

**1. Engineering Transport in Manganites by Tuning Local Nonstoichiometry in Grain Boundaries**

Chiabrera, F.; Garbayo, I.; López-Conesa, L.; Martín, G.; Ruiz-Caridad, A.; Walls, M.; Ruiz-González, L.; Kordatos, A.; Núñez, M.; Morata, A.; Estradé, S.; Chroneos, A.; Peiró, F.; and Tarancón, A.

*Adv. Mater.* **31**, 1805360 (1-8pp) (2019)

DOI: 10.1002/adma.201805360

**2. Sphericity and Roundness Computation for Particles using the Extreme Vertices Model**

Cruz Matías, I.; Ayala, D.; Hiller, D.; Gutsch, S.; Zacharias, M.; Estradé, S.; Peiró, F.

*Journal of Computational Science* **30**, 28-40 (2019)

<https://doi.org/10.1016/j.jocs.2018.11>.

**3. Size-Controlled Si Nanocrystals Fabricated by Electron Beam Evaporation**

Blázquez, O.; López-Conesa, L.; López-Vidrier, J.; Frieiro, J. L.; Estradé, S.; Peiró, F.; Ibáñez, J.; Hernández, S.; Garrido, B.

*Phys. Status Solidi A*, **216**, 1800619 (2019)

DOI: 10.1002/pssa.201800619

**4. Photoelectrochemically Active N-Adsorbing Ultrathin TiO<sub>2</sub> Layers for Water-Splitting Applications Prepared by Pyrolysis of Oleic Acid on Iron Oxide Nanoparticle Surfaces under Nitrogen Environment**

Kertmen, A.; Barbe, E.; Szkoda, M.; Siuzdak, K.; Babacic, V.; Torruella, P.; Iatsunskyi, I.; Kotkowiak, M.; Rytel, K.; Estrade, S.; Peiro, F.; Jurga, S.; Li, YG.; Coy, E.

*Adv. Mater. Interfaces* **6**, 1801286 (2019).

DOI: 10.1002/admi.201801286

**5. Low-Power, High-Performance, Non-volatile Inkjet-Printed HfO<sub>2</sub>-Based Resistive Random Access Memory: From Device to Nanoscale Characterization**

Vescio, G.; Martín, G.; Crespo-Yepes, A.; Claramunt, S.; Alonso, D.; López-Vidrier, J.; Estradé, S.; Porti M.; Rodriguez, R.; Peiró, F.; Cornet, A.; Cirera, A.; Nafría, M.

*ACS Appl. Mater. Interfaces* **11**, 23659–23666 (2019)

DOI: 10.1021/acsami.8b19817

**6. Low-Power, High-Performance, Non-volatile Inkjet-Printed HfO<sub>2</sub>-Based Resistive Random Access Memory: From Device to Nanoscale Characterization**

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*ACS Appl. Mater. Interfaces* **11**, 23659–23666 (2019)

DOI: 10.1021/acsami.8b19817

**7. Independent Tuning of Optical Transparency Window and Electrical Properties of Epitaxial SrVO<sub>3</sub> Thin Films by Substrate Mismatch**

Mirjolet, M.; Vasili, H.B.; López-Conesa, L.; Estradé, S.; Peiró, F.; Santiso, J.; Sánchez, F.; Machado, P.; Gargiani, P.; Valvidares. M.; Fontcuberta, J.

*Advanced Functional Materials* (in press)

**8. Precise Size Control of the Growth of Fe<sub>3</sub>O<sub>4</sub> Nanocubes over a Wide Size Range Using a Rationally Designed One-Pot Synthesis**

Muro-Cruces, J.; Roca A.G.; López-Ortega, A.; Fantechi E.; Del-Pozo-Bueno, D.; Estradé, S.; Peiró, F.; Sepúlveda, B.; Pineider, F.; Sangregorio, C.; Nogues, J.

