

Jorge Barroso

List of Publications by Year in descending order

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84
papers

4,571
citations

71102

41
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106344

65
g-index

87
all docs

87
docs citations

87
times ranked

1616
citing authors

#	ARTICLE	IF	CITATIONS
1	The Induced Magnetic Field in Cyclic Molecules. <i>Chemistry - A European Journal</i> , 2004, 10, 4367-4371.	3.3	266
2	Recent advances in planar tetracoordinate carbon chemistry. <i>Journal of Computational Chemistry</i> , 2007, 28, 362-372.	3.3	211
3	The Induced Magnetic Field. <i>Accounts of Chemical Research</i> , 2012, 45, 215-228.	15.6	204
4	B ₁₉ ⁺ : An Aromatic Wankel Motor. <i>Angewandte Chemie - International Edition</i> , 2010, 49, 5668-5671.	13.8	162
5	Boron Rings Enclosing Planar Hypercoordinate Group 14 Elements. <i>Journal of the American Chemical Society</i> , 2007, 129, 14767-14774.	13.7	129
6	Recent developments and future prospects of all-metal aromatic compounds. <i>Chemical Society Reviews</i> , 2015, 44, 6519-6534.	38.1	128
7	Theoretical Analysis of the Smallest Carbon Cluster Containing a Planar Tetracoordinate Carbon. <i>Journal of the American Chemical Society</i> , 2004, 126, 16160-16169.	13.7	126
8	Unravelling phenomenon of internal rotation in B ₁₃ ⁺ through chemical bonding analysis. <i>Chemical Communications</i> , 2011, 47, 6242.	4.1	120
9	∫ and ∫ contributions to the induced magnetic field: Indicators for the mobility of electrons in molecules. <i>Journal of Computational Chemistry</i> , 2007, 28, 302-309.	3.3	119
10	Multimetallocenes. A Theoretical Study. <i>Organometallics</i> , 2007, 26, 4731-4736.	2.3	118
11	Planar pentacoordinate carbons. <i>Nature Reviews Chemistry</i> , 2018, 2, .	30.2	118
12	B ₁₈ ²⁺ : a quasi-planar bowl member of the Wankel motor family. <i>Chemical Communications</i> , 2014, 50, 8140-8143.	4.1	107
13	Revisiting the racemization mechanism of helicenes. <i>Chemical Communications</i> , 2018, 54, 188-191.	4.1	107
14	CAI ₄ Be and CAI ₃ Be ²⁺ : global minima with a planar pentacoordinate carbon atom. <i>Chemical Communications</i> , 2010, 46, 8776.	4.1	104
15	Planar Tetracoordinate Carbon versus Planar Tetracoordinate Boron: The Case of CB ₄ and Its Cation. <i>Journal of the American Chemical Society</i> , 2011, 133, 13228-13231.	13.7	99
16	Coaxial Triple-layered versus Helical Be ₆ B ₁₁ ⁺ Clusters: Dual Structural Fluxionality and Multifold Aromaticity. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 10174-10177.	13.8	83
17	Not All That Has a Negative NICS Is Aromatic: The Case of the H-Bonded Cyclic Trimer of HF. <i>Journal of Chemical Theory and Computation</i> , 2010, 6, 1131-1135.	5.3	81
18	Dynamical behavior of Borospherene: A Nanobubble. <i>Scientific Reports</i> , 2015, 5, 11287.	3.3	81

