Pedro Jose Tarazona Lafarga

List of Publications by Year in Descending Order

152 papers	7,338 citations	42 h-index	82 g-index
157 ext. papers	7,686 ext. citations	3.4 avg, IF	5.98 L-index

#	Paper	IF	Citations
152	Tip Charge Dependence of Three-Dimensional AFM Mapping of Concentrated Ionic Solutions. *Physical Review Letters*, **2021**, 127, 196101	7.4	6
151	Subnanometer Interfacial Forces in Three-Dimensional Atomic Force Microscopy: Water and Octane near a Mica Surface. *Journal of Physical Chemistry C*, **2020**, 124, 26296-26303	3.8	6
150	A MOF@COF Composite with Enhanced Uptake through Interfacial Pore Generation. *Angewandte Chemie - International Edition*, **2019**, 58, 9512-9516	16.4	42
149	A MOF@COF Composite with Enhanced Uptake through Interfacial Pore Generation. *Angewandte Chemie*, **2019**, 131, 9612-9616	3.6	27
148	Density functional analysis of atomic force microscopy in a dense fluid. *Journal of Chemical Physics*, **2019**, 151, 034701	3.9	10
147	Bacterial cell division: modeling FtsZ assembly and force generation from single filament experimental data. *FEMS Microbiology Reviews*, **2019**, 43, 73-87	15.1	13
146	Capillary waves as eigenmodes of the density correlation at liquid surfaces. *Journal of Chemical Physics*, **2018**, 148, 084702	3.9	7
145	Density correlation in liquid surfaces: Bedeaux-Weeks high order terms and non capillary wave background. *Journal of Chemical Physics*, **2018**, 149, 124704	3.9	0
144	Deconstructing Temperature Gradients across Fluid Interfaces: The Structural Origin of the Thermal Resistance of Liquid-Vapor Interfaces. *Physical Review Letters*, **2017**, 119, 045901	7.4	14
143	A Novel Technique To Predict the Solubility of Planar Molecules. *Energy & Fuels*, **2016**, 30, 10747-10757	3.1	1
142	Atomically resolved three-dimensional structures of electrolyte aqueous solutions near a solid surface. *Nature Communications*, **2016**, 7, 12164	12.4	94
141	Collective effects of torsion in FtsZ filaments. *Physical Review E*, **2016**, 93, 042407	2.4	4
140	Capillary waves and the decay of density correlations at liquid surfaces. *Physical Review E*, **2016**, 94, 062802	2.4	9
139	Capillary wave Hamiltonian for the Landau-Ginzburg-Wilson density functional. *Journal of Physics Condensed Matter*, **2016**, 28, 244014	1.8	14
138	Mesoscopic Hamiltonian for the fluctuations of adsorbed Lennard-Jones liquid films. *Physical Review E*, **2015**, 91, 062404	2.4	4
137	A computer simulation approach to quantify the true area and true area compressibility modulus of biological membranes. *Journal of Chemical Physics*, **2015**, 143, 034706	3.9	22
136	Modeling the interplay between protein and lipid aggregation in supported membranes. *Chemistry and Physics of Lipids*, **2015**, 185, 141-52	3.7	6

135	Torsion and curvature of FtsZ filaments. *Soft Matter*, **2014**, 10, 1977-86	3.6	22
134	Effect of dispersion forces on the capillary-wave fluctuations of liquid surfaces. *Physical Review E*, **2014**, 89, 042406	2.4	11
133	Intrinsic fluid interfaces and nonlocality. *Physical Review Letters*, **2013**, 111, 096104	7.4	20
132	FtsZ protein on bilayer membranes: effects of specific lateral bonds. *Soft Matter*, **2013**, 9, 6072	3.6	5
131	Functional thermo-dynamics: a generalization of dynamic density functional theory to non-isothermal situations. *Journal of Chemical Physics*, **2013**, 139, 034106	3.9	17
130	Thermal fluctuations and bending rigidity of bilayer membranes. *Journal of Chemical Physics*, **2013**, 139, 094902	3.9	29
129	Depolymerization dynamics of individual filaments of bacterial cytoskeletal protein FtsZ. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 8133-8	11.5	42
128	Intrinsic profiles and the structure of liquid surfaces. *Journal of Physics Condensed Matter*, **2012**, 24, 284128	2.3	21
127	The structure of ionic aqueous solutions at interfaces: an intrinsic structure analysis. *Journal of Chemical Physics*, **2012**, 137, 114706	3.9	35
126	Capillary wave spectrum at adsorbed liquid films. *Physical Review B*, **2012**, 86,	3.3	10
125	Newton black films as wetting systems. *Physical Review B*, **2012**, 85,	3.3	11
124	Adhesive transitions in Newton black films: a computer simulation study. *Journal of Chemical Physics*, **2011**, 134, 214701	3.9	23
123	Thickness and fluctuations of free and adsorbed liquid films. *Physical Review B*, **2011**, 84,	3.3	8
122	The intrinsic interfacial structure of ionic surfactant monolayers at water–oil and water–vapour interfaces. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2011**, 467, 1939-1958	2.4	35
121	Constricting force of filamentary protein rings evaluated from experimental results. *Physical Review E*, **2010**, 81, 031922	2.4	13
120	Force-field dependence on the interfacial structure of oil–water interfaces. *Molecular Physics*, **2010**, 108, 1887-1898	1.7	23
119	Simple modeling of FtsZ polymers on flat and curved surfaces: correlation with experimental in vitro observations. *PMC Biophysics*, **2009**, 2, 8		25
118	Comparative study of the surface layer density of liquid surfaces. *Physical Review B*, **2009**, 80,	3.3	29

