

# Antonio À iber

## List of Publications by Year in descending order

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Version: 2024-02-01

61  
papers

1,514  
citations

279798

23  
h-index

345221

36  
g-index

62  
all docs

62  
docs citations

62  
times ranked

1125  
citing authors

#	ARTICLE	IF	CITATIONS
1	Energies and pressures in viruses: contribution of nonspecific electrostatic interactions. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 3746-3765.	2.8	120
2	Incoherent white light solitons in logarithmically saturable noninstantaneous nonlinear media. <i>Physical Review E</i> , 2003, 68, 036607.	2.1	109
3	Role of electrostatic interactions in the assembly of empty spherical viral capsids. <i>Physical Review E</i> , 2007, 76, 061906.	2.1	76
4	Nonspecific interactions in spontaneous assembly of empty versus functional single-stranded RNA viruses. <i>Physical Review E</i> , 2008, 78, 051915.	2.1	71
5	Observation of a Zone-Center Gap in the Longitudinal Mode of an Adsorbate Overlayer: Xenon on Cu(111). <i>Physical Review Letters</i> , 1998, 80, 125-128.	7.8	63
6	Buckling transition in icosahedral shells subjected to volume conservation constraint and pressure: Relations to virus maturation. <i>Physical Review E</i> , 2006, 73, 061915.	2.1	61
7	How simple can a model of an empty viral capsid be? Charge distributions in viral capsids. <i>Journal of Biological Physics</i> , 2012, 38, 657-671.	1.5	53
8	Propagation of incoherent "white" light and modulation instability in noninstantaneous nonlinear media. <i>Physical Review E</i> , 2002, 66, 035601.	2.1	51
9	Protein-DNA Interactions Determine the Shapes of DNA Toroids Condensed in Virus Capsids. <i>Biophysical Journal</i> , 2011, 100, 2209-2216.	0.5	47
10	Combined He-atom scattering and theoretical study of the low-energy vibrations of physisorbed monolayers of Xe on Cu(111) and Cu(001). <i>Physical Review B</i> , 1999, 59, 5898-5914.	3.2	43
11	Distribution of DNA-condensing protein complexes in the adenovirus core. <i>Nucleic Acids Research</i> , 2015, 43, 4274-4283.	14.5	41
12	Thermodynamics of nanospheres encapsulated in virus capsids. <i>Physical Review E</i> , 2010, 81, 051919.	2.1	39
13	Oscillatory electron-phonon coupling in ultra-thin silver films on V(100). <i>Journal of Physics Condensed Matter</i> , 2000, 12, L477-L482.	1.8	37
14	Adsorption of He atoms in external grooves of single-wall carbon nanotube bundles. <i>Physical Review B</i> , 2002, 66, .	3.2	36
15	Statistical analysis of sizes and shapes of virus capsids and their resulting elastic properties. <i>Journal of Biological Physics</i> , 2013, 39, 215-228.	1.5	35
16	Temperature dependence of photoemission from quantum-well states in Ag/V(100): Moving surface-vacuum barrier effects. <i>Physical Review B</i> , 2001, 64, .	3.2	34
17	Phonons and specific heat of linear dense phases of atoms physisorbed in the grooves of carbon nanotube bundles. <i>Physical Review B</i> , 2002, 66, .	3.2	34
18	Stability of elastic icosahedral shells under uniform external pressure: Application to viruses under osmotic pressure. <i>Physical Review E</i> , 2009, 79, 011919.	2.1	32

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19	Adenovirus major core protein condenses DNA in clusters and bundles, modulating genome release and capsid internal pressure. <i>Nucleic Acids Research</i> , 2019, 47, 9231-9242.	14.5	31
20	Linear versus Nonlinear Coupling Effects in Single- and Multiphonon Atom-Surface Scattering. <i>Physical Review Letters</i> , 2003, 90, 126103.	7.8	29
21	He atom scattering and theoretical study of the surface phonons of a simple benchmark system: Xe(111). <i>Physical Review B</i> , 2001, 63, .	3.2	28
22	Dispersion interactions between optically anisotropic cylinders at all separations: Retardation effects for insulating and semiconducting single-wall carbon nanotubes. <i>Physical Review B</i> , 2009, 80, .	3.2	28
23	Lattice-gas Poisson-Boltzmann approach for sterically asymmetric electrolytes. <i>Physical Review E</i> , 2013, 88, 022302.	2.1	24
24	Vibrations of a chain of Xe atoms in a groove in a carbon nanotube bundle. <i>Physical Review B</i> , 2003, 67, .	3.2	21
25	Packing nanomechanics of viral genomes. <i>European Physical Journal E</i> , 2008, 26, 317-25.	1.6	21
26	Recovery Temperature for Nonclassical Energy Transfer in Atom-Surface Scattering. <i>Physical Review Letters</i> , 1999, 83, 1375-1378.	7.8	19
27	Debye-Waller factor in He $\rightarrow$ Cu(001) collisions revisited: the role of the interaction potentials. <i>Surface Science</i> , 1997, 385, 270-280.	1.9	18
28	Mechanical design of apertures and the infolding of pollen grain. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 26600-26607.	7.1	18
29	Nonadiabatic dynamics of electron scattering from adsorbates in surface bands. <i>Physical Review B</i> , 2008, 78, .	3.2	17
30	Comment on "Quantum Scattering of Heavy Particles from a 10 K Cu(111) Surface". <i>Physical Review Letters</i> , 1998, 81, 1742-1742.	7.8	16
31	Quantum states and specific heat of low-density He gas adsorbed within carbon nanotube interstitial channels: Band-structure effects and potential dependence. <i>Physical Review B</i> , 2002, 66, .	3.2	15
32	Quantum virial expansion approach to thermodynamics of 4He adsorbates in carbon nanotube materials: Interacting Bose gas in one dimension. <i>Physical Review B</i> , 2003, 67, .	3.2	15
33	Energies of sp <sup>2</sup> carbon shapes with pentagonal disclinations and elasticity theory. <i>Nanotechnology</i> , 2006, 17, 3598-3606.	2.6	14
34	Suppression of inelastic bound-state resonance effects by the dimensionality of an atom-surface scattering event. <i>Physical Review B</i> , 2005, 71, .	3.2	13
35	Dynamics and (de)localization in a one-dimensional tight-binding chain. <i>American Journal of Physics</i> , 2006, 74, 692-698.	0.7	13
36	Spontaneous curvature as a regulator of the size of virus capsids. <i>Physical Review E</i> , 2009, 80, 021910.	2.1	12

