Rosa Espinosa-Marzal

List of Publications by Year
in descending order

79 papers	2,537 citations	159525 30 h-index	214721 47 g-index
83 all docs	83 docs citations	83 times ranked	2533 citing authors

#	Article	IF	Citations
1	Rheological Characteristics of Ionic Liquids under Nanoconfinement. Langmuir, 2022, 38, 2961-2971.	1.6	6
2	Pathological cardiolipin-promoted membrane hemifusion stiffens pulmonary surfactant membranes. Biophysical Journal, 2022, 121, 886-896.	0.2	7
3	Chargeâ€Induced Structural Changes of Confined Copolymer Hydrogels for Controlled Surface Morphology, Rheological Response, Adhesion, and Friction. Advanced Functional Materials, 2022, 32, .	7.8	9
4	Velocity-weakening and -strengthening friction at single and multiasperity contacts with calcite single crystals. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	3
5	Compositional Tuning Reveals a Pathway to Achieve a Strong and Lubricious Double Network in Agarose-Polyacrylamide Hydrogels. Tribology Letters, 2022, 70, .	1.2	2
6	Transient stiffening of cartilage during joint articulation: A microindentation study. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 113, 104113.	1.5	4
7	Nanoheterogeneity of LiTFSI Solutions Transitions Close to a Surface and with Concentration. Nano Letters, 2021, 21, 2304-2309.	4.5	9
8	Effects of Layering and Supporting Substrate on Liquid Slip at the Single-Layer Graphene Interface. ACS Nano, 2021, 15, 10095-10106.	7.3	19
9	Using Patterned Self-Assembled Monolayers to Tune Grapheneâ€"Substrate Interactions. Langmuir, 2021, 37, 9996-10005.	1.6	6
10	Nanoscale insight into the relation between pressure solution of calcite and interfacial friction. Journal of Colloid and Interface Science, 2021, 601, 254-264.	5.0	7
11	Correlation Between the Adsorption and the Nanotribological Performance of Fatty Acid-Based Organic Friction Modifiers on Stainless Steel. Tribology Letters, 2020, 68, 1.	1.2	21
12	Advances in Understanding Hydrogel Lubrication. Colloids and Interfaces, 2020, 4, 54.	0.9	18
13	Potential-Dependent Layering in the Electrochemical Double Layer of Water-in-Salt Electrolytes. ACS Applied Energy Materials, 2020, 3, 8086-8094.	2.5	28
14	Mediating the Enhanced Interaction Between Hydroxyapatite and Agarose through Amorphous Calcium Carbonate. Crystal Growth and Design, 2020, 20, 6917-6929.	1.4	5
15	Insight into the Electrical Double Layer of Ionic Liquids Revealed through Its Temporal Evolution. Advanced Materials Interfaces, 2020, 7, 2001313.	1.9	22
16	Effects of Nanoscale Roughness on the Lubricious Behavior of an Ionic Liquid. Advanced Materials Interfaces, 2020, 7, 2000314.	1.9	14
17	Nanoscale insight into the degradation mechanisms of the cartilage articulating surface preceding OA. Biomaterials Science, 2020, 8, 3944-3955.	2.6	12
18	Ion specific effects on the pressure solution of calcite single crystals. Geochimica Et Cosmochimica Acta, 2020, 280, 116-129.	1.6	6