117	Self-organization of curved living polymers: FtsZ protein filaments. *Soft Matter*, **2009**,	3.6	2
116	High fluidity and soft elasticity of the inner membrane of Escherichia coli revealed by the surface rheology of model Langmuir monolayers. *Langmuir*, **2008**, 24, 4065-76	4	31
115	FtsZ bacterial cytoskeletal polymers on curved surfaces: the importance of lateral interactions. *Biophysical Journal*, **2008**, 94, L81-3	2.9	31
114	Density Functional Theories of Hard Particle Systems. *Lecture Notes in Physics*, **2008**, 247-341	0.8	71
113	Beyond dynamic density functional theory: the role of inertia. *Journal of Physics Condensed Matter*, **2008**, 20, 494233	1.8	17
112	Beyond the dynamic density functional theory for steady currents: application to driven colloidal particles in a channel. *Journal of Chemical Physics*, **2008**, 128, 164704	3.9	17
111	Diffusion at the liquid-vapor interface. *Journal of Chemical Physics*, **2008**, 128, 134704	3.9	28
110	Hydrodynamics of nanoscopic capillary waves. *Physical Review Letters*, **2008**, 101, 106102	7.4	36
109	Intrinsic structure of hydrophobic surfaces: the oil-water interface. *Physical Review Letters*, **2008**, 101, 056102	7.4	60
108	Langevin computer simulations of bacterial protein filaments and the force-generating mechanism during cell division. *Physical Review E*, **2008**, 77, 011902	2.4	53
107	Capillary waves dynamics at the nanoscale. *Journal of Physics Condensed Matter*, **2008**, 20, 494229	1.8	17
106	In vitro reconstitution of the initial stages of the bacterial cell division machinery. *Journal of Biological Physics*, **2008**, 34, 237-47	1.6	8
105	Molecular dynamics investigation of the intrinsic structure of water-fluid interfaces via the intrinsic sampling method. *Physical Chemistry Chemical Physics*, **2008**, 10, 4704-15	3.6	55
104	Theory of thermostatted inhomogeneous granular fluids: a self-consistent density functional description. *Journal of Chemical Physics*, **2007**, 126, 164904	3.9	26
103	Critical analysis of the density functional theory prediction of enhanced capillary waves. *Physical Review Letters*, **2007**, 99, 196101	7.4	38
102	Thermodynamic properties and electrical conductivity of a tight-binding hard-sphere model for liquid metals. *Journal of Non-Crystalline Solids*, **2007**, 353, 3523-3527	3.9	1
101	Dynamical correlations in Brownian hard rods. *Journal of Chemical Physics*, **2006**, 124, 164903	3.9	14
100	The intrinsic structure of the water surface. *Journal of Chemical Physics*, **2006**, 125, 014709	3.9	67

