Pedro Alves da Silva Autreto

List of Publications by Year
in descending order

50 papers	1,551 citations	430874 18 h-index	302126 39 g-index
51 all docs	51 docs citations	51 times ranked	2180 citing authors

#	Article	IF	Citations
1	Structure, Properties and Applications of Twoâ€Dimensional Hexagonal Boron Nitride. Advanced Materials, 2021, 33, e2101589.	21.0	239
2	Graphene to graphane: a theoretical study. Nanotechnology, 2009, 20, 465704.	2.6	219
3	Nonzero Gap Two-Dimensional Carbon Allotrope from Porous Graphene. Journal of Physical Chemistry C, 2012, 116, 12810-12813.	3.1	152
4	Low-density three-dimensional foam using self-reinforced hybrid two-dimensional atomic layers. Nature Communications, 2014, 5, 4541.	12.8	91
5	Inorganic Graphenylene: A Porous Two-Dimensional Material With Tunable Band Gap. Journal of Physical Chemistry C, 2014, 118, 23670-23674.	3.1	76
6	Designing nanoscaled hybrids from atomic layered boron nitride with silver nanoparticle deposition. Journal of Materials Chemistry A, 2014, 2, 3148.	10.3	65
7	Unzipping Carbon Nanotubes at High Impact. Nano Letters, 2014, 14, 4131-4137.	9.1	63
8	Mechanical properties and fracture dynamics of silicene membranes. Physical Chemistry Chemical Physics, 2014, 16, 19417-19423.	2.8	56
9	3D Porous Graphene by Lowâ€Temperature Plasma Welding for Bone Implants. Advanced Materials, 2016, 28, 8959-8967.	21.0	52
10	Insights on the mechanism of water-alcohol separation in multilayer graphene oxide membranes: Entropic versus enthalpic factors. Carbon, 2018, 127, 280-286.	10.3	44
11	On the unzipping of multiwalled carbon nanotubes. Nanotechnology, 2012, 23, 465702.	2.6	39
12	Site-dependent hydrogenation on graphdiyne. Carbon, 2014, 77, 829-834.	10.3	38
13	Ambient solid-state mechano-chemical reactions between functionalized carbon nanotubes. Nature Communications, 2015, 6, 7291.	12.8	35
14	Graphene healing mechanisms: A theoretical investigation. Carbon, 2016, 99, 302-309.	10.3	29
15	Burning Graphene Layer-by-Layer. Scientific Reports, 2015, 5, 11546.	3.3	26
16	On the Mechanical Properties and Thermal Stability of a Recently Synthesized Monolayer Amorphous Carbon. Journal of Physical Chemistry C, 2020, 124, 14855-14860.	3.1	25
17	Enhanced Mechanical Stability of Gold Nanotips through Carbon Nanocone Encapsulation. Scientific Reports, 2015, 5, 10408.	3.3	21
18	Bacteria as Bio-Template for 3D Carbon Nanotube Architectures. Scientific Reports, 2017, 7, 9855.	3.3	21

