Pedro Jose de Pablo

List of Publications by Year
in descending order

106 papers	5,290 citations	81900 39 h-index	88630 70 g-index
110 all docs	110 docs citations	110 times ranked	4633 citing authors

#	Article	IF	Citations
1	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
2	Symmetry disruption commits vault particles to disassembly. Science Advances, 2022, 8, eabj7795.	10.3	9
3	Monitoring SARS-CoV-2 Surrogate TGEV Individual Virions Structure Survival under Harsh Physicochemical Environments. Cells, 2022, 11, 1759.	4.1	14
4	Electromechanical Photophysics of GFP Packed Inside Viral Protein Cages Probed by Forceâ€Fluorescence Hybrid Singleâ€Molecule Microscopy. Small, 2022, 18, .	10.0	7
5	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
6	Long-Range Cooperative Disassembly and Aging During Adenovirus Uncoating. Physical Review X, 2021, 11, .	8.9	3
7	Enhancing Visible-Light Photocatalysis <i>via</i> Endohedral Functionalization of Single-Walled Carbon Nanotubes with Organic Dyes. ACS Applied Materials & Interfaces, 2021, 13, 24877-24886.	8.0	19
8	Acidification induces condensation of the adenovirus core. Acta Biomaterialia, 2021, 135, 534-542.	8.3	7
9	Multifunctional carbon nanotubes covalently coated with imine-based covalent organic frameworks: exploring structureâ€"property relationships through nanomechanics. Nanoscale, 2020, 12, 1128-1137.	5.6	20
10	Cryo-electron Microscopy Structure, Assembly, and Mechanics Show Morphogenesis and Evolution of Human Picobirnavirus. Journal of Virology, 2020, 94, .	3.4	11
11	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
12	Virucidal Action Mechanism of Alcohol and Divalent Cations Against Human Adenovirus. Frontiers in Molecular Biosciences, 2020, 7, 570914.	3.5	6
13	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
14	Atomic Force Microscopy of Viruses. Advances in Experimental Medicine and Biology, 2019, 1215, 159-179.	1.6	18
15	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
16	Loading the dice: The orientation of virus-like particles adsorbed on titanate assisted organosilanized surfaces. Biointerphases, 2019, 14, 011001.	1.6	9
17	Structural and Mechanical Characterization of Viruses with AFM. Methods in Molecular Biology, 2019, 1886, 259-278.	0.9	5
18	Direct visualization of single virus restoration after damage in real time. Journal of Biological Physics, 2018, 44, 225-235.	1.5	10

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19	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
20	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
21	Atomic Force Microscopy of Protein Shells: Virus Capsids and Beyond. Methods in Molecular Biology, 2018, 1665, 281-296.	0.9	1
22	Atomic force microscopy of virus shells. Seminars in Cell and Developmental Biology, 2018, 73, 199-208.	5.0	41
23	The 2018 correlative microscopy techniques roadmap. Journal Physics D: Applied Physics, 2018, 51, 443001.	2.8	99
24	Biophysical properties of single rotavirus particles account for the functions of protein shells in a multilayered virus. ELife, 2018, 7, .	6.0	38
25	Atomic force microscopy of virus shells. Biochemical Society Transactions, 2017, 45, 499-511.	3.4	25
26	Structural Analysis of a Temperature-Induced Transition in a Viral Capsid Probed by HDX-MS. Biophysical Journal, 2017, 112, 1157-1165.	0.5	28
27	Cargoâ€“shell and cargoâ€“cargo couplings govern the mechanics of artificially loaded virus-derived cages. Nanoscale, 2016, 8, 9328-9336.	5.6	60
28	Tuning Viral Capsid Nanoparticle Stability with Symmetrical Morphogenesis. ACS Nano, 2016, 10, 8465-8473.	14.6	34
29	Decrease in pH destabilizes individual vault nanocages by weakening the inter-protein lateral interaction. Scientific Reports, 2016, 6, 34143.	3.3	17
30	Structural insights into the assembly and regulation of distinct viral capsid complexes. Nature Communications, 2016, 7, 13014.	12.8	43
31	A protein with simultaneous capsid scaffolding and dsRNA-binding activities enhances the birnavirus capsid mechanical stability. Scientific Reports, 2015, 5, 13486.	3.3	25
32	Improving the Lateral Resolution of Quartz Tuning Fork-Based Sensors in Liquid by Integrating Commercial AFM Tips into the Fiber End. Sensors, 2015, 15, 1601-1610.	3.8	9
33	Quantitative nanoscale electrostatics of viruses. Nanoscale, 2015, 7, 17289-17298.	5.6	45
34	Calcium Ions Modulate the Mechanics of Tomato Bushy Stunt Virus. Biophysical Journal, 2015, 109, 390-397.	0.5	25
35	Fluorescence Tracking of Genome Release during Mechanical Unpacking of Single Viruses. ACS Nano, 2015, 9, 10571-10579.	14.6	67
36	Mechanics of Viral Chromatin Reveals the Pressurization of Human Adenovirus. ACS Nano, 2015, 9, 10826-10833.	14.6	83

