Antonio Å iber

List of Publications by Year
in descending order

61	1,514	279798	345221
papers	citations	23 h-index	36 g-index

62	62	62	1125
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Mechanics of inactive swelling and bursting of porate pollen grains. Biophysical Journal, 2022, 121, 782-792.	0.5	7
2	Mechanical design of apertures and the infolding of pollen grain. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 26600-26607.	7.1	18
3	Icosadeltahedral Geometry of Geodesic Domes, Fullerenes and Viruses: A Tutorial on the T-Number. Symmetry, 2020, 12, 556.	2.2	12
4	Adenovirus major core protein condenses DNA in clusters and bundles, modulating genome release and capsid internal pressure. Nucleic Acids Research, 2019, 47, 9231-9242.	14.5	31
5	Topology of dividing planar tilings: Mitosis and order in epithelial tissues. Physical Review E, 2019, 100, 012410.	2.1	6
6	Electrostatics-Driven Inflation of Elastic Icosahedral Shells as a Model for Swelling of Viruses. Biophysical Journal, 2018, 115, 822-829.	0.5	12
7	Role of Condensing Particles in Polymer Confinement: A Model for Virus-Packed â€œMinichromosomesâ€• Biophysical Journal, 2017, 113, 1643-1653.	0.5	6
8	Shapes of minimal-energy DNA ropes condensed in confinement. Scientific Reports, 2016, 6, 29012.	3.3	1
9	Wrinkles of graphene on Ir(1 1 1): Macroscopic network ordering and internal multi-lobed structure. Carbon, 2015, 94, 856-863.	10.3	9
10	Distribution of DNA-condensing protein complexes in the adenovirus core. Nucleic Acids Research, 2015, 43, 4274-4283.	14.5	41
11	Ejecting Phage DNA against Cellular Turgor Pressure. Biophysical Journal, 2014, 107, 1924-1929.	0.5	8
12	Statistical analysis of sizes and shapes of virus capsids and their resulting elastic properties. Journal of Biological Physics, 2013, 39, 215-228.	1.5	35
13	Many-Body Contact Repulsion of Deformable Disks. Physical Review Letters, 2013, 110, 214301.	7.8	10
14	Lattice-gas Poisson-Boltzmann approach for sterically asymmetric electrolytes. Physical Review E, 2013, 88, 022302.	2.1	24
15	How simple can a model of an empty viral capsid be? Charge distributions in viral capsids. Journal of Biological Physics, 2012, 38, 657-671.	1.5	53
16	Energies and pressures in viruses: contribution of nonspecific electrostatic interactions. Physical Chemistry Chemical Physics, 2012, 14, 3746-3765.	2.8	120
17	Protein-DNA Interactions Determine the Shapes of DNA Toroids Condensed in Virus Capsids. Biophysical Journal, 2011, 100, 2209-2216.	0.5	47
18	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. Physical Review E, 2011, 83, 041916.	2.1	7

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19	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
20	Optically anisotropic infinite cylinder above an optically anisotropic half space: Dispersion interaction of a single-walled carbon nanotube with a substrate. Journal of Vacuum Science and Technology B:Nanotechnology and Microelectronics, 2010, 28, C4A17-C4A24.	1.2	8
21	Thermodynamics of nanospheres encapsulated in virus capsids. Physical Review E, 2010, 81, 051919.	2.1	39
22	Stability of elastic icosadeltahedral shells under uniform external pressure: Application to viruses under osmotic pressure. Physical Review E, 2009, 79, 011919.	2.1	32
23	Spontaneous curvature as a regulator of the size of virus capsids. Physical Review E, 2009, 80, 021910.	2.1	12
24	Dispersion interactions between optically anisotropic cylinders at all separations: Retardation effects for insulating and semiconducting single-wall carbon nanotubes. Physical Review B, 2009, 80, .	3.2	28
25	Packing nanomechanics of viral genomes. European Physical Journal E, 2008, 26, 317-25.	1.6	21
26	Phonon-mediated bound state resonances in inelastic atomâ€“surface scattering. Journal of Physics Condensed Matter, 2008, 20, 224002.	1.8	10
27	Nonspecific interactions in spontaneous assembly of empty versus functional single-stranded RNA viruses. Physical Review E, 2008, 78, 051915.	2.1	71
28	Nonadiabatic dynamics of electron scattering from adsorbates in surface bands. Physical Review B, 2008, 78, .	3.2	17
29	Role of electrostatic interactions in the assembly of empty spherical viral capsids. Physical Review E, 2007, 76, 061906.	2.1	76
30	Reply to â€œComment on â€˜Suppression of inelastic bound-state resonance effects by the dimensionality of an atom-surface scattering eventâ€™ â€. Physical Review B, 2007, 75, .	3.2	4
31	Continuum and all-atom description of the energetics of graphene nanocones. Nanotechnology, 2007, 18, 375705.	2.6	8
32	Dynamics and (de)localization in a one-dimensional tight-binding chain. American Journal of Physics, 2006, 74, 692-698.	0.7	13
33	Shapes and energies of giant icosahedral fullerenes. European Physical Journal B, 2006, 53, 395-400.	1.5	9
34	Anomalously Low Probabilities for Rotational Excitation in HDâ€“Surface Scattering. ChemPhysChem, 2006, 7, 1015-1018.	2.1	3
35	Buckling transition in icosahedral shells subjected to volume conservation constraint and pressure: Relations to virus maturation. Physical Review E, 2006, 73, 061915.	2.1	61
36	Energies of sp2carbon shapes with pentagonal disclinations and elasticity theory. Nanotechnology, 2006, 17, 3598-3606.	2.6	14

