Departamento de Física de la Materia Condensada

División Experimental

División Teoría

Publicaciones 2021

Volumetric and viscosity properties of water-in-salt lithium electrolytes: a comparison with ionic liquids and hydrated molten salts.

G. Horwitz, P. Steinberg, H. R. Corti

J. Chem. Termodyn. 158, 106457 (2021)

Effect of the carbon mesoporous structure on the transport properties of confined lithium chloride aqueous solutions

E. Fuentes Quezada, S. A. Maldonado Ochoa, R. H. Acosta, F. Vaca Chávez, M. Bruno, E. de la Llave, M. P. Longinotti, H. R. Corti

Micropor. Mesopor. Mater., 323, 111255 (2021)

Water-in-Salt Lithium Electrolytes' Nanostructure: Insights from Small-Angle Neutron Scattering Analysis

G. Horwitz,*E. Härk, P. Y. Steinberg, L. P. Cavalcanti, S. Risse, H. R. Corti ACS Nano 15, 11564–11572 (2021)

Revisiting the glass transition of water-glycerol mixtures in the bulk and confined in mesoporous silica.

I. Angarita, M. F. Mazzobre, H. R. Corti, M. P. Longinotti,

Phys. Chem. Chem Phys. 23, 17018-17025 (2021)

Non-negligible interactions of alkanes with silica mesopores affect self-diffusivity: insights from first principles calculations

I. J. Chevallier-Boutell, G. A. Monti, H. R. Corti, J. A. Olmos-Asar, M. B. Franzoni, R. H. Acosta,

Micropor. Mesopor. Mater., 326, 111315 (2021).

In-situ characterization of discharge products of lithium-oxygen battery using Flow Electrochemical Atomic Force Microscopy

H. A. Cortés,, H. R. Corti

Ultramicroscopy, 230, 113369 (2021)

Advances in the study of supercooled water

P. Gallo, J. Bachler, L. E. Bove, R. Böhmer, G. Camisasca, L. E. Coronas, H. R. Corti, I. de Almeida Ribeiro, M. de Koning,, G. Franzese, V. Fuentes-Landete, C. Gainaru, T. Loerting, J. M. Montes de Oca, P. H. Poole, M. Rovere, F. Sciortino, C. M. Tonauer, G. A. Appignanesi. Eur. Phys. J. E, en prensa.

Eur. Phys. J. E, en prensa

Structure and dynamics of nanoconfined water and aqueous solutions

H. R. Corti, G. A. Appignanesi, M. C. Barbosa, J. R. Bordin, C. Calero, G. Camisasca, M.

D. Elola, G. Franzese, P. Gallo, A. Hassanali, K. Huang, D. Laria, C. A. Menéndez, J. M.

Montes de Oca, M. P. Longinotti, J. Rodriguez, M. Rovere, D. Scherlis, I. Szleifer

Eur. Phys. J. E, DOI: 10.1140/epje/s10189-021-00136-4

Proton irradiation effects on metal-YBCO interfaces

C. Acha, G.A. Sanca, M. Barella, M. Alurralde, F. Gomez Marlasca, H. Huhtinen, P. Paturi, F. Golmar and P. Levy.

Radiation Physics and Chemistry 183, 109404 (2021)

Understanding the effect of doping on the charging performance of the Li-O2 battery: the role of hole polarons and lithium vacancies

Cortes, Henry; Zapata Cardona, John; Barral, María; Vildosola, Veronica

J. Phys. Chem. 125, 19156 (2021)

Polaron formation in Bi deficient BaBiO3

W. Román Acevedo, S. Di Napoli, F. Romano, G. Rodríguez Ruiz, P. Nukala, C. Quinteros,

J. Lecourt, U. Lueders, V. Vildosola and D. Rubi

Phys. Rev. B 104, 125307 (2021)

Two-dimensional superconductivity driven by interfacial electron-phonon coupling in a BaPbO3/BaBiO3 bilayer,

S. Di Napoli, C. Helman, A. M. Llois, and V. Vildosola

Phys. Rev. B 103, 174509 (2021)

Preventing uranium(VI) redissolution in water after treatment with zerovalent iron nanoparticles by passivation with chromium(VI).

JULIETA CRESPI; EMILIA B. HALAC; ANA G. LEYVA; GUILLERMO ZAMPIERI; NATALIA QUICI.

Chemical Engineering Transactions. 86, 1489 (2021) https://doi.org/10.3303/CET2186249

Fe and Ti metal-organic frameworks: Towards tailored materials for photovoltaic applications

V. A. Gómez Andrade, W. O. Herrera Martínez, F. Redondo, N. B. Correa Guerrero, F. Roncaroli, M. D. Perez

Applied Materials Today 2021, 22, 100915.

