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	Two-Dimensional Borides Discovery. , 2022, , .		1
2	Semimetallicity and electron-hole liquid in two-dimensional C and BN based compounds. Physical Review Materials, 2021, 5, .	2.4	0
3	Design principles and physical properties of two-dimensional heterostructured borides. Physical Review Materials, 2021, 5, .	2.4	2
4	Exceptional Radiation Absorption in a Pentagon-Based Si Allotrope. Nano Letters, 2021, 21, 4287-4291.	9.1	0
5	Qubit spin ice. Science, 2021, 373, 576-580.	12.6	36
6	Growing field of materials informatics: databases and artificial intelligence. MRS Communications, 2020, 10, 1-10.	1.8	16
7	f-Orbital based Dirac states in a two-dimensional uranium compound. JPhys Materials, 2020, 3, 024002.	4.2	9
8	Electrical band flattening, valley flux, and superconductivity in twisted trilayer graphene. Physical Review Research, 2020, 2, .	3.6	34
9	Parameter transferability, self-doping, and metallicity in LaNiO3/LaMnO3 superlattices. Physical Review B, 2019, 99, .	3.2	4
10	Emergence of flat-band magnetism and half-metallicity in twisted bilayer graphene. Physical Review Materials, 2019, 3, .	2.4	14
11	Defect-induced magnetism and Yu-Shiba-Rusinov states in twisted bilayer graphene. Physical Review Materials, 2019, 3, .	2.4	17
12	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
13	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
14	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	32
15	Zirconia and hafnia polymorphs: Ground-state structural properties from diffusion Monte Carlo. Physical Review Materials, 2018, 2, .	2.4	16
16	Structural and EELS studies on Doped Carbon Nanostructures for Cold Field Emission. Microscopy and Microanalysis, 2016, 22, 60-61.	0.4	2
17	Effect of atomic-scale defects and dopants on phosphorene electronic structure and quantum transport properties. Physical Review B, 2016, 93, .	3.2	20
18	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

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19	Strain-Mediated Modification of Phagraphene Dirac Cones. Journal of Physical Chemistry C, 2016, 120, 17101-17105.	3.1	14
20	Heptagraphene: Tunable Dirac Cones in a Graphitic Structure. Scientific Reports, 2016, 6, 33220.	3.3	3
21	Electronic Transport in Carbon Nanomaterials. , 2016, , 1084-1101.		0
22	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
23	Research Update: Plentiful magnetic moments in oxygen deficient SrTiO3. APL Materials, 2015, 3, .	5.1	21
24	Effective Hamiltonians for phosphorene and silicene. New Journal of Physics, 2015, 17, 025004.	2.9	51
25	Ïƒâ€“Ï€-Band Inversion in a Novel Two-Dimensional Material. Journal of Physical Chemistry C, 2015, 119, 19469-19474.	3.1	96
26	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
27	Chemical doping tunes the half-metallic properties of AlN nanoribbons. Materials Research Society Symposia Proceedings, 2014, 1704, 28.	0.1	0
28	Uniform Quantum Transport Properties Across Different Chemical Decorations in Bilayer Graphene. Journal of Physical Chemistry C, 2014, 118, 29467-29472.	3.1	1
29	Machine learning for many-body physics: The case of the Anderson impurity model. Physical Review B, 2014, 90, .	3.2	113
30	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
31	In Situ Formation of Carbon Nanotubes Encapsulated within Boron Nitride Nanotubes via Electron Irradiation. ACS Nano, 2014, 8, 8419-8425.	14.6	38
32	Substitutional Doping Widens Silicene Gap. Journal of Physical Chemistry C, 2014, 118, 18788-18792.	3.1	30
33	Electronic and Quantum Transport Properties of Substitutionally Doped Double-Walled Carbon Nanotubes. Journal of Physical Chemistry C, 2014, 118, 1472-1477.	3.1	8
34	Spin-resolved self-doping tunes the intrinsic half-metallicity of AlN nanoribbons. Nano Research, 2014, 7, 63-70.	10.4	13
35	Modeling electronic quantum transport with machine learning. Physical Review B, 2014, 89, .	3.2	58
36	Band Gap Engineering via Edge-Functionalization of Graphene Nanoribbons. Journal of Physical Chemistry C, 2013, 117, 26790-26796.	3.1	78

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37	Electronic Transport Properties of Chemically Modified Double-Walled Carbon Nanotubes. Journal of Physical Chemistry C, 2013, 117, 15266-15271.	3.1	12
38	Tuning from Half-Metallic to Semiconducting Behavior in SiC Nanoribbons. Journal of Physical Chemistry C, 2013, 117, 15447-15455.	3.1	26
39	Embedded boron nitride domains in graphene nanoribbons for transport gap engineering. Physical Review B, 2012, 86, .	3.2	18
40	Electrospinning. , 2012, , 769-775.		2
41	Electrostatic RF MEMS Switches. , 2012, , 783-783.		0
42	Structure and Electronic Properties of Edge-Functionalized Armchair Boron Nitride Nanoribbons. Journal of Physical Chemistry C, 2012, 116, 15675-15681.	3.1	40
43	Geometric and Electronic Structure of Closed Graphene Edges. Journal of Physical Chemistry Letters, 2012, 3, 2097-2102.	4.6	19
44	Electrowetting-on-Dielectric (EWOD). , 2012, , 789-789.		0
45	Electronic Transport in Carbon Nanomaterials. , 2012, , 754-768.		0
46	Evidence for Ï€-Interactions in Stacked Polymers by STM Simulations. Journal of Physical Chemistry C, 2011, 115, 18625-18633.	3.1	5
47	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
48	Boron Nitride Nanoribbons Become Metallic. Nano Letters, 2011, 11, 3267-3273.	9.1	120
49	Oxygen Surface Functionalization of Graphene Nanoribbons for Transport Gap Engineering. ACS Nano, 2011, 5, 9271-9277.	14.6	53
50	Quantum transport properties of chemically functionalized long semiconducting carbon nanotubes. Nano Research, 2010, 3, 288-295.	10.4	48
51	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
52	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
53	Quantum Transport in Graphene Nanoribbons: Effects of Edge Reconstruction and Chemical Reactivity. ACS Nano, 2010, 4, 1971-1976.	14.6	108
54	Multiscale simulation of carbon nanotube devices. Comptes Rendus Physique, 2009, 10, 305-319.	0.9	15

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55	Carbon nanotube chemistry and assembly for electronic devices. Comptes Rendus Physique, 2009, 10, 330-347.	0.9	28
56	Effect of the Chemical Functionalization on Charge Transport in Carbon Nanotubes at the Mesoscopic Scale. Nano Letters, 2009, 9, 940-944.	9.1	118
57	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
58	Chemical Functionalization Effects on Armchair Graphene Nanoribbon Transport. Nano Letters, 2009, 9, 2537-2541.	9.1	93