*ACS Nano* (in press)

DOI: 10.1021/acsnano.9b01281

**9. Commensurate and incommensurate antiferromagnetic order in CoO nanoparticles with zinc blende and wurtzite structures explored by neutron diffraction**

I. V. Golosovsky, M. Estrader, A. López-Ortega, A. G. Roca, L. López-Conesa, S. Estradé, F. Peiró, d; Puente-Orench and J. Nogués

*Applied Materials Today* (in press)

**10. Identification of polysaccharide capsules among extensively drug-resistant genitourinary *Haemophilus parainfluenzae* isolates**

Aida González-Díaz, Fe Tubau, Miguel Pinto, Yanik Sierra, Meritxell Cubero, Jordi Càmara, Josefina Ayats, Paula Bajanca-Lavado, Carmen Ardanuy & Sara Martí

*Scientific Reports volume 9*, Article number: 4481 (2019)

**11. Nanoscale Structure of Zoned Laurites from the Ojén Ultramafic Massif, Southern Spain.**

Jiménez Franco, Abigail; Roqué-Rosell, Josep. (2019)

*Minerals*. 9. 288

DOI: 10.3390/min9050288

**12. Structural characterization and ab-initio resolution of natural occurring zaccariniite (RhNiAs) by means of Precession Electron Diffraction.**

Roqué-Rosell, Josep & Portillo, Joaquim & Hans Aiglsperger, Thomas & Plana-Ruiz, Sergi & Pratim Das, Partha & Mendoza Gonzalvez, Joan & Trifonov, Trifon & Proenza, J. (2019).

*Microchemical Journal*. 148.

DOI: 10.1016/j.microc.2019.04.071

**13. Preparation and Antitumoral Activity of Au-Based Inorganic-Organometallic Nanocomposites.**

Dalmases, Mariona & Pinto, Andrea & Lippmann, Petra & Ott, Ingo & Rodríguez-Gómez, Laura & Figuerola, Albert. (2019). *Frontiers in Chemistry*. 7

DOI: 10.3389/fchem.2019.00060

**14. Lipase-Powered Mesoporous Silica Nanomotors for Triglyceride Degradation.**

Wang, Lei & Hortelão, Ana & Huang, Xin & Sanchez, Samuel. (2019).

*Angewandte Chemie International Edition*. 58.

DOI: 10.1002/anie.201900697

**15. High time resolution and high signal-to-noise monitoring of the bacterial growth kinetics in the presence of plasmonic nanoparticles.**

Vukomanovic, Marija & Torrents, Eduard. (2019).

*Journal of Nanobiotechnology*. 17(1):21

DOI: 10.1186/s12951-019-0459-1

**16. Supporting IrO<sub>2</sub> and IrRuO nanoparticles on TiO<sub>2</sub> and Nb-doped TiO<sub>2</sub> nanotubes as electrocatalysts for the oxygen evolution reaction.**

Genova-Koleva, Radostina & Alcaide Monterrubio, Francisco & Álvarez, Garbiñe & Cabot, Pere & Grande, Hans-Jürgen & Martínez-Huerta, M.V. & Miguel, Oscar. (2019).

*Journal of Energy Chemistry*. 34.

DOI: 10.1016/j.jecchem.2019.03.008

**17. Super-Capacitive Performance of Manganese Dioxide/Graphene Nano-Walls Electrodes Deposited on Stainless Steel Current Collectors.**

Amade, Roger & Muyshegyan-Avetisyan, Arevik & Martí González, Joan & Martí Pino, Angel & György, Eniko & Pascual, Esther & Luís Andújar, José & Bertran, Enric. (2019).

*Materials*. 12.

DOI: 10.3390/ma12030483

**18. Functionalized cerium oxide nanoparticles mitigate the oxidative stress and pro-inflammatory activity associated to the portal vein endothelium of cirrhotic rats.**

Ribera, Jordi & Rodríguez Vita, Juan & Cordoba, Bernat & Portolés, Irene & Casals, Gregori & Casals, Eudald & Jimenez, Vladimiro & Puntes, Victor & Morales-Ruiz, Manuel. (2019).

*PloS one*. 14.

DOI: 10.1371/journal.pone.0218716

**19. Mercury, lead and cadmium concentrations in *Talpa occidentalis* and in their digeneans of the genus *Itygonimus***

Adalid, R.; Torres, J.; Miñarro, M.; Miquel, J.; Fuentes, M.V.; Eira, C.

