

# Iván Santamaría-a-Holek

## List of Publications by Year in descending order

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69  
papers

797  
citations

623734

14  
h-index

580821

25  
g-index

71  
all docs

71  
docs citations

71  
times ranked

692  
citing authors

| #  | ARTICLE  | IF  | CITATIONS |
|----|--|-----|-----------|
| 1  | The rheology of hard sphere suspensions at arbitrary volume fractions: An improved differential viscosity model. <i>Journal of Chemical Physics</i> , 2009, 130, 044904.                                       | 3.0 | 106       |
| 2  | The rheology of concentrated suspensions of arbitrarily-shaped particles. <i>Journal of Colloid and Interface Science</i> , 2010, 346, 118-126.  | 9.4 | 76        |
| 3  | Diffusion in stationary flow from mesoscopic nonequilibrium thermodynamics. <i>Physical Review E</i> , 2001, 63, 051106.   | 2.1 | 39        |
| 4  | Carbon-Nanotube-Based Motor Driven by a Thermal Gradient. <i>Journal of Physical Chemistry C</i> , 2013, 117, 3109-3113.   | 3.1 | 38        |
| 5  | Thermokinetic Approach of Single Particles and Clusters Involving Anomalous Diffusion under Viscoelastic Response. <i>Journal of Physical Chemistry B</i> , 2007, 111, 2293-2298.                              | 2.6 | 33        |
| 6  | Mean-Square Displacement of Particles in Slightly Interconnected Polymer Networks. <i>Journal of Physical Chemistry B</i> , 2014, 118, 1146-1158.  | 2.6 | 30        |
| 7  | Some conceptual thoughts toward nanoscale oriented friction in a model of articular cartilage. <i>Mathematical Biosciences</i> , 2013, 244, 188-200.   | 1.9 | 28        |
| 8  | Local quasi-equilibrium description of slow relaxation systems. <i>Journal of Chemical Physics</i> , 2004, 120, 2818-2823.   | 3.0 | 27        |
| 9  | Critical analysis of negative heat capacity in nanoclusters. <i>Europhysics Letters</i> , 2007, 79, 43001.   | 2.0 | 26        |
| 10 | Generalized Fickâ€“Jacobs Approach for Describing Adsorptionâ€“Desorption Kinetics in Irregular Pores under Nonequilibrium Conditions. <i>Journal of Physical Chemistry C</i> , 2016, 120, 7810-7821.          | 3.1 | 22        |
| 11 | Thermodynamics and dynamics of the formation of spherical lipid vesicles. <i>Journal of Biological Physics</i> , 2009, 35, 297-308.  | 1.5 | 18        |
| 12 | Entropic effects in diffusion-adsorption processes in micropores. <i>European Physical Journal: Special Topics</i> , 2013, 222, 129-141.   | 2.6 | 18        |
| 13 | Mean-Field â€œTemperatureâ€“in Far From Equilibrium Systems. <i>Journal of Physical Chemistry B</i> , 2011, 115, 9439-9444.  | 2.6 | 17        |
| 14 | Relation between the porosity and tortuosity of a membrane formed by disconnected irregular pores and the spatial diffusion coefficient of the Fick-Jacobs model. <i>Physical Review E</i> , 2017, 95, 052804. | 2.1 | 17        |
| 15 | Slow dynamics and local quasi-equilibriumâ€“relaxation in supercooled colloidal systems. <i>Journal of Physics Condensed Matter</i> , 2004, 16, S2047-S2054.   | 1.8 | 14        |
| 16 | Finite-size effects in microrheology. <i>Journal of Chemical Physics</i> , 2006, 125, 064907.  | 3.0 | 14        |
| 17 | Mesoscopic thermodynamics of stationary non-equilibrium states. <i>New Journal of Physics</i> , 2005, 7, 35-35.  | 2.9 | 13        |
| 18 | A non-equilibrium thermodynamics model for combined adsorption and diffusion processes in micro- and nanopores. <i>Journal of Non-Equilibrium Thermodynamics</i> , 2012, 37, .                                 | 4.2 | 13        |

