

Departamento de Materia Condensada

División Experimental

División Teoría

Producción 2017

Publicaciones internacionales

• "**Extraterrestrial microspherules from Bajada del Diablo, Chubut, Argentina**" (artículo con referato)

M.J. Orgeira, L.N. Castro, G.A. Goldmann, C.B. Prezzi, E. Sileo, D.R. Vega, C. Franzosi, R.D. Acevedo, O. Martínez, J. Rabassa, *et al.*
Geoscience Frontiers **8**(1) (2017) 137-149

• "**Magnetic Gold Confined in Ordered Mesoporous Titania Thin Films: A Noble Approach for Magnetic Devices**" (artículo con referato)

Leticia P. Granja, Eduardo D. Martínez, Horacio Troiani, Clément Sanchez and Galo J.A.A. Soler Illia
ACS Appl. Mater. Interfaces **9**(1) (2017) 965-971

• "**Alkylation of 2- and 3-alkoxycarbonyl-4-quinolinones. DFT study on the regioselectivity**" (artículo con referato)

María S. Shmidt, Pau Arroyo Mañez, Carlos A. Stortz, Isabel A. Perillo, Daniel Vega and María M. Blanco
J. Mol. Struct. **1128** (2017) 142-150

• "**Nanotextured alpha Ni(II)-Co(II) hydroxides as supercapacitive active phases**" (artículo con referato)

Nicolás Arencibia, Víctor Oestreicher, Federico A. Viva and Matías Jobbágyn
RSC Adv. **7**(10) (2017) 5595-5600

• "**Kondo temperature when the Fermi level is near a step in the conduction density of states**" (artículo con referato)

J. Fernández, A.A. Aligia, P. Roura-Bas and J.A. Andrade
Phys. Rev. B **95**(4) (2017) 045143/1-9

• "**Origin of multistate resistive switching in Ti/manganite/SiO_x/Si heterostructures**" (artículo con referato)

W. Román Acevedo, C. Acha, M.J. Sánchez, P. Levy and D. Rubi
Appl. Phys. Lett. **110**(5) (2017) 053501/1-5

• "**Modified diatomites for Fenton-like oxidation of phenol**" (artículo con referato)

N. Inchaurondo, C.P. Ramos, G. Žerjav, J. Font, A. Pintar and P. Haure
Micropor. Mesopor. Mat. **239** (2017) 396-408

• "**Ab initio modeling of point defects, self-diffusion, and incorporation of impurities in thorium**" (artículo con referato)

D. Pérez Daroca
Solid State Comm. **252** (2017) 11-15

• "**Comment on "Out-of-Cell Oxygen Diffusivity Evaluation in Lithium-Air Batteries" by He et al.**" (artículo con referato)

Horacio R. Corti and Henry Andrés Cortés Páez
ChemElectroChem **4**(2) (2017) 450-453

• "**On the nature of the Mott transition in multiorbital systems**" (artículo con referato)

Jorge I. Facio, V. Vildosola, D.J. García and Pablo S. Cornaglia
Phys. Rev. B **95**(8) (2017) 085119/1-10

• "**Exchange interaction between $S = 1/2$ centers bridged by multiple noncovalent interactions: Contribution of the individual chemical pathways to the magnetic coupling**" (artículo con referato)

Ana L. Pérez, Nicolás I. Neuman, Ricardo Baggio, Carlos A. Ramos, Sergio D.

Dalosto, Alberto C. Rizzi and Carlos D. Brondino

Polyhedron **123** (2017) 404-410

• "**Molecular Insight into the Line Tension of Bilayer Membranes Containing Hybrid Polyunsaturated Lipids**" (artículo con referato)

Carla M. Rosetti, Guillermo G. Montich and Claudio Pastorino

J. Phys. Chem. B **121**(7) (2017) 1587-1600

• "**Evaluation of thermophysical properties of $(Np,Pu)O_2$ using molecular dynamics simulations**" (artículo con referato)

P.A. Bellino, H.O. Mosca and S. Jaroszewicz

J. Alloy. Compd. **695** (2017) 944-951

• "**Interface Defect Hydrogen Depassivation and Capacitance-Voltage Hysteresis of $Al_2O_3/InGaAs$ Gate Stacks**" (artículo con referato)