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37	Structural Insights into Magnetic Clusters Grown Inside Virus Capsids. ACS Applied Materials & Interfaces, 2014, 6, 20936-20942.	8.0	23
38	Interplay between the mechanics of bacteriophage fibers and the strength of virus-host links. Physical Review E, 2014, 89, 052710.	2.1	9
39	Imaging Biological Samples with Atomic Force Microscopy. Cold Spring Harbor Protocols, 2014, 2014, pdb.top080473.	0.3	8
40	Cementing proteins provide extra mechanical stabilization to viral cages. Nature Communications, 2014, 5, 4520.	12.8	71
41	The interplay between mechanics and stability of viral cages. Nanoscale, 2014, 6, 2702-2709.	5.6	51
42	Mechanical Stability and Reversible Fracture of Vault Particles. Biophysical Journal, 2014, 106, 687-695.	0.5	36
43	Biophysical Methods to Monitor Structural Aspects of the Adenovirus Infectious Cycle. Methods in Molecular Biology, 2014, 1089, 1-24.	0.9	1
44	Mapping in vitro local material properties of intact and disrupted virions at high resolution using multi-harmonic atomic force microscopy. Nanoscale, 2013, 5, 4729.	5.6	48
45	Mechanical Properties of Viruses. Sub-Cellular Biochemistry, 2013, 68, 519-551.	2.4	21
46	Monitoring dynamics of human adenovirus disassembly induced by mechanical fatigue. Scientific Reports, 2013, 3, 1434.	3.3	85
47	Atomic Force Microscopy of Viruses. Sub-Cellular Biochemistry, 2013, 68, 247-271.	2.4	14
48	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
49	The Role of Capsid Maturation on Adenovirus Priming for Sequential Uncoating. Journal of Biological Chemistry, 2012, 287, 31582-31595.	3.4	82
50	High Surface Water Interaction in Superhydrophobic Nanostructured Silicon Surfaces: Convergence between Nanoscopic and Macroscopic Scale Phenomena. Langmuir, 2012, 28, 1909-1913.	3.5	11
51	Mechanical Disassembly of Single Virus Particles Reveals Kinetic Intermediates Predicted by Theory. Biophysical Journal, 2012, 102, 2615-2624.	0.5	43
52	Resolving Structure and Mechanical Properties at the Nanoscale of Viruses with Frequency Modulation Atomic Force Microscopy. PLoS ONE, 2012, 7, e30204.	2.5	30
53	Direct Measurement of Phage phi29 Stiffness Provides Evidence of Internal Pressure. Small, 2012, 8, 2366-2370.	10.0	71
54	Physical Virology: Direct Measurement of Phage phi29 Stiffness Provides Evidence of Internal Pressure (Small 15/2012). Small, 2012, 8, 2365-2365.	10.0	10