99	Nonequilibrium inertial dynamics of colloidal systems. *Journal of Chemical Physics*, **2006**, 124, 164901	3.9	36
98	Intrinsic structure of the free liquid surface of an alkali metal. *Physical Review B*, **2006**, 74,	3.3	18
97	Characterization of the intrinsic density profiles for liquid surfaces. *Journal of Physics Condensed Matter*, **2005**, 17, S3493-S3498	1.8	46
96	Electrical conductivity of a tight-binding hard-sphere model for hot fluid metals. *Physical Review B*, **2005**, 71,	3.3	2
95	Validation of a glue-model approach in a tight-binding hard-sphere model for hot fluid metals. *Physical Review B*, **2005**, 71,	3.3	4
94	Density functional study of layering at liquid surfaces. *Physical Review E*, **2004**, 70, 061601	2.4	15
93	Monte Carlo intrinsic surfaces and density profiles for liquid surfaces. *Physical Review B*, **2004**, 70,	3.3	79
92	Nonlocal WDA functional capable of describing the image potential of a metallic surface. *International Journal of Quantum Chemistry*, **2003**, 91, 139-144	2.1	5
91	The Fisher-Widom line for systems with low melting temperature. *Molecular Physics*, **2003**, 101, 1595-1603	1.7	16
90	Intrinsic profiles beyond the capillary wave theory: a Monte Carlo study. *Physical Review Letters*, **2003**, 91, 166103	7.4	158
89	Dynamic density functional theory for steady currents: Application to colloidal particles in narrow channels. *Journal of Chemical Physics*, **2003**, 119, 1766-1776	3.9	32
88	Dynamic density functional study of a driven colloidal particle in polymer solutions. *Physical Review E*, **2003**, 68, 061407	2.4	52
87	Fundamental measure theory and dimensional interpolation for the hard spheres fluid. *Physica A: Statistical Mechanics and Its Applications*, **2002**, 306, 243-250	3.3	54
86	Layering structures at free liquid surfaces: The Fisher Widom line and the capillary waves. *Journal of Chemical Physics*, **2002**, 117, 3941-3950	3.9	28
85	Close to the edge of fundamental measure theory: a density functional for hard-sphere mixtures. *Journal of Physics Condensed Matter*, **2002**, 14, 11965-11980	1.8	48
84	Low melting temperature and liquid surface layering for pair potential models. *Journal of Chemical Physics*, **2002**, 117, 10777-10788	3.9	47
83	Thermodynamic and electronic properties of a hard-sphere fluid interacting self consistently with its tight-binding electrons. *Journal of Non-Crystalline Solids*, **2002**, 312-314, 242-246	3.9	
82	Layering at free liquid surfaces. *Physical Review Letters*, **2001**, 87, 166101	7.4	84

81	Image potential and the exchange-correlation weighted density approximation functional. *Physical Review B*, **2000**, 62, 16063-16068	3.3	17
80	Aggregation models at high packing fraction. *Physical Review E*, **2000**, 62, 7147-54	2.4	3
79	Dynamic density functional theory of fluids. *Journal of Physics Condensed Matter*, **2000**, 12, A413-A418	1.8	157
78	Lattice-gas model driven by Hubbard electrons. *Physical Review E*, **1999**, 60, 2626-35	2.4	4
77	Dynamic density functional theory of fluids. *Journal of Chemical Physics*, **1999**, 110, 8032-8044	3.9	491
76	Gutzwiller approximation for a Hubbard lattice gas. *Journal of Non-Crystalline Solids*, **1999**, 250-252, 20-23	3.9	
75	Microscopic Model for Mixed Surfactant Vesicles. *Langmuir*, **1998**, 14, 6827-6834	4	14
74	Density functional theory and the asymptotic high density expansion of the free energy of classical solids and fluids. *Molecular Physics*, **1998**, 95, 141-150	1.7	123
73	Elastic constants from a microscopic model of bilayer membrane. *Journal of Chemical Physics*, **1998**, 109, 2371-2379	3.9	17
72	Two-stage capillary condensation in pores with structured walls: A nonlocal density functional study. *Journal of Chemical Physics*, **1998**, 108, 8689-8697	3.9	66
71	Thermodynamic and electronic properties of a tight-binding lattice-gas model. *Journal of Physics Condensed Matter*, **1997**, 9, 9799-9810	1.8	4
70	Exact results and mean field approximation for a model of molecular aggregation. *Journal of Chemical Physics*, **1997**, 107, 10207-10213	3.9	16
69	Dimensional crossover and the freezing transition in density functional theory. *Journal of Physics Condensed Matter*, **1996**, 8, L577-L581	1.8	94
68	. *Journal of Physics Condensed Matter*, **1996**, 8, 9359-9362	1.8	5
67	Calculated structure, phase coexistence, and electrical conductivity of the alkali fluids. *Journal of Non-Crystalline Solids*, **1996**, 205-207, 251-255	3.9	
66	Gibbs-ensemble Monte Carlo simulation for the liquid-vapor coexistence of alkali fluids. *Journal of Non-Crystalline Solids*, **1996**, 205-207, 897-900	3.9	1
65	Capillary condensation in structured pores. *Journal of Chemical Physics*, **1996**, 105, 2034-2043	3.9	67
64	Simple model for the phase coexistence and electrical conductivity of alkali fluids. *Physical Review Letters*, **1995**, 74, 142-145	7.4	18

