Pedro J De Pablo

List of Publications by Year
in descending order

40 papers	1,371 citations	304743 22 h-index	345221 36 g-index
41 all docs	41 docs citations	41 times ranked	1170 citing authors

#	Article	IF	Citations
1	Elastic Response, Buckling, and Instability of Microtubules under Radial Indentation. Biophysical Journal, 2006, 91, 1521-1531.	0.5	163
2	Manipulation of the mechanical properties of a virus by protein engineering. Proceedings of the National Academy of Sciences of the United States of America, 2008, 105, 4150-4155.	7.1	103
3	Mechanics of Viral Chromatin Reveals the Pressurization of Human Adenovirus. ACS Nano, 2015, 9, 10826-10833.	14.6	83
4	The Role of Capsid Maturation on Adenovirus Priming for Sequential Uncoating. Journal of Biological Chemistry, 2012, 287, 31582-31595.	3.4	82
5	Direct Measurement of Phage phi29 Stiffness Provides Evidence of Internal Pressure. Small, 2012, 8, 2366-2370.	10.0	71
6	Fluorescence Tracking of Genome Release during Mechanical Unpacking of Single Viruses. ACS Nano, 2015, 9, 10571-10579.	14.6	67
7	Mechanical elasticity as a physical signature of conformational dynamics in a virus particle. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 12028-12033.	7.1	64
8	Cargoâ€“shell and cargoâ€“cargo couplings govern the mechanics of artificially loaded virus-derived cages. Nanoscale, 2016, 8, 9328-9336.	5.6	60
9	The interplay between mechanics and stability of viral cages. Nanoscale, 2014, 6, 2702-2709.	5.6	51
10	Resolving the molecular structure of microtubules under physiological conditions with scanning force microscopy. European Biophysics Journal, 2004, 33, 462-467.	2.2	47
11	Mechanical Disassembly of Single Virus Particles Reveals Kinetic Intermediates Predicted by Theory. Biophysical Journal, 2012, 102, 2615-2624.	0.5	43
12	Atomic force microscopy of virus shells. Seminars in Cell and Developmental Biology, 2018, 73, 199-208.	5.0	41
13	Biophysical properties of single rotavirus particles account for the functions of protein shells in a multilayered virus. ELife, 2018, 7, .	6.0	38
14	Kinesin Walks the Line: Single Motors Observed by Atomic Force Microscopy. Biophysical Journal, 2011, 100, 2450-2456.	0.5	36
15	Mechanical Stability and Reversible Fracture of Vault Particles. Biophysical Journal, 2014, 106, 687-695.	0.5	36
16	Tuning Viral Capsid Nanoparticle Stability with Symmetrical Morphogenesis. ACS Nano, 2016, 10, 8465-8473.	14.6	34
17	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
18	Resolving Structure and Mechanical Properties at the Nanoscale of Viruses with Frequency Modulation Atomic Force Microscopy. PLoS ONE, 2012, 7, e30204.	2.5	30

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19	Structural Analysis of a Temperature-Induced Transition in a Viral Capsid Probed by HDX-MS. Biophysical Journal, 2017, 112, 1157-1165.	0.5	28
20	Dynamic competition for hexon binding between core protein VII and lytic protein VI promotes adenovirus maturation and entry. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13699-13707.	7.1	26
21	A protein with simultaneous capsid scaffolding and dsRNA-binding activities enhances the birnavirus capsid mechanical stability. Scientific Reports, 2015, 5, 13486.	3.3	25
22	Calcium Ions Modulate the Mechanics of Tomato Bushy Stunt Virus. Biophysical Journal, 2015, 109, 390-397.	0.5	25
23	Atomic force microscopy of virus shells. Biochemical Society Transactions, 2017, 45, 499-511.	3.4	25
24	Mechanical Properties of Viruses. Sub-Cellular Biochemistry, 2013, 68, 519-551.	2.4	21
25	Decrease in pH destabilizes individual vault nanocages by weakening the inter-protein lateral interaction. Scientific Reports, 2016, 6, 34143.	3.3	17
26	The application of atomic force microscopy for viruses and protein shells: Imaging and spectroscopy. Advances in Virus Research, 2019, 105, 161-187.	2.1	17
27	Changes in the stability and biomechanics of P22 bacteriophage capsid during maturation. Biochimica Et Biophysica Acta - General Subjects, 2018, 1862, 1492-1504.	2.4	14
28	Atomic Force Microscopy of Viruses. Sub-Cellular Biochemistry, 2013, 68, 247-271.	2.4	14
29	Cryo-electron Microscopy Structure, Assembly, and Mechanics Show Morphogenesis and Evolution of Human Picobirnavirus. Journal of Virology, 2020, 94, .	3.4	11
30	Seeing and touching adenovirus: complementary approaches for understanding assembly and disassembly of a complex virion. Current Opinion in Virology, 2022, 52, 112-122.	5.4	11
31	Direct visualization of single virus restoration after damage in real time. Journal of Biological Physics, 2018, 44, 225-235.	1.5	10
32	Imaging Biological Samples with Atomic Force Microscopy. Cold Spring Harbor Protocols, 2014, 2014, pdb.top080473.	0.3	8
33	Introduction to Atomic Force Microscopy. Methods in Molecular Biology, 2011, 783, 197-212.	0.9	8
34	Acidification induces condensation of the adenovirus core. Acta Biomaterialia, 2021, 135, 534-542.	8.3	7
35	Virucidal Action Mechanism of Alcohol and Divalent Cations Against Human Adenovirus. Frontiers in Molecular Biosciences, 2020, 7, 570914.	3.5	6
36	Exploring the role of genome and structural ions in preventing viral capsid collapse during dehydration. Journal of Physics Condensed Matter, 2018, 30, 104001.	1.8	5

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37	Structural and Mechanical Characterization of Viruses with AFM. Methods in Molecular Biology, 2019, 1886, 259-278.	0.9	5
38	Fluctuating nonlinear spring theory: Strength, deformability, and toughness of biological nanoparticles from theoretical reconstruction of force-deformation spectra. Acta Biomaterialia, 2021, 122, 263-277.	8.3	5
39	Atomic Force Microscopy of Protein Shells: Virus Capsids and Beyond. Methods in Molecular Biology, 2018, 1665, 281-296.	0.9	1
40	Biophysical Methods to Monitor Structural Aspects of the Adenovirus Infectious Cycle. Methods in Molecular Biology, 2014, 1089, 1-24.	0.9	1