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55	Minimizing tipâ€“sample forces in jumping mode atomic force microscopy in liquid. Ultramicroscopy, 2012, 114, 56-61.	1.9	77
56	Built-In Mechanical Stress in Viral Shells. Biophysical Journal, 2011, 100, 1100-1108.	0.5	75
57	Kinesin Walks the Line: Single Motors Observed by Atomic Force Microscopy. Biophysical Journal, 2011, 100, 2450-2456.	0.5	36
58	Silicon-based hybrid luminescent/magnetic porous nanoparticles for biomedical applications. Journal of Nanophotonics, 2011, 5, 051505.	1.0	5
59	Introduction to Atomic Force Microscopy. Methods in Molecular Biology, 2011, 783, 197-212.	0.9	8
60	The capillarity of nanometric water menisci confined inside closed-geometry viral cages. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 5475-5480.	7.1	28
61	MC simulations of water meniscus in nanocontainers: explaining the collapse of viral particles due to capillary forces. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 2128-2132.	0.8	4
62	Synthesis of Designed Conductive One-Dimensional Coordination Polymers of Ni(II) with 6-Mercaptopurine and 6-Thioguanine. Inorganic Chemistry, 2009, 48, 7931-7936.	4.0	44
63	Origins of phase contrast in the atomic force microscope in liquids. Proceedings of the National Academy of Sciences of the United States of America, 2009, 106, 13655-13660.	7.1	109
64	Tau Aggregation Followed by Atomic Force Microscopy and Surface Plasmon Resonance, and Single Molecule Tau-Tau Interaction Probed by Atomic Force Spectroscopy. Journal of Alzheimer's Disease, 2009, 18, 141-151.	2.6	26
65	Study Of Mechanical Properties Of Bacteriophage T7. Biophysical Journal, 2009, 96, 422a-423a.	0.5	1
66	Dependence of the Single Walled Carbon Nanotube Length with Growth Temperature and Catalyst Density by Chemical Vapor Deposition. Journal of Nanoscience and Nanotechnology, 2009, 9, 2830-2835.	0.9	4
67	Unmasking Imaging Forces on Soft Biological Samples in Liquids When Using Dynamic Atomic Force Microscopy: A Case Study on Viral Capsids. Biophysical Journal, 2008, 95, 2520-2528.	0.5	57
68	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
69	Cutting down the forest of peaks in acoustic dynamic atomic force microscopy in liquid. Review of Scientific Instruments, 2008, 79, 126106.	1.3	45
70	Manipulation of the mechanical properties of a virus by protein engineering. , 2008, , 221-222.		0
71	MMX polymer chains on surfaces. Chemical Communications, 2007, , 1591-1593.	4.1	42
72	Elastic Response, Buckling, and Instability of Microtubules under Radial Indentation. Biophysical Journal, 2006, 91, 1521-1531.	0.5	163

