

# ELECM I

## PUBLICATIONS 2017

Resonant electron tunnelling assisted by charged domain walls in multiferroic tunnel junctions.  
G. Sánchez-Santolino, J. Tornos, D. Hernández-Martín, J.I. Beltrán, C. Munuera, M. Cabero, A. Pérez-Muñoz, J. Ricote, F. Mompean, M. García-Hernandez, Z. Sefrioui, C. León, S.J. Pennycook, M.C. Muñoz, M. Varela, J. Santamaria.  
*Nature Nanotechnology*. **2017**, 12, 655-662.

Chemical functionalization and characterization of graphene-based materials.  
G. Bottari, M. Á. Herranz, L. Wibmer, M. Volland, L. Rodríguez-Pérez, D. M. Guldi, A. Hirsch, N. Martín, F. D'Souza, T. Torres.  
*Chemical Society Reviews*. **2017**, 46, 4464-4500.

Tuning up or down the critical thickness in LaAlO<sub>3</sub>/SrTiO<sub>3</sub> through in situ deposition of metal overlayers.  
D. Castro Vaz, E. Lesne, A. Sander, H. Naganuma, E. Jacquet, J. Santamaría, A. Barthélémy, M. Bibes.  
*Advanced Materials*. **2017**, 29(28), 1700486.

Surface-Driven Magnetotransport in Perovskite Nanocrystals.  
H.L.T. N'Goc, L.D.N. Mouafo, C. Etrillard, A. Torres-Pardo, J.F. Dayen, S. Rano, G. Rouse, C. Laberty-Robert, J.M. González-Calbet, M. Drillon, C. Sánchez, B. Doudin, D. Portehault.  
*Advanced Materials*. **2017**, 29, 1604745.

Carbon Nanoforms for Photovoltaics: Myth or Reality?  
N. Martín.  
*Advanced Energy Materials*. **2017**, 7, 1601102.

High-Efficiency Perovskite Solar Cells using Molecularly-Engineered, Thiophene-Rich, Hole-Transporting Materials: Influence of Alkyl Chain Length on Power Conversion Efficiency.  
I. Zimmermann, J. Urieta-Mora, P. Gratia, J. Aragón, G. Grancini, A. Molina-Ontoria, E. Ortí, N. Martín, M. Khaja Nazeeruddin.  
*Advanced Energy Materials*. **2017**, 7, 1601674.

Fingerprints of Through-Bond and Through-Space Exciton and Charge  $\pi$ -Electron Delocalization in Linearly Extended [2.2] paracyclophanes.  
J.L. Zafra, A. Molina Ontoria, P. Mayorga Burrezo, M. Peña-Alvarez, M. Samoc, J. Szeremeta, F.J.J. Ramírez Aguilar, M.D. Lovander, C.J. Droske, T.M. Pappenfus, L. A. Echegoyen, J.T. López Navarrete, N. Martín, J. Casado Cordon.  
*Journal of the American Chemical Society*. **2017**, 139, 3095-3105.

Multivalent Glycosylated Nanostructures to Inhibit Ebola Virus Infection.

B.M. Illescas, J. Rojo, R. Delgado, N. Martín.

*Journal of the American Chemical Society*. **2017**, 139, 6018-6025.

Ionic Conductivity and Potential Application for Fuel Cell of a Modified Imine-Based Covalent Organic Framework.

C. Montoro, D. Rodríguez-San-Miguel, E. Polo, R. Escudero-Cid, M.L. Ruiz-González, J.A.R. Navarro, P. Ocón, F. Zamora.

*Journal of the American Chemical Society*. **2017**, 139, 10079-10086.

Fundamental insights into the degradation and stabilization of thin layer black phosphorous.

G. Abellán, S. Wild, V. Lloret, N. Scheuschner, R. Gillen, U. Mundloch, J. Maultzsch, M. Varela, F. Hauke, A. Hirsch.

*Journal of the American Chemical Society*. **2017**, 139, 10432-10440.

Mediating Reductive Charge Shift Reactions in Electron Transport 2 Chains.

M. Wolf, C. Villegas, O. Trukhina, J.L. Delgado, T. Torres, N. Martín, T. Clark, D.M. Guldi.

*Journal of the American Chemical Society*. **2017**, 139, 17474-17483.

Targeted supplementation with phosphatidylglycerol and surfactant protein B as surfactant replacement therapy in ards.

M.C. Seeds, M.V. Novotny, M. Echaide, D.C. Files, B.M. Waite, J. Pérez Gil, R.D. Hite, C.C. Smallcombe.

*American Journal of Respiratory and Critical Care Medicine*. **2017**, 195, A5838.

Toward Bioelectronic Nanomaterials: Photoconductivity in Protein–Porphyrin Hybrids Wrapped around SWCNT.

J. López-Andarias, S.H. Mejías, T. Sakurai, W. Matsuda, S. Seki, F. Feixas, S. Osuna, C. Atienza, N. Martín, A.L. Cortajarena.

*Advanced Functional Materials*. **2017**, 1704031.

Engineering Large Anisotropic Magnetoresistance in LaO. 7SrO. 3MnO3 Films at Room Temperature.

P. Perna, D. Maccariello, F. Ajejas, R. Guerrero, L. Méchin, S. Flament, J. Santamaría, R. Miranda, J. Camarero.

*Advanced Functional Materials*. **2017**, 27(26), 1700664.