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19	Atomically locked interfaces of metal (Aluminum) and polymer (Polypropylene) using mechanical friction. Polymer, 2019, 169, 148-153.	3.8	20
20	Virtually imprinted polymers (VIPs): understanding molecularly templated materialsviamolecular dynamics simulations. Physical Chemistry Chemical Physics, 2018, 20, 13145-13152.	2.8	19
21	Temperature effects on the atomic arrangement and conductance of atomic-size gold nanowires generated by mechanical stretching. Nanotechnology, 2010, 21, 485702.	2.6	18
22	On the mechanical properties of novamene: A fully atomistic molecular dynamics and DFT investigation. Carbon, 2018, 139, 782-788.	10.3	18
23	Carbon nanotube with square cross-section: An ab initio investigation. Journal of Chemical Physics, 2010, 133, 124513.	3.0	17
24	Ballistic Fracturing of Carbon Nanotubes. ACS Applied Materials & Interfaces, 2016, 8, 24819-24825.	8.0	16
25	A generic approach for mechano-chemical reactions between carbonnanotubes of different functionalities. Carbon, 2016, 104, 196-202.	10.3	15
26	The structural and dynamical aspects of boron nitride nanotubes under high velocity impacts. Physical Chemistry Chemical Physics, 2016, 18, 14776-14781.	2.8	15
27	Structural transformations of carbon and boron nitride nanoscrolls at high impact collisions. Physical Chemistry Chemical Physics, 2018, 20, 4911-4916.	2.8	15
28	Correlation between quantum conductance and atomic arrangement of atomic-size silver nanowires. Journal of Applied Physics, 2012, 111, 124316.	2.5	12
29	On the mechanical properties of protomene: A theoretical investigation. Computational Materials Science, 2019, 161, 190-198.	3.0	11
30	Efficient prediction of suitable functional monomers for molecular imprintingvialocal density of states calculations. Physical Chemistry Chemical Physics, 2018, 20, 13153-13158.	2.8	9
31	Me-graphane: tailoring the structural and electronic properties of Me-grapheneviahydrogenation. Physical Chemistry Chemical Physics, 2021, 23, 9483-9491.	2.8	9
32	One Side-Graphene Hydrogenation (Graphone): Substrate Effects. MRS Advances, 2016, 1, 1429-1434.	0.9	8
33	Assessing the oxygen reduction reaction by a 2-electron mechanism on ceria surfaces. Physical Chemistry Chemical Physics, 2021, 23, 18580-18587.	2.8	7
34	Dynamical aspects of the unzipping of multiwalled boron nitride nanotubes. Physical Chemistry Chemical Physics, 2013, 15, 19147.	2.8	6
35	Carbon Nanoscrolls at High Impacts: A Molecular Dynamics Investigation. MRS Advances, 2016, 1, 1423-1428.	0.9	5
36	Hydrogenation Dynamics of Biphenylene Carbon (Graphenylene) Membranes. MRS Advances, 2017, 2, 1571-1576.	0.9	5

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37	Water/Alcohol Separation in Graphene Oxide Membranes: Insights from Molecular Dynamics and Monte Carlo Simulations. MRS Advances, 2018, 3, 109-114.	0.9	5
38	On hardening silver nanocubes by high-velocity impacts: a fully atomistic molecular dynamics investigation. Journal of Materials Science, 2018, 53, 7486-7492.	3.7	5
39	Tuning hydrogen adsorption and electronic properties from graphene to fluorographone. Physical Review Materials, 2020, 4, .	2.4	5
40	Improving Graphene-metal Contacts: Thermal Induced Polishing. MRS Advances, 2018, 3, 73-78.	0.9	4
41	Hydrogenation Dynamics Process of Single-Wall Carbon Nanotube Twisted. Chemical Physics Letters, 2020, 739, 136960.	2.6	4
42	Febrifugine derivative antimalarial activity: quantum mechanical predictors. Revista Do Instituto De Medicina Tropical De Sao Paulo, 2008, 50, 21-24.	1.1	3
43	Carbon Nanotube Peapods Under High-Strain Rate Conditions: A Molecular Dynamics Investigation. MRS Advances, 2020, 5, 1723-1730.	0.9	3
44	Mechanical Properties of Protomene: A Molecular Dynamics Investigation. MRS Advances, 2019, 4, 191-196.	0.9	2
45	Bioinspired Aluminum Composite Reinforced with Soft Polymers with Enhanced Strength and Plasticity. Advanced Engineering Materials, 2020, 22, 1901116.	3.5	2
46	Silver Hardening via Hypersonic Impacts. MRS Advances, 2018, 3, 493-498.	0.9	1
47	High-velocity impact of a hybrid CBN nanotubes. Oxford Open Materials Science, 2020, 1, .	1.8	1
48	Species fractionation in atomic chains from mechanically stretched alloys. Journal of Physics Condensed Matter, 2014, 26, 435304.	1.8	0
49	The Influence of Morphology on the Charge Transport in Two-Phase Disordered Organic Systems. Materials Research Society Symposia Proceedings, 2015, 1737, 13.	0.1	0
50	Mixing the immiscible through high-velocity mechanical impacts: an experimental and theoretical study. Journal Physics D: Applied Physics, 2019, 52, 445304.	2.8	0