

Mauricio R Bonilla

List of Publications by Year in descending order

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Version: 2024-02-01

30
papers

818
citations

471509

17
h-index

501196

28
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31
all docs

31
docs citations

31
times ranked

1233
citing authors

#	ARTICLE	IF	CITATIONS
1	Molecular transport in nanopores: a theoretical perspective. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 15350.	2.8	137
2	Mucin gel assembly is controlled by a collective action of non-mucin proteins, disulfide bridges, Ca ²⁺ -mediated links, and hydrogen bonding. <i>Scientific Reports</i> , 2018, 8, 5802.	3.3	84
3	Cellulose-pectin composite hydrogels: Intermolecular interactions and material properties depend on order of assembly. <i>Carbohydrate Polymers</i> , 2017, 162, 71-81.	10.2	56
4	Micromechanics and Poroelasticity of Hydrated Cellulose Networks. <i>Biomacromolecules</i> , 2014, 15, 2274-2284.	5.4	52
5	Atomistic Insight into Ion Transport and Conductivity in Ga/Al-Substituted Li ₇ La ₃ Zr ₂ O ₁₂ Solid Electrolytes. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 753-765.	8.0	40
6	Interpreting atomic force microscopy nanoindentation of hierarchical biological materials using multi-regime analysis. <i>Soft Matter</i> , 2015, 11, 1281-1292.	2.7	38
7	Mapping nano-scale mechanical heterogeneity of primary plant cell walls. <i>Journal of Experimental Botany</i> , 2016, 67, 2799-2816.	4.8	34
8	Pectin impacts cellulose fibre architecture and hydrogel mechanics in the absence of calcium. <i>Carbohydrate Polymers</i> , 2016, 153, 236-245.	10.2	32
9	Diffusion Study by IR Micro-Imaging of Molecular Uptake and Release on Mesoporous Zeolites of Structure Type CHA and LTA. <i>Materials</i> , 2013, 6, 2662-2688.	2.9	30
10	Understanding Adsorption and Transport of Light Gases in Hierarchical Materials Using Molecular Simulation and Effective Medium Theory. <i>Journal of Physical Chemistry C</i> , 2014, 118, 14355-14370.	3.1	29
11	Nanostructure and poroviscoelasticity in cell wall materials from onion, carrot and apple: Roles of pectin. <i>Food Hydrocolloids</i> , 2020, 98, 105253.	10.7	28
12	Micromechanical model of biphasic biomaterials with internal adhesion: Application to nanocellulose hydrogel composites. <i>Acta Biomaterialia</i> , 2016, 29, 149-160.	8.3	27
13	Unveiling Interfacial Li-Ion Dynamics in Li ₇ La ₃ Zr ₂ O ₁₂ /PEO(LiTFSI) Composite Polymer-Ceramic Solid Electrolytes for All-Solid-State Lithium Batteries. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 30653-30667.	8.0	25
14	The low-density diffusion coefficient of soft-sphere fluids in nanopores: Accurate correlations from exact theory and criteria for applicability of the Knudsen model. <i>Journal of Membrane Science</i> , 2011, 382, 339-339.	8.2	23
15	Probing adhesion between nanoscale cellulose fibres using AFM lateral force spectroscopy: The effect of hemicelluloses on hydrogen bonding. <i>Carbohydrate Polymers</i> , 2019, 208, 97-107.	10.2	22
16	Heat Treatment-Induced Structural Changes in SiC-Derived Carbons and their Impact on Gas Storage Potential. <i>Journal of Physical Chemistry C</i> , 2010, 114, 16562-16575.	3.1	18
17	Diffusion in Pore Networks: Effective Self-Diffusivity and the Concept of Tortuosity. <i>Journal of Physical Chemistry C</i> , 2013, 117, 3343-3357.	3.1	17
18	Exploring Li-ion conductivity in cubic, tetragonal and mixed-phase Al-substituted Li ₇ La ₃ Zr ₂ O ₁₂ using atomistic simulations and effective medium theory. <i>Acta Materialia</i> , 2019, 175, 426-435.	7.9	16

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19	The transport of gases in macroporous γ -alumina supports. <i>Journal of Membrane Science</i> , 2012, 409-410, 24-33.	8.2	15
20	The transport of gases in a mesoporous γ -alumina supported membrane. <i>Journal of Membrane Science</i> , 2013, 428, 357-370.	8.2	14
21	Friction, lubrication, and in situ mechanics of poroelastic cellulose hydrogels. <i>Soft Matter</i> , 2017, 13, 3592-3601.	2.7	14
22	On the interfacial lithium dynamics in $\text{Li}_7\text{La}_3\text{Zr}_2\text{O}_{12}$:poly(ethylene oxide) (LiTFSI) composite polymer-ceramic solid electrolytes under strong polymer phase confinement. <i>Journal of Colloid and Interface Science</i> , 2022, 623, 870-882.	9.4	14
23	New insights into cooked rice quality by measuring modulus, adhesion and cohesion at the level of an individual rice grain. <i>Journal of Food Engineering</i> , 2019, 240, 21-28.	5.2	13
24	Multicomponent Effective Mediumâ€“Correlated Random Walk Theory for the Diffusion of Fluid Mixtures through Porous Media. <i>Langmuir</i> , 2012, 28, 517-533.	3.5	12
25	Revealing the Mechanism of Sodium Diffusion in Na_xFePO_4 Using an Improved Force Field. <i>Journal of Physical Chemistry C</i> , 2018, 122, 8065-8075.	3.1	12
26	Impact of Glucose on the Nanostructure and Mechanical Properties of Calcium-Alginate Hydrogels. <i>Gels</i> , 2022, 8, 71.	4.5	7
27	Viscoelasticity of non-colloidal hydrogel particle suspensions at the liquidâ€“solid transition. <i>Soft Matter</i> , 2021, 17, 5073-5083.	2.7	6
28	Multiscale Modelling and Simulation of Advanced Battery Materials. SEMA SIMAI Springer Series, 2021, , 69-113.	0.7	2
29	Modelling of Thermal Sterilisation of High-Moisture Snack Foods: Feasibility Analysis and Optimization. <i>Food and Bioprocess Technology</i> , 2018, 11, 979-990.	4.7	1
30	Exploring Li-Ion Conductivity in Cubic, Tetragonal and Mixed-Phase Al-Substituted $\text{Li}_{7-x}\text{La}_3\text{Zr}_2\text{O}_{12}$ Using Atomistic Simulations and Effective Medium Theory. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0