

# Reza Ghafouri

## List of Publications by Year in descending order

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papers

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#	ARTICLE	IF	CITATIONS
1	Exploring Adjacent Pentagons in Non-IPR and SW Defective Si <sub>60</sub> and Si <sub>70</sub> Silicon Fullerenes: a Computational Study. <i>Silicon</i> , 2019, 11, 323-329.	3.3	1
2	Hydrogen-abstraction reactions of fully hydrogenated silicon fullerene cages with the amino radical: a density functional study. <i>Structural Chemistry</i> , 2018, 29, 607-614.	2.0	1
3	Polarizability of the Si <sub>60</sub> H <sub>60</sub> Derivatives Containing Epoxide Moieties (Si <sub>60</sub> H <sub>60</sub> ~ <sup>2n</sup> O <sub>n</sub> with n up to 30): A DFT Study. <i>Journal of Cluster Science</i> , 2018, 29, 889-896.	3.3	1
4	Computational study for the circular redox reaction of N <sub>2</sub> O with CO catalyzed by fullerometallic cations C <sub>60</sub> Fe <sup>+</sup> and C <sub>70</sub> Fe <sup>+</sup> . <i>Journal of Molecular Graphics and Modelling</i> , 2017, 72, 50-57.	2.4	1
5	Chlorofluorofullerenes (CFFs). <i>Structural Chemistry</i> , 2017, 28, 1707-1716.	2.0	1
6	Theoretical study on the mechanism of reactions of CX <sub>3</sub> radicals (X=H, F, Cl and Br) with C <sub>20</sub> H <sub>20</sub> and C <sub>20</sub> F <sub>20</sub> fullerenes. <i>Journal of Molecular Structure</i> , 2017, 1127, 296-302.	3.6	1
7	Exploring pentagon-heptagon pair defects in the triangular graphene quantum dots: A computational study. <i>Materials Chemistry and Physics</i> , 2016, 175, 223-232.	4.0	5
8	Exploring the Mechanism of Reactions of SiX <sub>3</sub> and CX <sub>3</sub> Radicals with Si <sub>20</sub> X <sub>20</sub> Fullerenes (X=H, F): A Density Functional Study. <i>Journal of Cluster Science</i> , 2016, 27, 1719-1728.	3.3	3
9	Exploring the simultaneous existence of Stone-Wales and carbon ad-dimer defects in the zigzag single-walled carbon nanotubes. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2016, 83, 238-245.	2.7	1
10	Functionalization of pentagon-pentagon edges of fullerenes by cyclic polysulfides: A DFT study. <i>Journal of Physics and Chemistry of Solids</i> , 2016, 92, 26-31.	4.0	9
11	Theoretical study on the mono and multiply oxygenated Si <sub>60</sub> H <sub>60</sub> fullerene. <i>Molecular Physics</i> , 2016, 114, 819-828.	1.7	1
12	AlSi <sub>2</sub> P nanotubes: a theoretical study. <i>Structural Chemistry</i> , 2016, 27, 525-533.	2.0	1
13	A Computational Investigation of the Electronic Properties of Partially Hydrogenated Fullerenes C <sub>60</sub> H <sub>n</sub> (n = 18, 20, 24, 36 and 48). <i>Fullerenes Nanotubes and Carbon Nanostructures</i> , 2015, 23, 40-48.	2.1	2
14	1,3-Dipolar Cycloaddition in Stone-Wales Defective Carbon Nanotubes: A Computational Study. <i>Journal of Cluster Science</i> , 2015, 26, 581-594.	3.3	3
15	X <sub>24</sub> Y <sub>24</sub> fullerene-like cages with the group III and V elements X=Al, Ga; Y=P, As: a DFT prediction. <i>Monatshefte für Chemie</i> , 2015, 146, 1241-1247.	1.8	1
16	Functionalization of carbon ad-dimer defective single-walled carbon nanotubes through 1,3-dipolar cycloaddition: a DFT study. <i>Structural Chemistry</i> , 2015, 26, 507-515.	2.0	16
17	Characterization of Hydrogen Bonds in the End-Functionalized Single-Wall Carbon Nanotubes: A DFT Study. <i>Nano</i> , 2015, 10, 1550036.	1.0	2
18	Boron-nitride ad-unit and carbon ad-dimer defects in the boron nitride nanotubes. <i>Journal of Physics and Chemistry of Solids</i> , 2015, 79, 7-13.	4.0	4