2019 *Acta Parasitologica* 64 (4)

**20. Sperm characters of the digenetic *Nephrotrema truncatum* (Troglotrematidae): a kidney parasite of *Crocidura russula* (Soricidae) and their phylogenetic significance**

Diagne, P.M.; Ndiaye, P.I.; Bâ, C.T.; Feliu, C.; Miquel, J.

2019 *Invertebrate Reproduction & Development*

**21. Ultrastructural organisation of the spermatozoon of *Allopodocotyle tunisiensis* Derbel and Neifar, 2009 (Digenea, Opecoelidae), an intestinal parasite of *Solea aegyptiaca* Chabanaud, 1927 (Teleostei, Soleidae)**

Kacem, H.; Diagne, P.M.; Miquel, J.

2019 *Tissue & Cell* 57, pp 1-7

**22. Functional ultrastructure and cytochemistry of vitellogenesis and mature vitellocytes of the digenetic *Cainocreadium labracis* (Dujardin, 1845), parasite of *Dicentrarchus labrax* (L., 1758)**

Swiderski, Z.; Kacem, H.; Mackiewicz, J.S.; Miquel, J.

2019 *Parasitology Research* 118. (2), pp 493- 504

**23. Spermatological characteristics of *Siphoderina aloysiae* (Digenea, Cryptogonimidae), an intestinal parasite of *Sciaena umbra* (Teleostei, Sciaenidae)**

Kacem, H.; Miquel, J.

2019 *Zoomorphology*, 138 (2), pp 185- 192

**24. Aging Influences Hepatic Microvascular Biology and Liver Fibrosis in Advanced Chronic Liver Disease**

Raquel Maeso-Díaz, Martí Ortega-Ribera, Erica Lafoz, Juan José Lozano, Anna Baiges, Rubén Francés, Agustín Albillos, Carmen Peralta, Juan Carlos García-Pagán, Jaime Bosch, Victoria C Cogger, Jordi Gracia-Sancho  
*Aging and disease*, 10.14336/AD.2019.0127

**25. Ischemia/Reperfusion Injury in the Aged Liver: The Importance of the Sinusoidal Endothelium in Developing Therapeutic Strategies for the Elderly**

Diana Hide, Alessandra Warren, Anabel Fernández-Iglesias, Raquel Maeso-Díaz, Carmen Peralta, David G. Le Couteur, Jaime Bosch, Victoria C. Cogger, Jordi Gracia-Sancho,  
*Journals of Gerontology: Biological Sciences*, 2019,

**26. Quantitative Assessment of Anti-Gravity Reflexes to Evaluate Vestibular Dysfunction in Rats**

Vanessa Martins-Lopes, Anna Bellmunt, Erin A. Greguske, Alberto F. Maroto, Pere Boadas-Vaello, and Jordi Llorens  
*JARO* (2019)

**27. Calyx junction dismantlement and synaptic uncoupling precede hair cell extrusion in the vestibular sensory epithelium during sub-chronic 3,3'-iminodipropionitrile ototoxicity in the mouse**

Greguske E.A., Carreres-Pons M., Cutillas B., Boadas-Vaello P., Llorens J.  
*Archives of Toxicology* 93:417-434 (2019)

**28. Morphological and functional correlates of vestibular synaptic de-afferentation and repair in a mouse model of acute onset vertigo**

Cassel R, Bordiga P, Carcaud J, Simon F, Beraneck M, Le Gall A, Benoit A, Bouet V, Philoxene B, Besnard S, Watabe I, Pericot D, Hautefort C, Assie A, Tonetto A, Dyhrfjeld-Johnsen J, Llorens J, Tighilet B, Chabbert C.