63	Theoretical models for the liquid-vapor and metal-nonmetal transitions of alkali fluids. *Physical Review B*, **1995**, 52, 9330-9341	3.3	19
62	A model for membranes, vesicles and micelles in amphiphilic systems. *Journal of Physics Condensed Matter*, **1995**, 7, 5753-5776	1.8	36
61	Solid-fluid transition and interfaces with density functional approaches. *Surface Science*, **1995**, 331-333, 989-994	1.8	45
60	Perturbation theory applied to the freezing of classical systems. *Physical Review E*, **1994**, 49, 2161-2166	2.4	23
59	Lifetimes of small catalytic networks. *Bulletin of Mathematical Biology*, **1994**, 56, 875-898	2.1	7
58	Perturbation weighted-density approximation: The phase diagram of a Lennard-Jones system. *Physical Review E*, **1993**, 47, 4284-4288	2.4	41
57	Unified treatment of the metal-non-metal and liquid-vapour transitions in monovalent-atom fluids. *Journal of Physics Condensed Matter*, **1993**, 5, 1753-1758	1.8	6
56	RNA folding and combinatory landscapes. *Physical Review E*, **1993**, 47, 2083-2099	2.4	175
55	Structural and Electronic Aspects of the Phase Transitions of Alkali-atom Fluids. *Contributions To Plasma Physics*, **1993**, 33, 370-373	1.4	6
54	Liquid crystals of asymmetric hard body molecules. *Molecular Physics*, **1992**, 75, 17-21	1.7	10
53	Error thresholds for molecular quasispecies as phase transitions: From simple landscapes to spin-glass models. *Physical Review A*, **1992**, 45, 6038-6050	2.6	142
52	Density functional approximation for the kinetic energy of independent electrons in one dimension. *Physica A: Statistical Mechanics and Its Applications*, **1992**, 180, 225-240	3.3	4
51	Phase transitions at solid-fluid interfaces: theoretical description of the transverse structure. *Surface Science*, **1991**, 251-252, 628-634	1.8	3
50	Density functional theory of the elastic constants of a nematic liquid crystal. *Molecular Physics*, **1991**, 72, 911-926	1.7	45
49	Nematic and smectic liquid crystals of hard spherocylinders. *Physical Review A*, **1990**, 41, 965-970	2.6	69
48	Pinwheel and herringbone phases in systems of adsorbed molecules. *Physical Review B*, **1990**, 42, 8571-8576	3.3	10
47	First-order and continuous transitions in confined liquid crystals. *Physical Review A*, **1990**, 41, 1149-1152	2.6	29
46	Comment on "Prewetting at a solid-fluid interface via Monte Carlo simulation". *Physical Review A*, **1990**, 42, 2454-2457	2.6	28

45	Cluster variational method for a fluid in a narrow capillary. *Physical Review A*, **1990**, 42, 7340-7346	2.6	4
44	The effect of confinement on the isotropic-nematic transition. *Molecular Physics*, **1990**, 71, 801-821	1.7	39
43	Exact solution of approximate density functionals for the kinetic energy of the electron gas. *Physical Review B*, **1989**, 39, 10366-10369	3.3	22
42	Frank elastic constants of a nematic liquid crystal of hard molecules. *Physical Review A*, **1989**, 40, 6069-6076	2.6	25
41	Orientational phase transitions in systems of adsorbed molecules. *Physical Review B*, **1989**, 39, 7111-7119	3.3	28
40	Columnar liquid crystal of parallel hard spherocylinders. *Physical Review A*, **1989**, 40, 4161-4163	2.6	15
39	Fluctuation effects in the herringbone orientational phase transition. *Physical Review B*, **1989**, 39, 7157-7160	3.3	16
38	Nematic-smectic-A-smectic-C transitions in systems of parallel hard molecules. *Physical Review Letters*, **1988**, 61, 2566-2569	7.4	92
37	Self-consistent weighted-density approximation for the electron gas. I. Bulk properties. *Physical Review B*, **1988**, 37, 4013-4019	3.3	49
36	Self-consistent weighted-density approximation for the electron gas. II. The metal surface. *Physical Review B*, **1988**, 37, 4020-4025	3.3	23
35	A model for capillary crystallization and the capillary triple point. *Molecular Physics*, **1987**, 62, 497-507	1.7	16
34	Density-functional approach to phase transitions of submonolayer films. I. The role of the intrinsic and extrinsic ordering forces. *Physical Review B*, **1987**, 35, 3376-3383	3.3	17
33	Elastic properties of a hard-sphere crystal. *Physical Review A*, **1987**, 36, 979-981	2.6	30
32	Density-functional approach to phase transitions of submonolayer films. II. The role of the relaxation mechanisms. *Physical Review B*, **1987**, 35, 3384-3393	3.3	5
31	Wetting transitions for the Ar-CO2 interface: Modified-hypernetted-chain and density-functional-theory results. *Physical Review A*, **1987**, 35, 1210-1218	2.6	41
30	Phase equilibria of fluid interfaces and confined fluids. *Molecular Physics*, **1987**, 60, 573-595	1.7	547
29	Capillarity and Wetting. *Physica Scripta*, **1987**, T19B, 369-374	2.6	2
28	The image potential in the weighted-density approximation. *Nuovo Cimento Della Societa Italiana Di Fisica D - Condensed Matter, Atomic, Molecular and Chemical Physics, Biophysics*, **1987**, 9, 589-594		7