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19	Exploring Electronic Properties of $\text{Si}_{20}\text{H}_{20}\text{P}_n$ Heterofullerenes ( $n = 1, 2, 3, 4$ ) and Related Elements, 2014, 189, 60-73.	1.6	14
20	Mono- and multiply-functionalized fullerene derivatives through 1,3-dipolar cycloadditions: A DFT study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2014, 56, 351-356.	2.7	32
21	Evaluation of on-cage phosphorus doping of hydrogenated silicon fullerenes: a computational study. <i>Structural Chemistry</i> , 2014, 25, 37-42.	2.0	4
22	(SiH) $_{48}\text{X}_{12}$ Heterofullerenes with the Group III and V Dopants: A DFT Prediction of Geometry, Stability, and Electronic Structure. <i>Journal of Cluster Science</i> , 2014, 25, 505-515.	3.3	7
23	Exploring $^{11}\text{B}$ and $^{15}\text{N}$ NMR parameters of $\text{C}_{70}\text{B}_x(\text{N})_x$ fullerenes ( $x = 1, 2, 3, 4, 5$ ) in connection with local structures and curvature effects: a DFT study. <i>Monatshefte für Chemie</i> , 2014, 145, 411-419.	1.8	1
24	BN Belts: From Small Fullerenes to Nanocapsules. <i>Journal of Cluster Science</i> , 2014, 25, 1173-1185.	3.3	2
25	Stone-Wales defect formation in the zigzag and armchair BC <sub>2</sub> N nanotubes: A DFT study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2014, 58, 94-100.	2.7	6
26	Theoretical Investigation of Mono and Multiply Oxygenated C <sub>70</sub> Fullerenes. <i>Journal of Cluster Science</i> , 2014, 25, 1109-1119.	3.3	3
27	Fully and partially exohydrogenated Si <sub>80</sub> fullerene cage: a DFT study. <i>Structural Chemistry</i> , 2014, 25, 575-581.	2.0	3
28	Theoretical identification of the lowest energy structure of $\text{C}_{70}\text{Si}_n$ , $n = 1, 2, 6, 10, \text{ and } 20$ heterofullerenes. <i>Structural Chemistry</i> , 2014, 25, 617-623.	2.0	3
29	1,3-Dipolar cycloaddition of BC <sub>2</sub> N nanotubes: A DFT study. <i>Computational and Theoretical Chemistry</i> , 2014, 1034, 32-37.	2.5	11
30	Exploring the electronic and magnetic properties of zigzag and armchair BC <sub>2</sub> N nanotubes: a DFT study. <i>Structural Chemistry</i> , 2014, 25, 95-102.	2.0	3
31	COMPUTATIONAL NICS AND $^{13}\text{C}$ NMR CHARACTERIZATION OF SUBSTITUTION PATTERNS OF $\text{C}_{60}\text{N}_n$ FULLERENES ( $n = 1-12$ ). <i>Journal of Theoretical and Computational Chemistry</i> , 2013, 12, 1350009.	1.8	2
32	Silicon doping of defect sites in Stone-Wales defective carbon nanotubes: A density functional theory study. <i>Superlattices and Microstructures</i> , 2013, 60, 1-9.	3.1	11
33	An investigation of curvature effects on the nitrogen and boron chemical shielding tensors as well as NICS characterization of BN nanotubes with Stone-Wales defects: A DFT study. <i>Superlattices and Microstructures</i> , 2013, 55, 33-44.	3.1	11
34	A computational NICS and $^{13}\text{C}$ NMR characterization of the polyfluorofullerenes $\text{C}_{60}\text{F}_n$ ( $n = 18, 20, 24$ ). <i>Journal of Theoretical and Computational Chemistry</i> , 2013, 12, 1350010.	1.7	13
35	A computational investigation of electronic structure as well as $^{19}\text{F}$ and $^{29}\text{Si}$ chemical shielding tensors in the fluorinated silicon fullerenes $\text{Si}_n\text{F}_n$ ( $n = 60$ ). <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2013, 48, 13-20.	2.7	5
36	A computational investigation of $^{11}\text{B}$ and $^{15}\text{N}$ chemical shielding tensors as well as local aromaticity based on NICS characterization in the N/B doped triangular graphene quantum dots. <i>Superlattices and Microstructures</i> , 2013, 62, 207-216.	3.1	3