*Disease Models and Mechanisms* 12(7) (2019)

**29. Parkin controls brown adipose tissue plasticity in response to adaptive thermogenesis**

Montserrat Cairó, Laura Campderrós, Aleix Gavaldà-Navarro, Rubén Cereijo, Alejandro Delgado-Anglés, Tania Quesada-López, Marta Giralt, Joan Villarroya, Francesc Villarroya  
*EMBO reports* e46832 | 2019

**30. Cholesterol enrichment in liver mitochondria impairs oxidative phosphorylation and disrupts the assembly of respiratory supercomplexes**

Solsona-Vilarrasa E, Fucho R, Torres S, Nuñez S, Nuño-Lámbarri N, Enrich C, García-Ruiz C, Fernández-Checa JC. *Redox Biology*. 2019 June.

**31. Calcium changes in *Robinia pseudoacacia pulvinar* motor cells during nyctinastic closure mediated by phytochromes**

Luisa Moysset & Esther Llambrich & Esther Simón  
*Protoplasma* (2019) 256:615-629

**32. Nanoformulation of curcumin-loaded eudragit-nutriosomes to counteract malaria infection by a dual strategy: Improving antioxidant intestinal activity and systemic efficacy.**

Manconi M, Manca ML, Escribano-Ferrer E, Coma-Cros EM, Biosca A, Lantero E, Fernàndez-Busquets X, Fadda AM, Caddeo C.

*Int J Pharm.* 2019 Feb 10; 556:82-88.

DOI: 10.1016/j.ijpharm.2018.11.073

**33. Potential therapeutic effect of curcumin loaded hyalurosomes against inflammatory and oxidative processes involved in the pathogenesis of rheumatoid arthritis: The use of fibroblast-like synovial cells cultured in synovial fluid.**

Manca ML, Lattuada D, Valenti D, Marelli O, Corradini C, Fernàndez-Busquets X, Zaru M, Maccioni AM, Fadda AM, Manconi M.

*Eur J Pharm Biopharm.* 2019 Mar; 136:84-92.

DOI: 10.1016/j.ejpb.2019.01.012

**34. Antioxidant activity of quercetin in Eudragit-coated liposomes for intestinal delivery.**

Caddeo C, Gabriele M, Fernàndez-Busquets X, Valenti D, Fadda AM, Pucci L, Manconi M.

*Int J Pharm.* 2019 Jun 30; 565:64-69.

DOI: 10.1016/j.ijpharm.2019.05.007

**35. Optimization of Innovative Three-Dimensionally-Structured Hybrid Vesicles to Improve the Cutaneous Delivery of Clotrimazole for the Treatment of Topical Candidiasis.**

Manca ML, Usach I, Peris JE, Ibba A, Orrù G, Valenti D, Escribano-Ferrer E, Gomez-Fernandez JC, Aranda FJ, Fadda AM, Manconi M.

*Pharmaceutics.* 2019 Jun 6;11(6).

DOI: 10.3390/pharmaceutics11060263

**36. Potential application of nanovesicles (niosomes and liposomes) for fortification of functional beverages with Isoleucine-Proline-Proline: A comparative study with central composite design approach.**

Rezvani M, Hesari J, Peighambardoust SH, Manconi M, Hamishehkar H, Escribano-Ferrer E.

*Food Chem.* 2019 Sep 30;293:368-377

DOI: 10.1016/j.foodchem.2019.05.015

**37. Co-Loading of Ascorbic Acid and Tocopherol in Eudragit-Nutriosomes to Counteract Intestinal Oxidative Stress.**

Rezvani M, Manca ML, Caddeo C, Escribano-Ferrer E, Carbone C, Peris JE, Usach I, Diez-Sales O, Fadda AM, Manconi M.

*Pharmaceutics.* 2019 Jan 4;11(1).

DOI: 10.3390/pharmaceutics11010013

**38. Distribution of REE-bearing minerals in felsic magmatic rocks and paleosols from Gran Canaria, Spain: Intraplate oceanic islands as a new example of potential, non-conventional**

I Menéndez, M Campeny, L Quevedo-González, J Mangas, X Llovet, et al (2019)

*Journal of Geochemical Exploration* 204, 270–288

**39. Microscopy. Electron probe microanalysis**

Worsfold, P, Poole, C., Townshend, A. Miró M. (Eds)

*Encyclopedia of Analytical Science (Third Edition)*, vol 7, 30-38, Elsevier.