The Influence of Particle Size and Shape in Cobalt 2-Methylimidazolate Polymers on Catalytic Properties

A. K. Díaz-Duran y F. Roncaroli

Eur. J. Inorg. Chem. 2021, 2830-2839.

Strong Co-Mo Interaction behind Unexpected Physicochemical Properties in SrMo0.9Co0.1O3-δ Perovskite

Leandro M. Acuña, Marcelo D. Cabezas, Rodolfo O. Fuentes and Fernando F. Muñoz J. Phys. Chem. C 2021, 125, 17342–17354 https://doi.org/10.1021/acs.jpcc.1c04006

NiO/CeO2-Sm2O3 nanocomposites for partial oxidation of methane: In-situ experiments by dispersive X-ray absorption spectroscopy.

Lucía M.Toscani, Marina S.Bellora, Cristián Huck-Iriart, Analía L. Soldati, Joaquín Sacanell, Tereza S.Martins, Aldo F.Craievich, Márcia C.A.Fantini, Susana A.Larrondo, Diego G.Lamas.

Applied Catalysis A: General 626, 25, 1183 (2021)

Tuning the magneto-electrical properties of multiferroic multilayers through interface strain and disorder

Sutter, J.G., Chávez, A.S., Soria, S., ...Leyva, A.G., Sirena, M. Journal of Alloys and Compounds, 2021, 859, 157820

Treatment of ethylmercury chloride by heterogeneous photocatalysis with TiO2 Emmanuel M.de la Fournière, Jorge M.Meichtry, Eduardo A.Gautier, Ana G.Leyva, Marta I.Litter

Journal of Photochemistry & Photobiology, A: Chemistry, 2021,vol 411, 113205

Equilibrium and Dynamical Characteristics of the Solvation
Associated with the Li + /Li Redox Couple at the Ethylene Carbonate/
Graphene Interface
Emilio Méndez, M. Dolores Elola, Javier Rodriguez, and Daniel Laria

Phase diagram of a model for topological superconducting wires Diego Pérez Daroca, Armando A Aligia Physical Review B 104, 115125 (2021)

Journal of Physical Chemistry C, 125, 6694-6707 (2021)

Noncollinear magnetic configurations and substrate-mediated interactions in Mn trimers on the GaN (000 1) surface

Diego Hunt, María Andrea Barral, Arthur R. Smith, and Valeria Ferrari Phys. Rev. B 103, 094418 (2021)

Immobilization of nanoscale zerovalent iron in hierarchically channelled polyacrylonitrile for Cr(VI) remediation in wastewater

I. Sciscenko, V. Luca, C. P. Ramos, T. B. Scott, V. N. Montesinos, N. Quici Journal of Water Process Engineering 39 (2021) 101704, DOI: 10.1016/j.jwpe.2020.101704

Stable nZVI-based nanocomposites for adsorption and reduction processes: the case of U(VI) removal

J. L. Marco-Brown, R. Valiente, C. P. Ramos, M. A., Fernández, R. Candal Environmental Nanotechnology, Monitoring & Management 16 (2021) 100563, DOI: 10.1016/j.enmm.2021.100563

Microwave assisted hydrothermal nanoarchitectonics of polyethyleneimine-coated iron oxide nanoparticles

C. A. Albornoz, M. A. Paulin, A. A. Cristóbal, D. R. Vega, A. G. Leyva, C. P. Ramos ACEPTADO Applied Physics A

Paramagnetic solid-state NMR assignment and novel chemical conversion of aldehyde group to dihydrogen ortho ester and hemiacetal moieties in copper(II)- and cobalt(II)-pyridinecarboxaldehyde complexes

Ayelén F. Crespi, Verónica M. Sánchez, Daniel Vega, Ana L. Pérez, Carlos D. Brondino, Yamila Garro Linck, Paul Hodgkinson, Enrique Rodríguez-Castellón and Juan M. Lázaro-Martínez

RSC Adv., 2021, 11, 20216-20231

Form quantitation in desmotropic mixtures of albendazole bulk drug by chemometricsassisted analysis of vibrational spectra

Aldana B. Moroni, Daniel R. Vega, Teodoro S. Kaufman, Natalia L. Calvo En prensa en Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy

EPR, Magnetic, and Computational Characterization of Linear and Zigzag Ladder-type Chains of Exchange Coupled Cu(II) Complexes with Picolinic and Dipicolinic Acid Ligands Ana L. Pérez, Axel Kemmerer, Ricardo Baggio, Carlos A. Ramos, Sergio D. Dalosto, Mario C. G. Passeggi, Alberto C. Rizzi, Carlos D. Brondino