Kechao Tang, Felix Roberto Palumbo, Liangliang Zhang, Ravi Droopad and Paul C. McIntyre

ACS Appl. Mater. Interfaces **9**(8) (2017) 7819-7825

• "**Kondo behavior and conductance through 3d impurities in gold chains doped with oxygen**" (artículo con referato)

M.A. Barral, S. Di Napoli, G. Blesio, P. Roura-Bas, A. Camjayi, L.O. Manuel and A.A. Aligia
J. Chem. Phys. **146**(9), Special Issue on "Molecular Transport" (2017) 092315/1-8

• "**Comparative study of the breakdown transients of thin Al_2O_3 and HfO_2 films in MIM structures and their connection with the thermal properties of materials**" (artículo con referato)

S. Pazos, F. Aguirre, E. Miranda, S. Lombardo and F. Palumbo

J. Appl. Phys. **121**(9) (2017) 094102/1-8

• "**Oxygen Reduction Mechanisms in Nanostructured $La_{0.8}Sr_{0.2}MnO_3$ Cathodes for Solid Oxide Fuel Cells**" (artículo con referato)

Joaquín Sacanell, Joaquín Hernández Sánchez, Adrián Ezequiel Rubio López, Hernán Martinelli, Jimena Siepe, Ana G. Leyva, Valeria Ferrari, Dilson Juan, Miguel Pruneda, Augusto Mejía Gómez, et al.

J. Phys. Chem. C **121**(12) (2017) 6533-6539

• "**Surface Stabilizes Ceria in Unexpected Stoichiometry**" (artículo con referato)

Reinhard Olbrich, Gustavo E. Murgida, Valeria Ferrari, Clemens Barth, Ana M. Llois, Michael Reichling and M. Verónica Ganduglia-Pirovano

J. Phys. Chem. C **121**(12) (2017) 6844-6851

• "**Nanostructured $LnBaCo_2O_{6-\delta}$ ($Ln = Sm, Gd$) with layered structure for intermediate temperature solid oxide fuel cell cathodes**" (artículo con referato)

Augusto E. Mejía Gómez, Diego G. Lamas, Ana Gabriela Leyva and Joaquín Sacanell

AIP Advances **7**(4) (2017) 045214/1-7

• "**Spectroelectrochemical analysis of HOPG surface controlled modification**" (artículo con referato)

Esteban A. Franceschini and Gabriela I. Lacconi

Appl. Surf. Sci. **400** (2017) 254-261

• " **$BaTiO_3$ thin films on platinized silicon: Growth, characterization and resistive memory behavior**" (artículo con referato)