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37	Suppression of inelastic bound-state resonance effects by the dimensionality of an atom-surface scattering event. Physical Review B, 2005, 71, .	3.2	13
38	Reply to â€œComment on â€˜Quantum virial expansion approach to thermodynamics ofHe4adsorbates in carbon nanotube materials: Interacting Bose gas in one dimensionâ€™â€‰â€•. Physical Review B, 2004, 70, .	3.2	1
39	Vibrations of closed-shell Lennard-Jones icosahedral and cuboctahedral clusters and their effect on the cluster ground-state energy. Physical Review B, 2004, 70, .	3.2	9
40	Interactions of He atoms with Xe plated graphite: unified treatment of scattering and adsorbate dynamics based on method of coupled channels. Progress in Surface Science, 2003, 74, 375-388.	8.3	7
41	Diffraction of He atoms from Xe monolayer adsorbed on the graphite (0 0 0 1) revisited: the importance of multiple scattering processes. Surface Science, 2003, 529, L269-L274.	1.9	11
42	Quantum virial expansion approach to thermodynamics of4Headsorbates in carbon nanotube materials:â€ƒInteracting Bose gas in one dimension. Physical Review B, 2003, 67, .	3.2	15
43	Vibrations of a chain of Xe atoms in a groove in a carbon nanotube bundle. Physical Review B, 2003, 67, .	3.2	21
44	Incoherent white light solitons in logarithmically saturable noninstantaneous nonlinear media. Physical Review E, 2003, 68, 036607.	2.1	109
45	Coating carbon nanotubes:â€ƒGeometry of incommensurate long-range-ordered physisorbed monolayers. Physical Review B, 2003, 68, .	3.2	8
46	Linear versus Nonlinear Coupling Effects in Single- and Multiphonon Atom-Surface Scattering. Physical Review Letters, 2003, 90, 126103.	7.8	29
47	Propagation of incoherent â€œwhiteâ€•light and modulation instability in noninstantaneous nonlinear media. Physical Review E, 2002, 66, 035601.	2.1	51
48	Adsorption of He atoms in external grooves of single-wall carbon nanotube bundles. Physical Review B, 2002, 66, .	3.2	36
49	Quantum states and specific heat of low-density He gas adsorbed within carbon nanotube interstitial channels: Band-structure effects and potential dependence. Physical Review B, 2002, 66, .	3.2	15
50	Kinematic effects in the Debye-Waller factor and sticking probabilities in low-energy atom-surface scattering. Journal of Physics Condensed Matter, 2002, 14, 5913-5932.	1.8	11
51	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
52	Phonons and specific heat of linear dense phases of atoms physisorbed in the grooves of carbon nanotube bundles. Physical Review B, 2002, 66, .	3.2	34
53	Temperature dependence of photoemission from quantum-well states in Ag/V(100):â€ƒ Moving surface-vacuum barrier effects. Physical Review B, 2001, 64, .	3.2	34
54	He atom scattering and theoretical study of the surface phonons of a simple benchmark system: Xe(111). Physical Review B, 2001, 63, .	3.2	28

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55	Oscillatory electron-phonon coupling in ultra-thin silver films on V(100). Journal of Physics Condensed Matter, 2000, 12, L477-L482.	1.8	37
56	Combined He-atom scattering and theoretical study of the low-energy vibrations of physisorbed monolayers of Xe on Cu(111) and Cu(001). Physical Review B, 1999, 59, 5898-5914.	3.2	43
57	Recovery Temperature for Nonclassical Energy Transfer in Atom-Surface Scattering. Physical Review Letters, 1999, 83, 1375-1378.	7.8	19
58	Study of energy transfer in helium atom scattering from surfaces. Vacuum, 1999, 54, 315-320.	3.5	6
59	Comment on â€œQuantum Scattering of Heavy Particles from a 10 K Cu(111) Surfaceâ€• Physical Review Letters, 1998, 81, 1742-1742.	7.8	16
60	Observation of a Zone-Center Gap in the Longitudinal Mode of an Adsorbate Overlayer: Xenon on Cu(111). Physical Review Letters, 1998, 80, 125-128.	7.8	63
61	Debye-Waller factor in Heâ†'Cu(001) collisions revisited: the role of the interaction potentials. Surface Science, 1997, 385, 270-280.	1.9	18