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|----|--|-----|-----------|
| 19 | Review on the Macro-Transport Processes Theory for Irregular Pores able to Perform Catalytic Reactions. <i>Catalysts</i> , 2019, 9, 281.   | 3.5 | 13        |
| 20 | Temperature dependence of anomalous protonic and superprotonic transport properties in mixed salts based on CsH <sub>2</sub> PO <sub>4</sub> . <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 12948-12960. | 2.8 | 12        |
| 21 | Biophysics of Active Vesicle Transport, an Intermediate Step That Couples Excitation and Exocytosis of Serotonin in the Neuronal Soma. <i>PLoS ONE</i> , 2012, 7, e45454.  | 2.5 | 12        |
| 22 | Effect of Surface Diffusion on Adsorption-Desorption and Catalytic Kinetics in Irregular Pores. I. Local Kinetics. <i>Journal of Physical Chemistry C</i> , 2017, 121, 14544-14556.                                | 3.1 | 10        |
| 23 | On the Protein Crystal Formation as an Interface-Controlled Process with Prototype Ion-Channeling Effect. <i>Journal of Biological Physics</i> , 2007, 33, 313-329.  | 1.5 | 9         |
| 24 | Protein motors induced enhanced diffusion in intracellular transport. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2009, 388, 1515-1520.   | 2.6 | 9         |
| 25 | Superstatistics of Brownian motion: A comparative study. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2007, 385, 456-464.  | 2.6 | 8         |
| 26 | Transition to irreversibility in sheared suspensions: An analysis based on a mesoscopic entropy production. <i>Physical Review E</i> , 2009, 79, 031201.   | 2.1 | 8         |
| 27 | Effect of Surface Diffusion on Adsorption-Desorption and Catalytic Kinetics in Irregular Pores. II. Macro-Kinetics. <i>Journal of Physical Chemistry C</i> , 2017, 121, 14557-14565.                               | 3.1 | 8         |
| 28 | The interplay between phenotypic and ontogenetic plasticities can be assessed using reaction-diffusion models. <i>Journal of Biological Physics</i> , 2017, 43, 247-264.   | 1.5 | 8         |
| 29 | Mesoscopic nonequilibrium thermodynamics approach to non-Debye dielectric relaxation. <i>Journal of Chemical Physics</i> , 2010, 132, 084502.  | 3.0 | 7         |
| 30 | Effective temperatures and the breakdown of the Stokes-Einstein relation for particle suspensions. <i>Journal of Chemical Physics</i> , 2015, 143, 104506.   | 3.0 | 7         |
| 31 | Onsager's irreversible thermodynamics of the dynamics of transient pores in spherical lipid vesicles. <i>European Biophysics Journal</i> , 2015, 44, 473-481.  | 2.2 | 7         |
| 32 | Effectiveness Factor and Mass Transfer Coefficient in Wedge and Funnel Pores Using a Generalized Fick-Jacobs Model. <i>Journal of Physical Chemistry C</i> , 2016, 120, 29153-29161.                               | 3.1 | 7         |
| 33 | Possible fates of the spread of SARS-CoV-2 in the Mexican context. <i>Royal Society Open Science</i> , 2020, 7, 200886.  | 2.4 | 7         |
| 34 | Entropic Effects of Interacting Particles Diffusing on Spherical Surfaces. <i>Frontiers in Physics</i> , 2021, 9, .  | 2.1 | 7         |
| 35 | Reply to the Comment by D. Lynden-Bell and R. M. Lynden-Bell. <i>Europhysics Letters</i> , 2008, 82, 43002.  | 2.0 | 6         |
| 36 | Fluctuation theorems for systems under Fokker-Planck dynamics. <i>Physical Review E</i> , 2009, 79, 011101.  | 2.1 | 6         |