- A. Román, M. Rengifo, L.M. Saleh Medina, M. Reinoso, R.M. Negri, L.B. Steren and D. Rubi
Thin Solid Films **628** (2017) 208-213
- "**Hydrogen evolution kinetics on Ni cathodes modified by spontaneous deposition of Ag or Cu**" (artículo con referato)
Esteban A. Franceschini, Gabriela I. Lacconi and Horacio R. Corti
Journal of Energy Chemistry **26**(3) (2017) 466-475
- "**Flexible Ligand-Based Lanthanide Three-Dimensional Metal-Organic Frameworks with Tunable Solid-State Photoluminescence and OH-Solvent-Sensing Properties**" (artículo con referato)
Germán E. Gomez, Elena V. Brusau, Anna M. Kaczmarek, Caroline Mellot-Draznieks, Joaquín Sacanell, Gwenaelle Rousse, Rik Van Deun, Clément Sanchez, Griselda E. Narda and Galo J.A.A. Soler Illia
Eur. J. Inorg. Chem. **2017**(17) (2017) 2321-2331
- "**Investigation of stress induced interface states in Al₂O₃/InGaAs metal-oxide-semiconductor capacitors**" (artículo con referato)
F. Palumbo, R. Winter, K. Tang, P.C. McIntyre and M. Eizenberg
J. Appl. Phys. **121**(17) (2017) 174105/1-7
- "**Singlet Orbital Ordering in Bilayer Sr₃Cr₂O₇**" (artículo con referato)
Justin Jeanneau, Pierre Toulemonde, Gyorgy Remenyi, André Sulpice, Claire Colin, Vivian Nassif, Emmanuelle Suard, Eduardo Salas Colera, Germán R. Castro, Frederic Gay, et al.
Phys. Rev. Lett. **118**(20) (2017) 207207/1-5
- "**Modeling of the multilevel conduction characteristics and fatigue profile of Ag/La_{1/3}Ca_{2/3}MnO₃/Pt structures using a compact memristive approach**" (artículo con referato)
E. Miranda, W. Román Acevedo, D. Rubi, U. Lüders, P. Granell, J. Suñé and P. Levy
J. Appl. Phys. **121**(20) (2017) 205302/1-9
- "**A dihydro-β-agarofuran sesquiterpene from Maytenus boaria**" (artículo con referato)
C. Paz, D. von Dossow, V. Tiznado, S. Suarez, F.D. Cukiernik and R. Baggio
Acta Cryst. C **73**(6) (2017) 451-457
- "**Non-destructive characterisation of laser hardened steels. Part 2: Metallography and residual stresses**" (artículo con referato)
M. Ruch, G. Cosarinsky, M. Kopp, M. Rabung, D. Vega, M. Amiri and J. Fava
Insight, Volume **59**, Number **6**, 2017, pp. 311-317
- "**Temperature dependence of trapping effects in metal gates/Al₂O₃/InGaAs stacks**" (artículo con referato)
F. Palumbo, S. Pazos, F. Aguirre, R. Winter, I. Krylov and M. Eizenberg
Solid State Electron. **132** (2017) 12-18
- "**Nonlinear charge and energy dynamics of an adiabatically driven interacting quantum dot**" (artículo con referato)
Javier I. Romero, Pablo Roura-Bas, Armando A. Aligia and Liliana Arrachea
Phys. Rev. B **95**(23) (2017) 235117/1-12
- "**Spray-casting ABPBI membranes for high temperature PEM fuel cells**" (artículo con referato)
Federico Viva, Nayra Heredia, Sofia Pagani Palmbaum, Liliana Diaz, Juan De Diego, Matias Lozano, Mariano Bruno and Horacio Corti
J. Electrochem. Soc. **164**(7) (2017) F866-F872

- "**Lamotriginium crotonate and lamotriginium salicylate ethanol monosolvate: The role of solvent molecules in the packing organization**" (artículo con referato)
E. Freire, G.A. Echeverría and R. Baggio
Acta Cryst. C **73**(7) (2017) 563-568
- "**Synthesis and characterization of mesoporous NiO₂/ZrO₂-CeO₂ catalysts for total methane conversion**" (artículo con referato)
R. Bacani, L.M. Toscani, T.S. Martins, M.C.A. Fantini, D.G. Lamas and S.A. Larrondo
Ceram. Int. **43**(10) (2017) 7851-7860
- "**Simple TiO₂ Coatings by Sol-Gel Techniques Combined with Commercial TiO₂ Particles for Use in Heterogeneous Photocatalysis**" (artículo con referato)
María Laura Vera, Gabriela Leyva and Marta I. Litter
J. Nanosci. Nanotechnol. **17**(7) (2017) 4946-4954
- "**Mesoporous metal-oxide-semiconductor capacitors detect intra-porous fluid changes**" (artículo con referato)
Rocío Giménez, Diana C. Delgado, Félix Palumbo, Claudio L.A. Berli and Martín G. Bellino
Colloids Surf. A **524** (2017) 66-70
- "**Surface Behavior of Aprotic Mixtures: Dimethyl Sulfoxide/Acetonitrile**" (artículo con referato)
Javier Rodriguez, M. Dolores Elola, Jordi Martí and Daniel Laria
J. Phys. Chem. C **121**(27) (2017) 14618-14627
- "**Two-dimensional electron systems in ATiO₃ perovskites (A=Ca, Ba, Sr): Control of orbital hybridization and energy order**" (artículo con referato)
T.C. Rödel, M. Vivek, F. Fortuna, P. Le Fèvre, F. Bertran, R. Weht, J. Goniakowski, M. Gabay and A.F. Santander-Syro
Phys. Rev. B **96**(4): Rapid Comm. (2017) 041121(R)/1-6
- "**Molecular conformation of linear alkane molecules: From gas phase to bulk water through the interface**" (artículo con referato)
Ezequiel L. Murina, Roberto Fernández-Prini and Claudio Pastorino
J. Chem. Phys. **147**(6) (2017) 064907/1-8
- "**Comparative study on structural, magnetic and spectroscopic properties of four new copper(II) coordination polymers with 4'-substituted terpyridine ligands**" (artículo con referato)
Dominique Toledo, Andrés Vega, Nancy Pizarro, Ricardo Baggio, Octavio Peña, Thierry Roisnel, Jean-Yves Pivan and Yanko Moreno
J. Solid State Chem. **253** (2017) 78-88
- "**Polymorphism of a widely used building block for halogen-bonded assemblies: 1,3,5-Trifluoro-2,4,6-Triiodobenzene**" (artículo con referato)
P.A. Raffo, S. Suárez, A.C. Fantoni, R. Baggio and F.D. Cukiernik
Acta Cryst. C **73**(9) (2017) 667-673
- "**Comment on "Oxygen Vacancy Ordering and Electron Localization in CeO₂: Hybrid Functional Study"**" (artículo con referato)
M. Verónica Ganduglia-Pirovano, Gustavo E. Murgida, Valeria Ferrari and Ana María Llois
J. Phys. Chem. C **121**(38) (2017) 21080-21083
- "**Enhancement of rutile phase formation in TiO₂ films deposited on stainless steel substrates with a vacuum arc**" (artículo con referato)
L.M. Franco Arias, A. Kleiman, D. Vega, M. Fazio, E. Hala and A. Márquez
Thin Solid Films **638** (2017) 269-276