Eur. J. Inorg. Chem. 2021, 4183-4195

A new synthetic thiochalcone, intended as a ligand for polymetallic coordination compounds: Structural, Electrochemical and Theoretical study

F. Brovelli, R. Baggio, L. Álvarez and Y. Moreno

J.Chil. Chem. Soc., 66 2 5190-5194

Experimental re-evaluation of proton penetration ranges in GaAs and InGaP

E. Yaccuzzi, S. Di Napoli, E. Di Liscia, S. Suárez, M. Alurralde, A. Strittmatter, J. Plá, P. Giudici

J. Phys. D: Appl. Phys. 54 115302

Optical method for measuring proton projected range in GaAs

E. Yaccuzzi, E. Di Liscia, M.E. Reinoso, A. Strittmatter, M. Alurralde, J. Plá, P. Giudici Nucl. Instrum. Methods Phys. Res. B: Beam Interact. Mater. At., 500–501, 2021, 68-75

Energy performance of perovskite solar cell fabrication in Argentina. A life cycle assessment approach

Correa Guerrero, Natalia B.; Herrera Martinez, Walter O.; Civit, Barbara; Perez, M. Dolores

Solar Energy, 2021, 230, 645-653

Chapter 2. Emergent Materials and Concepts for Solar Cell Applications M. Dolores Perez, Juan Plá

Sustainable Material Solutions for Solar Energy Technologies, Elsevier. ISBN: 9780128215920

Anomalous Hall effect in MnAs: Intrinsic contribution due to Berry curvature

C. Helman, A. Camjayi, E. Islam, M. Akabori, L. Thevenard, C. Gourdon, and M. Tortarolo

Phys. Rev. B 103, 134408

Ordinary Hall anomaly due to the Fermi surface shape in MnAs C. Helman, A. M. Llois, and M. Tortarolo Phys. Rev. B 104, 195109 (2021)

Crystalline Quality, Composition Homogeneity, Tellurium Precipitates/Inclusions Concentration, Optical Transmission, and Energy Band Gap of Bridgman Grown Single-Crystalline Cd1-xZnxTe (0 < x < 0.1)

Ana María Martínez, Paula Giudici, Alicia Beatriz Trigubó , Raúl D'Elía, Eduardo Heredia, Rodrigo Ramelli, Rubén González, Felipe Aza and Ulises Gilabert Materials 14, 4207 (2021)

Energías renovables en áreas urbanas y periurbanas: vehículos para la inclusión social y la soberanía energética ciudadana

M. Videla, P. Giudici, I. Eyras.

Habitat Inclusivo (en prensa)

Magnetic properties of chiral Eulr2P2

D. J. Garcia, V. Vildosola, A. A. Aligia, D. G. Franco, Pablo S. Cornaglia Phys. Rev. B (en prensa)

Recent progress in homogeneous light-driven hydrogen evolution using first-row transition metal catalysts

Agostina Mazzeo, Sol Santalla, Carina Gaviglio, Fabio Doctorovich, Juan Pellegrino Inorganica Chimica Acta, Volume 517, 2021, 119950

Structure and Reactivity of NO/NO+/NO- Pincer and Porphyrin Complexes
Cecilia Gallego, Agostina Mazzeo, Carina Gaviglio, Juan Pellegrino, Fabio Doctorovich
Eur. J. Inorg. Chem. 2021, 1 –20

Localized electronic vacancy level and its effect on the properties of doped manganites D. Juan, M. Pruneda, V. Ferrari Scientific Reports 11, 6706 (2021)

Ce=O Terminated CeO2

David C Grinter, Michael Allan, Hyun Jin Yang, Agustín Salcedo, Gustavo E Murgida, Bobbie-Jean Shaw, Chi L Pang, Hicham Idriss, M Verónica Ganduglia-Pirovano y Geoff Thornton

Angewandte Chemie International Edition, .2021, 60, 13835 – 13839

Liquid and Droplet Transport in Brush-Coated Cylindrical Nanochannels: Brush-Assisted Droplet Formation

C. Pastorino, M. Müller

J. Phys. Chem. B 125, 1, 442–449 (2021)

Structural and Mechanical Properties of Silica Mesoporous Films Synthesized Using Deep X-Rays: Implications in the Construction of Devices.

P. Y. Steinberg, D. F. Lionello, D. E. Medone Acosta, M. M. Zalduendo, H. Amenitsch, L. P. Granja, B. Marmiroli, P. C. Angelomé, M. C. Fuertes
Front. Mater. 8, 628245 (2021)