#	ARTICLE	IF	CITATIONS
37	Electrostatics-Driven Inflation of Elastic Icosahedral Shells as a Model for Swelling of Viruses. <i>Biophysical Journal</i> , 2018, 115, 822-829.	0.5	12
38	Icosadeltahedral Geometry of Geodesic Domes, Fullerenes and Viruses: A Tutorial on the T-Number. <i>Symmetry</i> , 2020, 12, 556.	2.2	12
39	Kinematic effects in the Debye-Waller factor and sticking probabilities in low-energy atom-surface scattering. <i>Journal of Physics Condensed Matter</i> , 2002, 14, 5913-5932.	1.8	11
40	Diffraction of He atoms from Xe monolayer adsorbed on the graphite (0 0 1) revisited: the importance of multiple scattering processes. <i>Surface Science</i> , 2003, 529, L269-L274.	1.9	11
41	Phonon-mediated bound state resonances in inelastic atom-surface scattering. <i>Journal of Physics Condensed Matter</i> , 2008, 20, 224002.	1.8	10
42	Many-Body Contact Repulsion of Deformable Disks. <i>Physical Review Letters</i> , 2013, 110, 214301.	7.8	10
43	Vibrations of closed-shell Lennard-Jones icosahedral and cuboctahedral clusters and their effect on the cluster ground-state energy. <i>Physical Review B</i> , 2004, 70, .	3.2	9
44	Shapes and energies of giant icosahedral fullerenes. <i>European Physical Journal B</i> , 2006, 53, 395-400.	1.5	9
45	Wrinkles of graphene on Ir(1 1 1): Macroscopic network ordering and internal multi-lobed structure. <i>Carbon</i> , 2015, 94, 856-863.	10.3	9
46	Coating carbon nanotubes: Geometry of incommensurate long-range-ordered physisorbed monolayers. <i>Physical Review B</i> , 2003, 68, .	3.2	8
47	Continuum and all-atom description of the energetics of graphene nanocones. <i>Nanotechnology</i> , 2007, 18, 375705.	2.6	8
48	Optically anisotropic infinite cylinder above an optically anisotropic half space: Dispersion interaction of a single-walled carbon nanotube with a substrate. <i>Journal of Vacuum Science and Technology B: Nanotechnology and Microelectronics</i> , 2010, 28, C4A17-C4A24.	1.2	8
49	Ejecting Phage DNA against Cellular Turgor Pressure. <i>Biophysical Journal</i> , 2014, 107, 1924-1929.	0.5	8
50	Interactions of He atoms with Xe plated graphite: unified treatment of scattering and adsorbate dynamics based on method of coupled channels. <i>Progress in Surface Science</i> , 2003, 74, 375-388.	8.3	7
51	Electrostatic self-energy of a partially formed spherical shell in salt solution: Application to stability of tethered and fluid shells as models for viruses and vesicles. <i>Physical Review E</i> , 2011, 83, 041916.	2.1	7
52	Mechanics of inactive swelling and bursting of porate pollen grains. <i>Biophysical Journal</i> , 2022, 121, 782-792.	0.5	7
53	Study of energy transfer in helium atom scattering from surfaces. <i>Vacuum</i> , 1999, 54, 315-320.	3.5	6
54	Role of Condensing Particles in Polymer Confinement: A Model for Virus-Packed Minichromosomes. <i>Biophysical Journal</i> , 2017, 113, 1643-1653.	0.5	6

#	ARTICLE	IF	CITATIONS
55	Topology of dividing planar tilings: Mitosis and order in epithelial tissues. Physical Review E, 2019, 100, 012410.	2.1	6
56	Zone edge focused two-phonon processes in He atom scattering from a simple prototype system: Xe(111). Surface Science, 2002, 502-503, 422-428.	1.9	5
57	Reply to "Comment on "Suppression of inelastic bound-state resonance effects by the dimensionality of an atom-surface scattering event" Physical Review B, 2007, 75, .	3.2	4
58	Anomalously Low Probabilities for Rotational Excitation in HD "Surface Scattering. ChemPhysChem, 2006, 7, 1015-1018.	2.1	3
59	Theoretical and experimental analysis of a thin elastic cylindrical tube acting as a non-Hookean spring. Physical Review E, 2011, 83, 067601.	2.1	2
60	Reply to "Comment on "Quantum virial expansion approach to thermodynamics of He4 adsorbates in carbon nanotube materials: Interacting Bose gas in one dimension" Physical Review B, 2004, 70, .	3.2	1
61	Shapes of minimal-energy DNA ropes condensed in confinement. Scientific Reports, 2016, 6, 29012.	3.3	1