**40. Magmatic platinum nanoparticles in metasomatic silicate glasses and sulfides from Patagonian mantle xenoliths**

JM González-Jiménez, J Roqué-Rosell, A Jiménez-Franco, S Tassara et al. (2019)  
*Contributions to Mineralogy and Petrology* 174 (5), 47

**41. A shallow origin for diamonds in ophiolitic chromitites**

J Farré-de-Pablo, JA Proenza, JM González-Jiménez, A Garcia-Casco et al (2019)  
*Geology* 47 (1), 75-78

**42. Tectono-metamorphic evolution of subduction channel serpentinites from South-Central Chile**

G Plissart, JM González-Jiménez, LNF Garrido, V Colas, J Berger, et al. (2019)  
*Lithos* 336, 221-241

**43. Nanoscale Structure of Zoned Laurites from the Ojén Ultramafic Massif, Southern Spain**

S Baurier-Aymat, A Jiménez-Franco, J Roqué-Rosell, et al. (2019)  
*Minerals* 9 (5), 288

**44. Spatial and Temporal Controls on the Distribution of Indium in Xenothermal Vein Deposits: The Huari Huari District, Potosí, Bolivia**

L Torró, JC Melgarejo, L Gemmrich, D Mollinedo, M Cazorla, Á Martínez, ... et al. (2019)  
*Minerals* 9 (5), 304

**45. Deciphering the evolution of Deception Island's magmatic system**

A Geyer, AM Álvarez-Valero, G Gisbert, M Aulinás, D Hernández-Barreña, (2019)  
*Scientific reports* 9 (1), 373

**46. A novel type of organometallic 2-R-2,4-dihydro-1H-3,1-benzoxazine with R = [M( $\eta$ 5-C5H4)(CO)3] (M = Re or Mn) units. Experimental and computational studies of the effect of substituent R on ring-chain tautomerism**

Juan Oyarzo, Ramón Bosque, Patricia Toro, Carlos P. Silva, Rodrigo Arancibia, Mercè Font-Bardía, Vania Artigas, Carme Calvis, Ramon Messeguer, A. Hugo Klahn a and Concepción López Dalton *Trans.*, 2019, 48, 1023

**47. Chiral dinuclear Ln(III) complexes derived from S- and R-2-(6-methoxy-2-naphthyl)propionate. Optical and magnetic properties**

Berta Casanovas, Saskia Speed, Mohamed Salah El Fallah, Ramon Vicente, \* Mercè Font-Bardía, Francesco Zinna and Lorenzo Di Bari  
*Dalton Trans.*, 2019, 48, 2059

**48. Derisking Development by a Cocrystallization Screen of a Novel Selective Inhaled JAK-STAT inhibitor**

Antonio Llinas, Rafael Barbas, Mercè Font-Bardia, Amir Smailagic, and Rafel Prohens,  
*Cryst. Growth Des.* 2019, 19, 403-414

**49. Direct and Asymmetric Nickel(II)-Catalyzed Construction of Carbon–Carbon Bonds from N-Acyl Thiazinanethiones**

Stuart C. D. Kennington, Adam J. Taylor, Pedro Romea, Fèlix Urpí, Gabriel Aullón, Mercè Font-Bardia, Laura Ferré, and Jesus Rodriguez-Vazquez  
*Org. Lett.* 2019, 21, 305-309

**50. Enhancement of magnetic relaxation properties with 3d diamagnetic cations in [ZnIILnIII] and [NiIILnIII], LnIII = Kramers lanthanides**

Júlia Mayans, Queralt Saez, Mercè Font-Bardiab, and Albert Escuer

*Dalton Trans*, 2019, 48, 641

**51. Kinetico-mechanistic study on the reduction/complexation sequence of PtIV/PtII organometallic complexes by thiol-containing biological molecules**

Margarita Crespoa, Mercè Font-Bardia, Peyman Hamidizadeha, Manuel Martíneza, S. Masoud Nabavizadehc

*Inorganica Chimica Acta* 486 (2019) 8-16