323.	4.2	2
82	Hepatitis C virus genotypes in immigrants from equatorial guinea. <i>Journal of Hepatology</i> , 2000, 32, 189.	3.7	0
83	Functional Evolution of Ribosomes. , 2004, , 106-118.		0
84	EMERGENCE AND SELECTION OF BIOMODULES: STEPS IN THE ASSEMBLY OF A PROTOCELL. <i>World Scientific Lecture Notes in Complex Systems</i> , 2013, , 323-343.	0.1	0
85	Ordered SAMS of peptide nucleic acids on surfaces with DNA recognition capability. <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2005, 61, c415-c415.	0.3	0
86	Populations of RNA Molecules as Computational Model for Evolution. , 2010, , 67-79.		0
87	Clustering and Visualizing HIV Quasispecies Using Kohonen's Self-Organizing Maps. , 2007, , 940-947.		0