- "**Oxygen influence in the magnetic and the transport properties of ferroelectric/ferromagnetic heterostructures**" (artículo con referato)
J. Gonzalez Sutter, L. Neñer, H. Navarro, G. Leyva, S. Fusil, K. Bouzehouane, N. Haberkorn and M. Sirena
Thin Solid Films **639** (2017) 42-46
- "**MOF derived Mesoporous Nitrogen doped Carbons with high Activity towards Oxygen Reduction**" (artículo con referato)
Ana Katherine Díaz-Duran and Federico Roncaroli
Electrochim. Acta **251** (2017) 638-650
- "**Droplet Transport in a Nanochannel Coated by Hydrophobic Semiflexible Polymer Brushes: The Effect of Chain Stiffness**" (artículo con referato)
K. Speyer and C. Pastorino
Langmuir **33**(40) (2017) 10753-10763
- "**Study of bi-dimensional materials using a semi-empirical potential including a torsional term**" (artículo con referato)
E.B. Halac, M. Reinoso and E. Burgos
Chem. Phys. Lett. **686** (2017) 97-102
- "**Dielectric Breakdown in Chemical Vapor Deposited Hexagonal Boron Nitride**" (artículo con referato)
Lanlan Jiang, Yuanyuan Shi, Fei Hui, Kechao Tang, Qian Wu, Chengbin Pan, Xu Jing, Hasan Uppal, Felix Palumbo, Guangyuan Lu, et al.
ACS Appl. Mater. Interfaces **9**(45) (2017) 39758-39770
- "**Structural and magnetic properties of nanocrystalline $Bi_{1-x}La_xFeO_3$ ($0.0 \leq x \leq 0.4$) synthesized by a mechanochemical route**" (artículo con referato)
Adrián A.Cristóbal, Cinthia P. Ramos, M. Susana Conconi, Paula G. Bercoff and Pablo M. Botta
Mater. Res. Bull. **95** (2017) 292-299
- "**Crystallographic and computational study of a network composed of $[ZnCl_4]^{2-}$ anions and triply protonated 4'-functionalized terpyridine cations**" (artículo con referato)
Juan Granijo, Sebastián Suárez, Fernando Boubeta and Ricardo Baggio
Acta Cryst. C **73**(12) (2017) 1121-1130
- "**A combined crystallographic, thermal, Raman and computational study on polymorphism and phase transition in 1-(4-hexyloxy-3-hydroxyphenyl)ethanone**" (artículo con referato)
Sebastián Suárez, Veronica E. Manzano, Adolfo C. Fantoni, Emilia Halac, Ricardo Baggio and Fabio D. Cukiernik
Acta Cryst. C **73**(12) (2017) 1137-1143
- "**Modeling of oxygen incorporation in Th, ThC, and ThN by density functional theory calculations**" (artículo con referato)
D. Pérez Daroca, A.M. Llois and H.O. Mosca
J. Nucl. Mater. **496** (2017) 124-128
- " **NO^* disproportionation by a $\{RhNO\}^9$ pincer-type complex**" (artículo con referato)
Carina Gaviglio, Juan Pellegrino, David Milstein and Fabio Doctorovich
Dalton Trans. (2017), en prensa