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19	Influence of Water on Structure, Dynamics, and Electrostatics of Hydrophilic and Hydrophobic Ionic Liquids in Charged and Hydrophilic Confinement between Mica Surfaces. ACS Applied Materials & Interfaces, 2019, 11, 33465-33477.	4.0	28
20	Adsorption Behavior and Nanotribology of Amine-Based Friction Modifiers on Steel Surfaces. Journal of Physical Chemistry C, 2019, 123, 13672-13680.	1.5	32
21	Tailoring Calcite Growth through an Amorphous Precursor in a Hydrogel Environment. Crystal Growth and Design, 2019, 19, 3192-3205.	1.4	14
22	Effect of Fluid Chemistry on the Interfacial Composition, Adhesion, and Frictional Response of Calcite Single Crystalsâ€"Implications for Injectionâ€Induced Seismicity. Journal of Geophysical Research: Solid Earth, 2019, 124, 5607-5628.	1.4	11
23	Mixing oil and water with ionic liquids: bicontinuous microemulsions under confinement. Soft Matter, 2019, 15, 9609-9613.	1.2	6
24	Influence of Loading Conditions and Temperature on Static Friction and Contact Aging of Hydrogels with Modulated Microstructures. ACS Applied Materials & Interfaces, 2019, 11, 42722-42733.	4.0	14
25	Slippery and Sticky Graphene in Water. ACS Nano, 2019, 13, 2072-2082.	7.3	12
26	Lubrication of Si-Based Tribopairs with a Hydrophobic Ionic Liquid: The Multiscale Influence of Water. Journal of Physical Chemistry C, 2018, 122, 7331-7343.	1.5	23
27	Stickâ€"Slip Friction Reveals Hydrogel Lubrication Mechanisms. Langmuir, 2018, 34, 756-765.	1.6	52
28	Molecular Mechanisms Underlying Lubrication by Ionic Liquids: Activated Slip and Flow. Lubricants, 2018, 6, 64.	1.2	21
29	Electroviscous Retardation of the Squeeze Out of Nanoconfined Ionic Liquids. Journal of Physical Chemistry C, 2018, 122, 21344-21355.	1.5	27
30	The role of water in fault lubrication. Nature Communications, 2018, 9, 2309.	5.8	44
31	Effect of divalent ions and a polyphosphate on composition, structure, and stiffness of simulated drinking water biofilms. Npj Biofilms and Microbiomes, 2018, 4, 15.	2.9	33
32	Insight into the Viscous and Adhesive Contributions to Hydrogel Friction. Tribology Letters, 2018, 66, 1.	1.2	27
33	Collective dehydration of ions in nano-pores. Physical Chemistry Chemical Physics, 2017, 19, 13462-13468.	1.3	9
34	Calcium carbonate with nanogranular microstructure yields enhanced toughness. Nanoscale, 2017, 9, 16689-16699.	2.8	6
35	Reconciling DLVO and non-DLVO Forces and Their Implications for Ion Rejection by a Polyamide Membrane. Langmuir, 2017, 33, 8982-8992.	1.6	14
36	Self-adaptive hydrogels to mineralization. Soft Matter, 2017, 13, 5469-5480.	1.2	9

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37	Ion specific hydration in nano-confined electrical double layers. Journal of Colloid and Interface Science, 2017, 506, 263-270.	5.0	17
38	Strong Stretching of Poly(ethylene glycol) Brushes Mediated by Ionic Liquid Solvation. Journal of Physical Chemistry Letters, 2017, 8, 3954-3960.	2.1	9
39	Assembly, Morphology, Diffusivity, and Indentation of Hydrogel-Supported Lipid Bilayers. Langmuir, 2017, 33, 7105-7117.	1.6	15
40	Insight into the Electrical Double Layer of an Ionic Liquid on Graphene. Scientific Reports, 2017, 7, 4225.	1.6	74
41	Influence of Chain Stiffness, Grafting Density and Normal Load on the Tribological and Structural Behavior of Polymer Brushes: A Nonequilibrium-Molecular-Dynamics Study. Polymers, 2016, 8, 254.	2.0	24
42	Stepwise collapse of highly overlapping electrical double layers. Physical Chemistry Chemical Physics, 2016, 18, 24417-24427.	1.3	22
43	Effect of the environmental humidity on the bulk, interfacial and nanoconfined properties of an ionic liquid. Physical Chemistry Chemical Physics, 2016, 18, 22719-22730.	1.3	51
44	Molecular insight into the nanoconfined calciteâ€“solution interface. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12047-12052.	3.3	43
45	Mechanistic Approach to Predict the Combined Effects of Additives and Surface Templates on Calcium Carbonate Mineralization. Crystal Growth and Design, 2016, 16, 6186-6198.	1.4	16
46	Effect of Crosslinking on the Microtribological Behavior of Model Polymer Brushes. Tribology Letters, 2016, 63, 1.	1.2	22
47	Response of Simulated Drinking Water Biofilm Mechanical and Structural Properties to Long-Term Disinfectant Exposure. Environmental Science & Technology, 2016, 50, 1779-1787.	4.6	66
48	Layering of ionic liquids on rough surfaces. Nanoscale, 2016, 8, 4094-4106.	2.8	48
49	Influence of Environmental Humidity on the Wear and Friction of a Silica/Silicon Tribopair Lubricated with a Hydrophilic Ionic Liquid. ACS Applied Materials & Interfaces, 2016, 8, 2961-2973.	4.0	31
50	Ab Initio Studies of Calcium Carbonate Hydration. Journal of Physical Chemistry A, 2015, 119, 11591-11600.	1.1	19
51	Irreversible structural change of a dry ionic liquid under nanoconfinement. Physical Chemistry Chemical Physics, 2015, 17, 13613-13624.	1.3	62
52	Polymer Brushes under Shear: Molecular Dynamics Simulations Compared to Experiments. Langmuir, 2015, 31, 4798-4805.	1.6	53
53	Environmental Influence on the Surface Chemistry of Ionic-Liquid-Mediated Lubrication in a Silica/Silicon Tribopair. Journal of Physical Chemistry C, 2014, 118, 29389-29400.	1.5	30
54	Interactions in Water Across Interfaces: From Nano to Macro-Scale Perspective. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 1-14.	0.1	1