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19	Fluxional Boron Clusters: From Theory to Reality. <i>Accounts of Chemical Research</i> , 2019, 52, 2732-2744.	15.6	79
20	Designing 3-D Molecular Stars. <i>Journal of the American Chemical Society</i> , 2009, 131, 9426-9431.	13.7	78
21	Li_2B_{12} and Li_3B_{12} : Prediction of the Smallest Tubular and Cage-like Boron Structures. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 4627-4631.	13.8	73
22	What Is the Maximum Coordination Number in a Planar Structure?. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 4275-4276.	13.8	70
23	Dynamical behavior of boron clusters. <i>Nanoscale</i> , 2016, 8, 17639-17644.	5.6	67
24	Structure and bonding of $\text{IrB}_{12}^{\text{+}}$: converting a rigid boron B_{12} platelet to a Wankel motor. <i>RSC Advances</i> , 2016, 6, 27177-27182.	3.6	67
25	Planar pentacoordinate carbons in $\text{CBe}_5\text{C}_4^{\text{+}}$ derivatives. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 4620-4624.	2.8	66
26	Exhaustive exploration of MgB_n ($n = 10\text{--}20$) clusters and their anions. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 6935-6941.	2.8	61
27	D_{3h} CN_3Be_3^+ and CO_3Li_3^+ : viable planar hexacoordinate carbon prototypes. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 14760.	2.8	59
28	Planar tetracoordinate carbons with a double bond in CAI_3E clusters. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 8769-8775.	2.8	57
29	Planar tetracoordinate carbon in $\text{CE}_4^{\text{+}}$ ($\text{E}=\text{Al--Ti}$) clusters. <i>Chemical Physics Letters</i> , 2012, 519-520, 29-33.	2.6	56
30	Isomerization Energy Decomposition Analysis for Highly Ionic Systems: Case Study of Starlike $\text{E}_5\text{Li}_7^{\text{+}}$ Clusters. <i>Chemistry - A European Journal</i> , 2013, 19, 2305-2310.	3.3	56
31	Planar pentacoordinate carbon atoms embedded in a metallocene framework. <i>Chemical Communications</i> , 2017, 53, 138-141.	4.1	56
32	$\text{CBe}_5\text{E}^{\text{+}}$ ($\text{E} = \text{Al, Ga, In, Tl}$): planar pentacoordinate carbon in heptaatomic clusters. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 14764.	2.8	55
33	Structural evolution of small gold clusters doped by one and two boron atoms. <i>Journal of Computational Chemistry</i> , 2014, 35, 2288-2296.	3.3	55
34	Structure and Electron Delocalization in Al_{42} - and Al_{44} -. <i>Journal of Chemical Theory and Computation</i> , 2007, 3, 775-781.	5.3	53
35	Li_2B_{24} : the simplest combination for a three-ring boron tube. <i>Nanoscale</i> , 2019, 11, 2143-2147.	5.6	52
36	And Yet It Rotates: The Starter for a Molecular Wankel Motor. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 10226-10227.	13.8	51