- "Thermal evolution of structures and conductivity of Pr-substituted $\text{BaZr}_{0.7}\text{Ce}_{0.2}\text{Y}_{0.1}\text{O}_{3-\delta}$: potential cathode components for protonic ceramic fuel cells" (artículo con referato)

Gemma Heras-Juaristi, Ulises Amador, Rodolfo O. Fuentes, Adilson L. Chinelatto, Julio Romero de Paz, Clemens Ritter, Duncan P. Fagg, Domingo Pérez-Colla and Glenn C. Mather J. Mater. Chem. A (2018), en prensa

- "Synthesis, crystal structure and magnetic properties of di aqua bis(2,6-diamino-7H-purin-1-i um- κ N9) bis(4,4'-oxybis(benzoate- κ O) cobalt(II) dihydrate: $[\text{Co}(\text{HDAP})_2(\text{OBA})_2(\text{H}_2\text{O})_2].2\text{H}_2\text{O}$ " (artículo con referato)

Ana María Atria, José Parada, Yanko Moreno, Sebastián Suárez, Ricardo Baggio and Octavio Peña

Acta Cryst. C **73** (2017), en prensa

- "Structure and electrical properties of a 1D polymeric silverthiosaccarinate complex with argentophilic interactions" (artículo con referato)

Mariana Dennehy, Pilar Amo-Ochoa, Eleonora Freire, Sebastián Suárez, Emilia Halac and Ricardo Baggio

Acta Cryst. C **73** (2017), en prensa

- "N-haloacetyl phenothiazines and derivatives: Preparation, characterization and structure-activity relationship for antifungal activity" (artículo con referato)

Gabriela P. Sarmiento, M. Florencia Martini, Roxana G. Vitale, Lucas E. Fabian, Javier Afeltra, Daniel Vega, Graciela Y. Moltrasio and Albertina G. Moglioni Arabian Journal of Chemistry (2017), en prensa

- "Análisis de rellenos en surcos incisos y excisos en pucos de Fiambalá (Catamarca, Argentina)" (artículo con referato)

Eleonora Freire, Emilia B. Halac, Griselda Polla, María Reinoso, Mara Basile and Norma Ratto

Intersecciones antropol. (2017), en prensa [[abstract](#)]

- "Dynamic tuning by hydrostatic pressure of magnetocaloric properties to Ericsson like cycles" (artículo con referato)

P. Gaztañaga, J. Sacanell, A.G. Leyva and M. Quintero

J. Magn. Magn. Mater. **449** (2018) 17-20, en prensa

- "Isotope effects in aqueous solvation of simple halides" (artículo con referato)

Pablo E. Videla, Peter J. Rossky and D. Laria

J. Chem. Phys. **148**(10) (2018) 102306/1-7, en prensa

- "Width of the charge-transfer peak in the SU(N) impurity Anderson model and its relevance to non-equilibrium transport" (artículo con referato)

J. Fernández, F. Lisandrini, P. Roura-Bas, C. Gazza and A.A. Aligia

Aceptado para su publicación en Phys. Rev. B (2017) [[abstract](#), [url](#)]

- "Analysis and comparison of the CV-Dispersion of high-k, bi-layered MOS InGaAs/InP stacks" (acta de conferencia)

Sebastian M. Pazos, Felix Palumbo and Fernando L. Aguirre

Proc. of the "1st Conference on PhD Research in Microelectronics and Electronics in Latin America" (PRIME-LA 2017), San Carlos de Bariloche, Argentina, February 20-23, 2017. Compiled by Alfonso Chacón and Alfredo Arnaud

2017 1st Conference on PhD Research in Microelectronics and Electronics Latin America (PRIME-LA), Volume **CFP17K02-ART**, Published by the Institute of Electrical and Electronics Engineers (IEEE). (2017) 17-19

• "**Experimental study of progressive breakdown in different conductance states of resistive switching structures**" (acta de conferencia)

Fernando L. Aguirre, Sebastian M. Pazos and Felix Palumbo

Proc. of the "1st Conference on PhD Research in Microelectronics and Electronics in Latin America" (PRIME-LA 2017), San Carlos de Bariloche, Argentina, February 20-23, 2017.