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55	Microslips to â€œAvalanchesâ€•in Confined, Molecular Layers of Ionic Liquids. Journal of Physical Chemistry Letters, 2014, 5, 179-184.	2.1	107
56	Ionic Liquids Confined in Hydrophilic Nanocontacts: Structure and Lubricity in the Presence of Water. Journal of Physical Chemistry C, 2014, 118, 6491-6503.	1.5	98
57	Mitigation of ASR by the use of LiNO3â€"Characterization of the reaction products. Cement and Concrete Research, 2014, 59, 73-86.	4.6	53
58	Impact of in-pore salt crystallization on transport properties. Environmental Earth Sciences, 2013, 69, 2657-2669.	1.3	53
59	Understanding the role of viscous solvent confinement in the tribological behavior of polymer brushes: a bioinspired approach. Soft Matter, 2013, 9, 10572.	1.2	35
60	Exploring Lubrication Regimes at the Nanoscale: Nanotribological Characterization of Silica and Polymer Brushes in Viscous Solvents. Langmuir, 2013, 29, 10149-10158.	1.6	37
61	Sugars Communicate through Water: Oriented Glycans Induce Water Structuring. Biophysical Journal, 2013, 104, 2686-2694.	0.2	20
62	Impact of solvation on equilibrium conformation of polymer brushes in solvent mixtures. Soft Matter, 2013, 9, 4045.	1.2	30
63	Molecularly-Thin Precursor Films of Imidazolium-Based Ionic Liquids on Mica. Journal of Physical Chemistry C, 2013, 117, 23676-23684.	1.5	46
64	Adhesion and Friction Properties of Polymer Brushes on Rough Surfaces: A Gradient Approach. Langmuir, 2013, 29, 15251-15259.	1.6	38
65	Two-Fluid Model for the Interpretation of Quartz Crystal Microbalance Response: Tuning Properties of Polymer Brushes with Solvent Mixtures. Journal of Physical Chemistry C, 2013, 117, 4533-4543.	1.5	25
66	Confinement During In-Pore Crystallization. , 2013, , .		0
67	Hydrated-ion ordering in electrical double layers. Physical Chemistry Chemical Physics, 2012, 14, 6085.	1.3	68
68	Nucleation of sodium sulfate heptahydrate on mineral substrates studied by nuclear magnetic resonance. Journal of Crystal Growth, 2012, 338, 166-169.	0.7	25
69	Poly(acrylamide) films at the solvent-induced glass transition: adhesion, tribology, and the influence of crosslinking. Soft Matter, 2012, 8, 9092.	1.2	43
70	Density profile of water in nanoslit. Europhysics Letters, 2012, 99, 26001.	0.7	12
71	Can drying and re-wetting of magnesium sulfate salts lead to damage of stone?. Environmental Earth Sciences, 2011, 63, 1463-1473.	1.3	42
72	Sodium sulfate heptahydrate I: The growth of single crystals. Journal of Crystal Growth, 2011, 329, 44-51.	0.7	41

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73	The chemomechanics of crystallization during rewetting of limestone impregnated with sodium sulfate. Journal of Materials Research, 2011, 26, 1472-1481.	1.2	46
74	Advances in Understanding Damage by Salt Crystallization. Accounts of Chemical Research, 2010, 43, 897-905.	7.6	138
75	Mechanisms of damage by salt. Geological Society Special Publication, 2010, 331, 61-77.	0.8	36
76	Model for the mechanical stress due to the salt crystallization in porous materials. Construction and Building Materials, 2008, 22, 1350-1367.	3.2	71
77	Phase changes of salts in porous materials: Crystallization, hydration and deliquescence. Construction and Building Materials, 2008, 22, 1758-1773.	3.2	115
78	Influence of the age and drying process on pore structure and sorption isotherms of hardened cement paste. Cement and Concrete Research, 2006, 36, 1969-1984.	4.6	113
79	Inkbottle Pore-Method: Prediction of hygroscopic water content in hardened cement paste at variable climatic conditions. Cement and Concrete Research, 2006, 36, 1954-1968.	4.6	56