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37	Stop rotating! One substitution halts the B ₁₉ ⁺ motor. Chemical Communications, 2014, 50, 10680.	4.1	47
38	Structural transformations in boron clusters induced by metal doping. Chemical Society Reviews, 2022, 51, 1098-1123.	38.1	47
39	Stabilizing carbon-lithium stars. Physical Chemistry Chemical Physics, 2011, 13, 12975.	2.8	45
40	Starlike Aluminum-Carbon Aromatic Species. Chemistry - A European Journal, 2011, 17, 714-719.	3.3	45
41	Is Al ₂ Cl ₆ Aromatic? Cautions in Superficial NICS Interpretation. Journal of Physical Chemistry A, 2013, 117, 5529-5533.	2.5	45
42	Scalar and Spin-Orbit Relativistic Corrections to the NICS and the Induced Magnetic Field: The case of the E ₁₂ ²⁺ Spherenes (E = Ge, Sn, Pb). Journal of Chemical Theory and Computation, 2010, 6, 2701-2705.	5.3	44
43	Planar or tetrahedral? A ternary 17-electron CBe ₅ H ₄ ⁺ cluster with planar pentacoordinate carbon. Chemical Communications, 2020, 56, 8305-8308.	4.1	42
44	A hierarchical algorithm for molecular similarity (H-FORMS). Journal of Computational Chemistry, 2015, 36, 1456-1466.	3.3	41
45	Planar pentacoordinate carbon in CGa ₅ ⁺ derivatives. Physical Chemistry Chemical Physics, 2018, 20, 12350-12355.	2.8	41
46	Planar Hexacoordinate Carbons: Half Covalent, Half Ionic. Angewandte Chemie - International Edition, 2021, 60, 8700-8704.	13.8	40
47	How Far Can One Push the Noble Gases Towards Bonding?: A Personal Account. Molecules, 2019, 24, 2933.	3.8	34
48	Revisiting Aromaticity and Chemical Bonding of Fluorinated Benzene Derivatives. ChemistryOpen, 2015, 4, 302-307.	1.9	33
49	A Spinning Umbrella: Carbon Monoxide and Dinitrogen Bound MB ₁₂ ⁺ Clusters (M = Co, Rh, Ir). Journal of Physical Chemistry A, 2017, 121, 2971-2979.	2.5	31
50	Structure and Bonding in CE ₅ ⁺ (E=Al-Tl) Clusters: Planar Tetracoordinate Carbon versus Pentacoordinate Carbon. Chemistry - an Asian Journal, 2018, 13, 1467-1473.	3.3	30
51	10- π -Electron arenes À la carte: structure and bonding of the [E _n (C _n H _n) ⁺] ₆ ⁺ (E = Ca, Sr, Ba; n = 6-8) complexes. Physical Chemistry Chemical Physics, 2016, 18, 11909-11918.	2.8	29
52	Analysis of Aromaticity in Planar Metal Systems using the Linear Response Kernel.. Journal of Physical Chemistry A, 2013, 117, 3556-3560.	2.5	26
53	Celebrating the 150th anniversary of the Kekulé benzene structure. Physical Chemistry Chemical Physics, 2016, 18, 11587-11588.	2.8	26
54	Evaluation of restricted probabilistic cellular automata on the exploration of the potential energy surface of Be ₆ B ₁₁ ⁺ . Theoretical Chemistry Accounts, 2020, 139, 1.	1.4	26

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55	Noble Gas Inserted Metal Acetylides (Metal = Cu, Ag, Au). Journal of Physical Chemistry A, 2018, 122, 7391-7401.	2.5	25
56	Planar tetracoordinate fluorine atoms. Chemical Science, 2021, 12, 6699-6704.	7.4	25
57	B10M2 (M = Rh, Ir): finally a stable boron-based icosahedral cluster. Chemical Communications, 2019, 55, 7490-7493.	4.1	22
58	Embedding a Planar Hypercoordinate Carbon Atom into a [4n+2] π -System. ChemPhysChem, 2020, 21, 145-148.	2.1	22
59	Consequences of Curvature on Induced Magnetic Field: The Case of Helicenes. Chemistry - A European Journal, 2020, 26, 326-330.	3.3	21
60	Structure and stability of Si ₆ Li ₆ : Aromaticity vs polarizability. Chemical Physics Letters, 2010, 496, 172-174.	2.6	20
61	Re-examination of the C ₆ Li ₆ Structure: To Be, or not To Be Symmetric. Chemistry - A European Journal, 2013, 19, 12668-12672.	3.3	20
62	Structure and bonding of molecular stirrers with formula B ₇ M ₂ ⁺ and B ₈ M ₂ (M = Zn, Cd, Hg). Physical Chemistry Chemical Physics, 2020, 22, 12312-12320.	2.8	20
63	Exploring the Potential Energy Surface of E ₂ P ₄ Clusters (E=Group...13 Element): The Quest for Inverse Carbon-Free Sandwiches. Chemistry - A European Journal, 2014, 20, 4583-4590.	3.3	19
64	Boron Nanowheels with Axles Containing Noble Gas Atoms: Viable Noble Gas Bound M ₁₀ ⁺ Clusters (M=Nb, Ta). Chemistry - A European Journal, 2018, 24, 3590-3598.	3.3	19
65	Probing Hyperconjugative Aromaticity of Monosubstituted Cyclopentadienes. Asian Journal of Organic Chemistry, 2019, 8, 123-127.	2.7	19
66	Planar pentacoordinate silicon and germanium atoms. Chemical Communications, 2020, 56, 13772-13775.	4.1	17
67	Structural effects of alkali-metals on the B ₁₂ skeleton. Physical Chemistry Chemical Physics, 2020, 22, 17344-17350.	2.8	17
68	Magnetically Induced Ring-Current Strengths of Planar and Nonplanar Molecules: New Insights from the Pseudo- π Model. Journal of Physical Chemistry A, 2021, 125, 5753-5764.	2.5	17
69	E ₅ M ₇ ⁺ (E=Cd ²⁺ , Pb, M=Li ⁺ , Cs): A Source of Viable Star-Shaped Clusters. Chemistry - an Asian Journal, 2018, 13, 1751-1755.	3.3	15
70	Hydrogen-Bonded Crystalline Molecular Machines with Ultrafast Rotation and Displacive Phase Transitions. Chemistry - A European Journal, 2020, 26, 11727-11733.	3.3	13
71	Bare and ligand protected planar hexacoordinate silicon in SiSb ₃ M ₃ ⁺ (M = Ca, Sr, Ba) clusters. Chemical Science, 2022, 13, 8045-8051.	7.4	13
72	E ₃ M ₃ ⁺ (E=Cd ²⁺ , Pb, M=Li ⁺ , Cs) Clusters: The Smallest Molecular Stars. Chemistry - A European Journal, 2017, 23, 11430-11436.	3.3	12