Compiled by Alfonso Chacón and Alfredo Arnaud

2017 1st Conference on PhD Research in Microelectronics and Electronics Latin America (PRIME-LA), Volume **CFP17K02-ART**, Published by the Institute of Electrical and Electronics Engineers (IEEE). (2017) 25-28

• "**Electrochemical Behavior of Nanostructured $La_{0.8}Sr_{0.2}MnO_3$ as Cathodes for Solid Oxide Fuel Cells**" (acta de conferencia)

Joaquín Sacanell, Joaquín Hernández Sánchez, Adrián Ezequiel Rubio Lopez, Hernán Martinelli, Jimena Siepe, Ana Gabriela Leyva, Valeria Paola Ferrari, Miguel Pruneda, Dilson Juan and Diego German Lamas

Proc. of the "15th International Symposium on Solid Oxide Fuel Cells" (SOFC-XV), Hollywood, Florida, USA, July 23-28, 2017. Eds. S.C. Singhal and T. Kawada

ECS Trans. **78**(1) (2017) 667-675

• "**Study of the Mechanisms of O_2 -Reduction and Degradation Operating on $La_{0.5-x}Pr_xBa_{0.5}CoO_{3-\delta}$ Cathodes for SOFCs**" (acta de conferencia)

Diana Andrea Garcés, Hongqian Wang, Scott A. Barnett, Ana Gabriela Leyva and Liliana Veronica Mogni

Proc. of the "15th International Symposium on Solid Oxide Fuel Cells" (SOFC-XV), Hollywood, Florida, USA, July 23-28, 2017. Eds. S.C. Singhal and T. Kawada

ECS Trans. **78**(1) (2017) 1011-1020

• "**Substrate influence on the behavior of capacitance hysteresis of III-V bilayered MOS stacks**" (acta de conferencia)

Fernando L. Aguirre, Sebastián M. Pazos, Felix Palumbo, Igor Krylov and Moshe Eizenberg

Proc. of the "32nd Symposium on Microelectronics Technology and Devices" (SBMicro 2017), Fortaleza, Ceará, Brazil, August 28-September 1, 2017.

"Microelectronics Technology and Devices (SBMicro), 2017 32nd Symposium on", Published by the Institute of Electrical and Electronics Engineers (IEEE). (2017) 1-4

• "**New results on the continuous cooling behavior of an ASTM A335 P92 steel**" (acta de conferencia)

M.N. Xaubet, C.P. Ramos, C.A. Danón and M.I. Luppo

Proc. of the "International Conference on Fast Reactors and Related Fuel Cycles: Next Generation Nuclear Systems for Sustainable Development" (FR17), Yekaterinburg, Russian Federation, June 26-29, 2017.

[abstract,url]

• "**Determinación de la presencia de austenita retenida en un acero P91 mediante Espectroscopía Mössbauer**" (acta de conferencia)

J.I. Besoky, C.P. Ramos and C.A. Danón

Proc. of the "6^{to} Encuentro de Jóvenes Investigadores en Ciencia y Tecnología de Materiales" (JIM 2017), INTI - Parque Tecnológico Miguelete, Buenos Aires, Argentina, August 17-18, 2017.

- "Caracterización hiperfina de un acero ASTM A335 P91 sometido a ciclos de enfriamiento a distintas velocidades a partir de la fase austenita" (acta de conferencia)

L.L. García, C.P. Ramos and C.A. Danón

Proc. of the "6^{to} Encuentro de Jóvenes Investigadores en Ciencia y Tecnología de Materiales" (JIM 2017), INTI - Parque Tecnológico Miguelete, Buenos Aires, Argentina, August 17-18, 2017.