Alejandro Lopez-Bezanilla

List of Publications by Year
in descending order

58 papers	1,869 citations	279798 23 h-index	265206 42 g-index
62 all docs	62 docs citations	62 times ranked	2766 citing authors

#	Article	IF	Citations
1	Electronic properties of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mn>8</mml:mn><mml:mtext>â^'</mml:mtext><mml:mi mathvariant="italic">Pmmn</mml:mi></mml:math>borophene. Physical Review B, 2016, 93, .	3.2	128
2	Boron Nitride Nanoribbons Become Metallic. Nano Letters, 2011, 11, 3267-3273.	9.1	120
3	Effect of the Chemical Functionalization on Charge Transport in Carbon Nanotubes at the Mesoscopic Scale. Nano Letters, 2009, 9, 940-944.	9.1	118
4	Machine learning for many-body physics: The case of the Anderson impurity model. Physical Review B, 2014, 90, .	3.2	113
5	Quantum Transport in Graphene Nanoribbons: Effects of Edge Reconstruction and Chemical Reactivity. ACS Nano, 2010, 4, 1971-1976.	14.6	108
6	Ïƒâ€“Ï€-Band Inversion in a Novel Two-Dimensional Material. Journal of Physical Chemistry C, 2015, 119, 19469-19474.	3.1	96
7	Chemical Functionalization Effects on Armchair Graphene Nanoribbon Transport. Nano Letters, 2009, 9, 2537-2541.	9.1	93
8	Band Gap Engineering via Edge-Functionalization of Graphene Nanoribbons. Journal of Physical Chemistry C, 2013, 117, 26790-26796.	3.1	78
9	Density functional theory based screening of ternary alkali-transition metal borohydrides: A computational material design project. Journal of Chemical Physics, 2009, 131, 014101.	3.0	77
10	Molecular dynamics study of the dewetting of copper on graphite and graphene: Implications for nanoscale self-assembly. Physical Review E, 2011, 83, 041603.	2.1	68
11	Modeling electronic quantum transport with machine learning. Physical Review B, 2014, 89, .	3.2	58
12	Oxygen Surface Functionalization of Graphene Nanoribbons for Transport Gap Engineering. ACS Nano, 2011, 5, 9271-9277.	14.6	53
13	Boron nitride materials: an overview from <scp>0D</scp> to <scp>3D</scp> (nano)structures. Wiley Interdisciplinary Reviews: Computational Molecular Science, 2015, 5, 299-309.	14.6	52
14	Effective Hamiltonians for phosphorene and silicene. New Journal of Physics, 2015, 17, 025004.	2.9	51
15	Quantum transport properties of chemically functionalized long semiconducting carbon nanotubes. Nano Research, 2010, 3, 288-295.	10.4	48
16	Magnetism and metal-insulator transition in oxygen-deficient<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>SrTiO</mml:mi><mml:mn>3</mml:mn></mml:msub></m Physical Review B, 2015, 92, .	3.2	42
17	Structure and Electronic Properties of Edge-Functionalized Armchair Boron Nitride Nanoribbons. Journal of Physical Chemistry C, 2012, 116, 15675-15681.	3.1	40
18	In Situ Formation of Carbon Nanotubes Encapsulated within Boron Nitride Nanotubes via Electron Irradiation. ACS Nano, 2014, 8, 8419-8425.	14.6	38