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73	Electrical Measurements with SFM-Based Techniques. , 2006, , 355-389.		0
74	Studying electrical transport in carbon nanotubes by conductance atomic force microscopy. Journal of Materials Science: Materials in Electronics, 2006, 17, 475-482.	2.2	12
75	DNA-mediated anisotropic mechanical reinforcement of a virus. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 13706-13711.	7.1	186
76	Tuning the conductance of single-walled carbon nanotubes by ion irradiation in the Anderson localization regime. Nature Materials, 2005, 4, 534-539.	27.5	378
77	From Coordination Polymer Macrocrystals to Nanometric Individual Chains. Advanced Materials, 2005, 17, 1761-1765.	21.0	73
78	Scanning Probe Microscopy Characterization of Single Chains Based on a One-Dimensional Oxalato-Bridged Manganese(II) Complex with 4-Aminotriazole. Inorganic Chemistry, 2005, 44, 8343-8348.	4.0	52
79	Bacteriophage capsids: Tough nanoshells with complex elastic properties. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 7600-7605.	7.1	317
80	Resolving the molecular structure of microtubules under physiological conditions with scanning force microscopy. European Biophysics Journal, 2004, 33, 462-467.	2.2	47
81	Radial Electromechanical Properties of Carbon Nanotubes. Advanced Materials, 2004, 16, 549-552.	21.0	43
82	Jumping mode scanning force microscopy: a suitable technique for imaging DNA in liquids. Applied Surface Science, 2003, 210, 22-26.	6.1	12
83	Interaction forces and conduction properties between multi wall carbon nanotube tips and Au(111). Ultramicroscopy, 2003, 96, 83-92.	1.9	7
84	Observation of microtubules with scanning force microscopy in liquid. Nanotechnology, 2003, 14, 143-146.	2.6	13
85	Probing electrical transport in nanowires: current maps of individual V2O5nanofibres with scanning force microscopy. Nanotechnology, 2003, 14, 134-137.	2.6	11
86	Deformation and Collapse of Microtubules on the Nanometer Scale. Physical Review Letters, 2003, 91, 098101.	7.8	220
87	Performing current versus voltage measurements of single-walled carbon nanotubes using scanning force microscopy. Applied Physics Letters, 2002, 80, 1462-1464.	3.3	46
88	Contactless experiments on individual DNA molecules show no evidence for molecular wire behavior. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 8484-8487.	7.1	128
89	Scanning force microscopy three-dimensional modes applied to the study of the dielectric response of adsorbed DNA molecules. Nanotechnology, 2002, 13, 314-317.	2.6	42
90	Electrostatic scanning force microscopy images of long molecules: single-walled carbon nanotubes and DNA. Nanotechnology, 2002, 13, 309-313.	2.6	28

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91	Nonlinear Resistance versus Length in Single-Walled Carbon Nanotubes. Physical Review Letters, 2002, 88, 036804.	7.8	85
92	Scanning force microscopy jumping and tapping modes in liquids. Applied Physics Letters, 2002, 81, 2620-2622.	3.3	40
93	Visualization of single-walled carbon nanotubes electrical networks by scanning force microspy. Applied Physics Letters, 2001, 79, 2979-2981.	3.3	22
94	Temperature dependence of the conductance of multiwalled carbon nanotubes. Physical Review B, 2001, 64, .	3.2	52
95	Electrical characterization of single-walled carbon nanotubes with Scanning Force Microscopy. Materials Science and Engineering C, 2001, 15, 149-151.	7.3	14
96	Thermal maps of gold micro-stripes obtained using scanning force microscopy. Nanotechnology, 2001, 12, 113-117.	2.6	3
97	Mechanical and Electrical Properties of Nanosized Contacts on Single-Walled Carbon Nanotubes. Advanced Materials, 2000, 12, 573-576.	21.0	37
98	In situ observation of electromigration in micrometre-sized gold stripes by scanning force microscopy. Surface and Interface Analysis, 2000, 30, 278-282.	1.8	7
99	Tip-sample interaction in tapping-mode scanning force microscopy. Physical Review B, 2000, 61, 14179-14183.	3.2	50
100	Ratchet effect in surface electromigration detected with scanning force microscopy in gold micro-stripes. Surface Science, 2000, 464, 123-130.	1.9	8
101	Absence of dc-Conductivity inÎ»-DNA. Physical Review Letters, 2000, 85, 4992-4995.	7.8	602
102	Mechanical and Electrical Properties of Nanosized Contacts on Single-Walled Carbon Nanotubes. Advanced Materials, 2000, 12, 573-576.	21.0	1
103	A simple, reliable technique for making electrical contact to multiwalled carbon nanotubes. Applied Physics Letters, 1999, 74, 323-325.	3.3	130
104	Adhesion Maps Using Scanning Force Microscopy Techniques. Journal of Adhesion, 1999, 71, 339-356.	3.0	21
105	Correlating the location of structural defects with the electrical failure of multiwalled carbon nanotubes. Applied Physics Letters, 1999, 75, 3941-3943.	3.3	41
106	Jumping mode scanning force microscopy. Applied Physics Letters, 1998, 73, 3300-3302.	3.3	167