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|----|--|-----|-----------|
| 37 | Comment on "Violation of the Zeroth Law of Thermodynamics in Systems with Negative Specific Heat": Physical Review Letters, 2009, 102, 138901, author reply 138902.                              | 7.8 | 6         |
| 38 | Origin of the effective mobility in non-linear active micro-rheology. Journal of Chemical Physics, 2016, 145, 134905.  | 3.0 | 6         |
| 39 | Reply to the Comment by F. Calvo et al.. Europhysics Letters, 2008, 82, 43004.   | 2.0 | 5         |
| 40 | On morphological selection rule of noisy character applied to model (dis)orderly protein formations. Journal of Chemical Physics, 2010, 132, 195103.   | 3.0 | 5         |
| 41 | Pattern formation from consistent dynamical closures of uniaxial nematic liquid crystals. Journal of Chemical Physics, 2012, 136, 114109.  | 3.0 | 5         |
| 42 | Nonlinear irreversible thermodynamics of single-molecule experiments. Physical Review E, 2015, 91, 062714.   | 2.1 | 5         |
| 43 | Dynamics and Thermodynamics of Nanoclusters. Entropy, 2015, 17, 7133-7148.   | 2.2 | 5         |
| 44 | Entropic restrictions control the electric conductance of superprotonic ionic solids. Physical Chemistry Chemical Physics, 2020, 22, 437-445.  | 2.8 | 5         |
| 45 | Eyring equation and fluctuation-dissipation far away from equilibrium. Journal of Chemical Physics, 2020, 153, 244116.   | 3.0 | 5         |
| 46 | Mesoscopic constitutive relations for dilute polymer solutions. Physica A: Statistical Mechanics and Its Applications, 2006, 369, 291-300.   | 2.6 | 4         |
| 47 | Relaxation in homogeneous and non-homogeneous polarized systems. A mesoscopic entropy approach. Physica A: Statistical Mechanics and Its Applications, 2010, 389, 1819-1828.                     | 2.6 | 4         |
| 48 | Entropy production and energy dissipation in symmetric redox supercapacitors. Physical Review E, 2017, 96, 022103.   | 2.1 | 4         |
| 49 | Photocurrent oscillations in natural dyes-based DSSCs with different mordant and assistants: Their role in oscillations and color stability. Materials Chemistry and Physics, 2022, 286, 126163. | 4.0 | 4         |
| 50 | The non-equilibrium work relation: Thermodynamic analysis and microscopic foundations. Physica A: Statistical Mechanics and Its Applications, 2008, 387, 1529-1537.                              | 2.6 | 3         |
| 51 | Precursors of long-range order and local disorder in colloids. Physica A: Statistical Mechanics and Its Applications, 2009, 388, 1973-1977.  | 2.6 | 3         |
| 52 | Thermostatistical description of small systems in nonequilibrium conditions: Energy conversion and harvesting. Physical Review E, 2014, 89, 012144.  | 2.1 | 3         |
| 53 | Effect of elastic colored noise in the hopping dynamics of single molecules in stretching experiments. Physical Review E, 2015, 92, 062708.  | 2.1 | 3         |
| 54 | Local Quasi-equilibrium Description of Multiscale Systems. Journal of Non-Equilibrium Thermodynamics, 2016, 41, .  | 4.2 | 3         |

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|----|--|-----|-----------|
| 55 | Power conversion efficiency of non-equilibrium light absorption. AIP Advances, 2017, 7, .  | 1.3 | 3         |
| 56 | Scaling Planck's law: a unified approach to the Casimir effect and radiative heat-conductance in nanogaps. Nanoscale Horizons, 2022, 7, 526-532.   | 8.0 | 3         |
| 57 | Competitive Adsorption and Interplay between Methanol and Water During Electro-Oxidation on Pd-Based Electrocatalyst. Journal of the Electrochemical Society, 2022, 169, 046505.   | 2.9 | 3         |
| 58 | A nonequilibrium thermodynamic approach to generalized statistics for Brownian motion. Physica A: Statistical Mechanics and Its Applications, 2006, 366, 141-148.  | 2.6 | 2         |
| 59 | On the origin of the phaseâ€“space diffusion limit in (dis)ordered protein aggregation. Physica A: Statistical Mechanics and Its Applications, 2013, 392, 3155-3167.   | 2.6 | 2         |
| 60 | Unravelling a Self-healing Thermo- and Hydrodynamic Mechanism of Transient Pore's Late-stage Closing in Vesicles, and Related Soft-matter Systems, in Terms of Liaison Between Surface-tension and Bending Effects. Acta Physica Polonica B, 2016, 47, 1341. | 0.8 | 2         |
| 61 | Invalid Microstate Densities for Model Systems Lead to Apparent Violation of Thermodynamic Law. Entropy, 2017, 19, 314.  | 2.2 | 1         |
| 62 | Electrical response of optimized DSSCâ€™s by different dye-mordant-assistant combinations: A multi-time-hierarchical theoretical approach. Results in Physics, 2021, 23, 104064.   | 4.1 | 1         |
| 63 | Size and surface-energy dependence of the adsorption/desorption equilibrium in ethanol electro-oxidation by Pd-nanoparticles. Theory and experiment. RSC Advances, 2022, 12, 2525-2530.  | 3.6 | 1         |
| 64 | Generalized hydrodynamics of a dilute suspension of finite-sized particles: Dynamic viscosity. Physical Review E, 2006, 74, 051401.  | 2.1 | 0         |
| 65 | Statistical Mechanical Theory of a Closed Oscillating Universe. Foundations of Physics, 2010, 40, 267-275.   | 1.3 | 0         |
| 66 | Mesoscopic Thermodynamics in the Presence of Flow. , 0, , .  |     | 0         |
| 67 | Comment on â€œA New Model for the Viscosity of Asphaltene Solutionsâ€; Canadian Journal of Chemical Engineering, 2015, 93, 1149-1150.  | 1.7 | 0         |
| 68 | Eckhaus selection: The mechanism of pattern persistence in a reaction-diffusion system. Physical Review E, 2020, 102, 032214.  | 2.1 | 0         |
| 69 | A Theoretical Perspective of the Photochemical Potential in the Spectral Performance of Photovoltaic Cells. Entropy, 2021, 23, 579.  | 2.2 | 0         |