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37	Carbon Doping of Defect Sites in Stone-Wales Defective Boron-nitride Nanotubes: A Density Functional Theory Study. <i>Journal of Cluster Science</i> , 2013, 24, 865-879.	3.3	7
38	A computational investigation of the electronic properties of Octahedral Al <sub>n</sub> N <sub>n</sub> and Al <sub>n</sub> P <sub>n</sub> cages (n=12, 16, 28, 36, and 48). <i>Structural Chemistry</i> , 2013, 24, 681-689.	2.0	11
39	Electronic and Chemical Characterization of Aluminum-Nitrogen (AlN) Substituted Fullerenes: C <sub>58</sub> AlN to C <sub>24</sub> Al <sub>12</sub> N <sub>12</sub> . <i>Journal of Cluster Science</i> , 2013, 24, 327-339.	3.3	2
40	Theoretical studies on one-dimensional polymers constructed from BN-substituted C <sub>36</sub> fullerene. <i>Computational and Theoretical Chemistry</i> , 2013, 1017, 1-6.	2.5	4
41	Exploring magnetic properties and Curved $\pi$ -Conjugation of B <sub>x</sub> N <sub>y</sub> C <sub>z</sub> nanotubes using density functional theory. <i>Superlattices and Microstructures</i> , 2013, 57, 66-76.	3.1	6
42	A computational proof toward correlation between the theoretical chemical concept of electrophilicity index for the acceptors of C <sub>60</sub> and C <sub>70</sub> fullerene derivatives with the open-circuit voltage of polymer-fullerene solar cells. <i>Solar Energy Materials and Solar Cells</i> , 2012, 105, 125-131.	6.2	26
43	Exploring the electronic and magnetic properties of C <sub>60</sub> fullerene dimers with ladderane-like hexagonal bridges. <i>Computational and Theoretical Chemistry</i> , 2012, 1000, 85-91.	2.5	6
44	A computational NICS and <sup>13</sup> C NMR characterization of the substitution patterns of C <sub>70</sub> ~ <sub>2x</sub> (BN) <sub>x</sub> fullerenes (x=1~25). <i>Journal of Physics and Chemistry of Solids</i> , 2012, 73, 1378-1384.	4.0	12
45	Exploring magnetic properties inside full equatorial BN-substituted fullerenes C <sub>n</sub> (n=20, 24, 30, 36, 60). <i>Journal of Physics and Chemistry of Solids</i> , 2012, 44, 1386-1391.	2.7	17
46	Exploring electronic structures for the most stable isomers of C <sub>12</sub> B <sub>6</sub> N <sub>6</sub> and B <sub>6</sub> N <sub>6</sub> C <sub>12</sub> heterofullerenes based on NMR, NICS and NBO analysis: A DFT study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2012, 44, 1992-1998.	2.7	10
47	<sup>1</sup> H and <sup>29</sup> Si NMR investigation of Si <sub>n</sub> H <sub>n</sub> polysilanes with n%60: A DFT study. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2012, 44, 2099-2104.	2.7	12
48	Investigation of curvature effects on the nitrogen and boron electric field gradient and chemical shielding tensors in the mono-BN-substituted fullerenes: A density functional theory. <i>Physica E: Low-Dimensional Systems and Nanostructures</i> , 2012, 45, 183-189.	2.7	6
49	Density functional investigation of the electronic properties of B <sub>80</sub> fullerene exposed to regioselective chemisorption of nucleophiles NH <sub>3</sub> , PH <sub>3</sub> and AsH <sub>3</sub> . <i>Superlattices and Microstructures</i> , 2012, 52, 861-871.	3.1	8
50	BN-Substituted fullerenes C <sub>60</sub> ~ <sub>2x</sub> (BN) <sub>x</sub> : a computational <sup>11</sup> B and <sup>15</sup> N NMR study. <i>Structural Chemistry</i> , 2012, 23, 1921-1929.	2.0	17
51	A Computational NICS and <sup>13</sup> C NMR Characterization of C <sub>60</sub> ~ <sub>n</sub> Si <sub>n</sub> Heterofullerenes (n=1, 2, 6, 12, 20). <i>Journal of Physics and Chemistry of Solids</i> , 2012, 73, 1378-1384.	3.3	9
52	A computational investigation of <sup>11</sup> B electric field gradient and chemical shielding tensors as well as NBO analysis in the B <sub>80</sub> fullerene. <i>Solid State Sciences</i> , 2012, 14, 381-386.	3.2	15