#	Article	IF	Citations
19	Qubit spin ice. Science, 2021, 373, 576-580.	12.6	36
20	Electrical band flattening, valley flux, and superconductivity in twisted trilayer graphene. Physical Review Research, 2020, 2, .	3.6	34
21	Substitutional Doping Widens Silicene Gap. Journal of Physical Chemistry C, 2014, 118, 18788-18792.	3.1	30
22	Carbon nanotube chemistry and assembly for electronic devices. Comptes Rendus Physique, 2009, 10, 330-347.	0.9	28
23	Tuning from Half-Metallic to Semiconducting Behavior in SiC Nanoribbons. Journal of Physical Chemistry C, 2013, 117, 15447-15455.	3.1	26
24	Unequivocal signatures of the crossover to Anderson localization in realistic models of disordered quasi-one-dimensional materials. Physical Review B, 2018, 98, .	3.2	23
25	Interplay between p â^'â€‰â€‰and d â^'â€‰â€‰orbitals yields multiple Dirac states in one- and two-dimensional CrB ₄. 2D Materials, 2018, 5, 035041.	4.4	23
26	Twelve inequivalent Dirac cones in two-dimensional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msub><mml:mi>ZrB</mml:mi><mml:mn>2</mml:mn></mml:msub></mm Physical Review Materials, 2018, 2, .	2.4	22
27	Research Update: Plentiful magnetic moments in oxygen deficient SrTiO3. APL Materials, 2015, 3, .	5.1	21
28	Effect of atomic-scale defects and dopants on phosphorene electronic structure and quantum transport properties. Physical Review B, 2016, 93, .	3.2	20
29	Geometric and Electronic Structure of Closed Graphene Edges. Journal of Physical Chemistry Letters, 2012, 3, 2097-2102.	4.6	19
30	Embedded boron nitride domains in graphene nanoribbons for transport gap engineering. Physical Review B, 2012, 86, .	3.2	18
31	Defect-induced magnetism and Yu-Shiba-Rusinov states in twisted bilayer graphene. Physical Review Materials, 2019, 3, .	2.4	17
32	Conductance of functionalized nanotubes, graphene and nanowires: from ab initio to mesoscopic physics. Physica Status Solidi (B): Basic Research, 2010, 247, 2962-2967.	1.5	16
33	Growing field of materials informatics: databases and artificial intelligence. MRS Communications, 2020, 10, 1-10.	1.8	16
34	Zirconia and hafnia polymorphs: Ground-state structural properties from diffusion Monte Carlo. Physical Review Materials, 2018, 2, .	2.4	16
35	Multiscale simulation of carbon nanotube devices. Comptes Rendus Physique, 2009, 10, 305-319.	0.9	15
36	Electronic and Quantum Transport Properties of Atomically Identified Si Point Defects in Graphene. Journal of Physical Chemistry Letters, 2014, 5, 1711-1718.	4.6	14

#	Article	IF	Citations
37	Strain-Mediated Modification of Phagraphene Dirac Cones. Journal of Physical Chemistry C, 2016, 120, 17101-17105.	3.1	14
38	Emergence of flat-band magnetism and half-metallicity in twisted bilayer graphene. Physical Review Materials, 2019, 3, .	2.4	14
39	Spin-resolved self-doping tunes the intrinsic half-metallicity of AlN nanoribbons. Nano Research, 2014, 7, 63-70.	10.4	13
40	Electronic Transport Properties of Chemically Modified Double-Walled Carbon Nanotubes. Journal of Physical Chemistry C, 2013, 117, 15266-15271.	3.1	12
41	f-Orbital based Dirac states in a two-dimensional uranium compound. JPhys Materials, 2020, 3, 024002.	4.2	9
42	Electronic and Quantum Transport Properties of Substitutionally Doped Double-Walled Carbon Nanotubes. Journal of Physical Chemistry C, 2014, 118, 1472-1477.	3.1	8
43	Evidence for Ï€-Interactions in Stacked Polymers by STM Simulations. Journal of Physical Chemistry C, 2011, 115, 18625-18633.	3.1	5
44	Parameter transferability, self-doping, and metallicity in LaNiO3/LaMnO3 superlattices. Physical Review B, 2019, 99, .	3.2	4
45	Heptagraphene: Tunable Dirac Cones in a Graphitic Structure. Scientific Reports, 2016, 6, 33220.	3.3	3
46	Electrospinning. , 2012, , 769-775.		2
47	Structural and EELS studies on Doped Carbon Nanostructures for Cold Field Emission. Microscopy and Microanalysis, 2016, 22, 60-61.	0.4	2
48	Design principles and physical properties of two-dimensional heterostructured borides. Physical Review Materials, 2021, 5, .	2.4	2
49	Mobility gaps in disordered grapheneâ€based materials: an ab initio â€based tightâ€binding approach to mesoscopic transport. Physica Status Solidi C: Current Topics in Solid State Physics, 2010, 7, 2628-2631.	0.8	1
50	Uniform Quantum Transport Properties Across Different Chemical Decorations in Bilayer Graphene. Journal of Physical Chemistry C, 2014, 118, 29467-29472.	3.1	1
51	Two-Dimensional Borides Discovery. , 2022, , .		1
52	Electrostatic RF MEMS Switches. , 2012, , 783-783.		0
53	Electrowetting-on-Dielectric (EWOD). , 2012, , 789-789.		0
54	Chemical doping tunes the half-metallic properties of AlN nanoribbons. Materials Research Society Symposia Proceedings, 2014, 1704, 28.	0.1	0

#	Article	IF	Citations
55	Semimetallicity and electron-hole liquid in two-dimensional C and BN based compounds. Physical Review Materials, 2021, 5, .	2.4	0
56	Exceptional Radiation Absorption in a Pentagon-Based Si Allotrope. Nano Letters, 2021, 21, 4287-4291.	9.1	0
57	Electronic Transport in Carbon Nanomaterials. , 2012, , 754-768.		0
58	Electronic Transport in Carbon Nanomaterials. , 2016, , 1084-1101.		0