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73	Planar Tetracoordinate Carbons in Allene-Type Structures. <i>Journal of Physical Chemistry A</i> , 2021, 125, 3009-3014.	2.5	12
74	Origin of the isotropic motion in crystalline molecular rotors with carbazole stators. <i>Chemical Science</i> , 2019, 10, 4422-4429.	7.4	11
75	Planar Hypercoordinate Carbons in Alkali Metal Decorated C_3^{2-} and C_2^{2-} Dianions. <i>Chemistry - A European Journal</i> , 2021, 27, 16701-16706.	3.3	11
76	Revisiting the Formation Mechanism of 1,3,4-Oxadiazole-2(3 <i>H</i>)-ones from Hydrazonyl Chloride and Carbon Dioxide. <i>Journal of Organic Chemistry</i> , 2018, 83, 13045-13050.	3.2	10
77	Revisiting the Rearrangement of Dewar Thiophenes. <i>Molecules</i> , 2020, 25, 284.	3.8	10
78	Planar Hexacoordinate Carbons: Half Covalent, Half Ionic. <i>Angewandte Chemie</i> , 2021, 133, 8782-8786.	2.0	9
79	Structure and Bonding of Alkali-Metal Pentalenides. <i>Organometallics</i> , 2017, 36, 310-317.	2.3	8
80	Bonding and Mobility of Alkali Metals in Helicenes. <i>Chemistry - A European Journal</i> , 2018, 24, 11227-11233.	3.3	6
81	Delocalization in Substituted Benzene Dications: A Magnetic Point of View. <i>ChemistryOpen</i> , 2020, 9, 657-661.	1.9	4
82	Isomerization and luminescent properties of Schiff-base aluminum complexes containing 1 <i>H</i> -pyrrole-2-carbaldehyde moieties. <i>Inorganica Chimica Acta</i> , 2018, 482, 535-541.	2.4	3
83	Head to Tail Distortion Wave Characterizes the Enantiomerization of Helicenes. <i>Journal of Organic Chemistry</i> , 2020, 85, 15415-15421.	3.2	3
84	The base-catalyzed keto-enol tautomerism of chrysophanol anthrone. A DFT investigation of the base-catalyzed reaction. <i>Molecular Simulation</i> , 2019, 45, 716-723.	2.0	2