27	Non-local effects in the density functional treatment of the Wigner crystal. *Journal of Physics C: Solid State Physics*, **1986**, 19, 2431-2440		1
26	Complete wetting at a model fluid-argon-solid-CO2 interface. *Physical Review A*, **1986**, 34, 2513-2516	2.6	16
25	Nonlocal density functional for the exchange and correlation energy of electrons. *Physical Review B* , **1986**, 33, 6579-6587	3.3	17
24	Capillary condensation and adsorption in cylindrical and slit-like pores. *Journal of the Chemical Society, Faraday Transactions 2*, **1986**, 82, 1763		332
23	Free-energy density functional for hard spheres. *Physical Review A*, **1985**, 31, 2672-2679	2.6	922
22	Effects of the electrostatic forces in the structure of molecular interphases. *Molecular Physics*, **1985** , 54, 1073-1083	1.7	1
21	Pairwise correlations at a fluid-fluid interface. *Molecular Physics*, **1985**, 54, 1357-1392	1.7	18
20	Nonlocal kinetic energy functional for nonhomogeneous electron systems. *Physical Review B*, **1985**, 32, 7868-7877	3.3	93
19	A model for density oscillations in liquids between solid walls. *Molecular Physics*, **1985**, 56, 557-572	1.7	91
18	Molecular fluids in an external field. *Molecular Physics*, **1984**, 51, 1475-1486	1.7	11
17	Theory of Condensation in Narrow Capillaries. *Physical Review Letters*, **1984**, 52, 557-560	7.4	134
16	Critical Exponents for Complete Wetting. *Physical Review Letters*, **1984**, 53, 400-400	7.4	6
15	A density functional theory of melting. *Molecular Physics*, **1984**, 52, 81-96	1.7	347
14	On the validity of certain integro-differential equations for the density-orientation profile of molecular fluid interfaces. *Chemical Physics Letters*, **1983**, 97, 279-282	2.5	3
13	Wetting transitions at models of a solid-gas interface. *Molecular Physics*, **1983**, 48, 799-831	1.7	165
12	Pairwise correlations and wetting transitions at a solid-gas interface. *Surface Science*, **1983**, 125, 298-303	1.8	2
11	Wetting and thick-thin film transitions in a model of argon at a solid CO2 substrate. *Physical Review A*, **1983**, 28, 1864-1868	2.6	55
10	Wetting transitions at fluid-fluid interfaces. *Molecular Physics*, **1983**, 49, 283-300	1.7	63

9	On the failure of certain integral equation theories to account for complete wetting at solid-fluid interfaces. *Molecular Physics*, **1983**, 50, 993-1011	1.7	69
8	Wetting transitions at fluid-fluid interfaces. *Molecular Physics*, **1983**, 49, 301-314	1.7	30
7	Long ranged correlations at a solid-fluid interface A signature of the approach to complete wetting. *Molecular Physics*, **1982**, 47, 1033-1063	1.7	65
6	A perturbation-variational theory for molecular fluid interphases. *Molecular Physics*, **1982**, 47, 145-160	1.7	19
5	A perturbation-variational theory for molecular fluid interphases in the presence of an electric field. *Molecular Physics*, **1982**, 47, 1021-1031	1.7	7
4	Thermodynamics of deformable three-phase systems. *Physica A: Statistical Mechanics and Its Applications*, **1982**, 115, 490-500	3.3	6
3	Surface stress of curved solid-fluid interfaces. *Surface Science*, **1981**, 111, L733-L738	1.8	2
2	Contact angle and line tension dependence on curvature. *Chemical Physics Letters*, **1981**, 82, 586-588	2.5	20
1	Surface tension of hard sphere fluid near a wall. *Molecular Physics*, **1979**, 37, 1077-1087	1.7	27