Stereodivergent-at-Metal Synthesis of [60] Fullerene Hybrids.

J. Marco-Martínez, S. Vidal, I. Fernández, S. Filippone, N. Martín.

*Angewandte Chemie-International Edition*. **2017**, 56, 2136-2139.

Large Magnetoelectric coupling near room temperature insynthetic metanostibite Mn<sub>2</sub>FeSbO<sub>6</sub>.

A. J. Dos Santos-García, E. Solana-Madruga, C. Ritter, A. Andrada-Chacón, J. Sánchez-Benítez, F.J. Mompean, M. García-Hernández, R. Sáez-Puche, R. Schmidt.

*Angewandte Chemie-International Edition*. **2017**, 56, 4438-4442.

Band-Gap Opening in Metallic Single-Walled Carbon Nanotubes by Encapsulation of an Organic Salt.

B. Nieto-Ortega, J. Villalva, M. Vera-Hidalgo, L. Ruiz-González, E. Burzurí, E.M. Pérez.

*Angewandte Chemie-International Edition*. **2017**, 56, 12240-12244.

Critical Influence of Redox Pretreatments on the CO Oxidation Activity of BaFeO<sub>3-δ</sub> Perovskites: An in-Depth Atomic-Scale Analysis by Aberration-Corrected and in Situ Diffraction Techniques.

A. el Hadri, I. Gómez-Recio, E. del Río, J.C. Hernández-Garrido, R. Cortés-Gil, M. Hernando, Á. Varela, Á. Gutiérrez-Alonso, M. Parras, J.J. Delgado, J.A. Pérez-Omil, G. Blanco, J.J. Calvino, J.M. González-Calbet.

*ACS Catalysis*. **2017**, 7, 8653-8663.

In operando evidence of deoxygenation in ionic liquid gating of YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub>.

A.M. Pérez-Muñoz, P. Schio, R. Poloni, A. Fernández-Martínez, A. Rivera-Calzada, J.C. Cezar, E. Salas-Colera, G.R. Castro, J. Kinney, C. León, J. Santamaría, J. García-Barriocanal, A.M. Goldman.

*Proceedings of the National Academy of Sciences*. **2017**, 114(2), 215-220.

The effect of the surface disordered layer on the photoreactivity of titania nanoparticles.

J. Soria, J. Sanz, M.J. Torralvo, I. Sobrados, C. Garlisi, G. Palmisano, S. Çetinkaya, S. Yurdakal, V. Augugliarof.

*Applied Catalysis B: Environmental*. **2017**, 210, 306-319.

Isomerism effect on the photovoltaic properties of benzotrithiophene-based hole-transporting materials.

I. García-Benito, I. Zimmermann, J. Urieta-Mora, J. Aragón, A. Molina-Ontoria, E. Ortí, N. Martín, M. Khaja Nazeeruddin.

*Journal of Materials Chemistry A*. **2017**, 5, 8317-8324.

Thiol grafted imine-based covalent organic frameworks for water remediation through selective removal of Hg(II)

L. Merí-Bofí, S. Royuela, F. Zamora, M. Luisa Ruiz-González, J.L. Segura, R. Muñoz-Olivas, M.J. Mancheño.

*Journal of Materials Chemistry A*. **2017**, 5, 17973-17981.

Flexible chirality in self-assembled N-annulated perylene-dicarboxamides.

J. Buendía, J. Calbo, E. Ortí, L. Sánchez.

*Small*. **2017**, 13, 1603880 (Front Cover Issue).

Electrical and mechanical switching of ferroelectric and resistive states in semiconducting BaTiO<sub>3</sub> films on silicon.

A. Gómez, J.M. Vila-Fungeiriño, R. Moalla, G. Saint-Girons, J. Gazquez, M. Varela, R. Bachelet, M. Gich, F. Rivadulla, A. Carretero-Genevri.

*Small*. **2017**, 13, 1701614.

Decoration of reduced graphene oxide with rhodium nanoparticles for the design of a sensitive electrochemical enzyme biosensor for 17β-estradiol

E. Povedano, F.H. Cincotto, C. Parrado, P. Díez, A. Sánchez, T.C. Canevari, S.A. Machado, J.M. Pingarrón, R. Villalonga

*Biosensors and Bioelectronics*. **2017**, 89, 343-351.

Motion of Fullerenes around Topological Defects on Metals: Implications for the Progress of Molecular Scale Devices.

P. Nirmalraj, R. Daly, N. Martin, D. Thompson.

*ACS Applied Materials & Interfaces*. **2017**, 9, 7897-7902.

Janus mesoporous silica nanoparticles for dual targeting of tumor cells and mitochondria.  
V. López, M.R. Villegas, V. Rodríguez, G. Villaverde, D. Lozano, A. Baeza and M. Vallet-Regí.  
*ACS Applied Materials & Interfaces*. **2017**, 9(32), 26697-26706.

Vectorization of ultrasound-responsive nanoparticles in placental mesenchymal stem cells for cancer therapy.

J.L. Paris, P. Torre, M.V. Cabañas, M. Manzano, M. Grau, A.I. Flores, M. Vallet-Regí.  
*Nanoscale*. **2017**, 9, 5528-5537.

A novel visible light responsive nanosystem for cancer treatment.

M. Martínez, D. Lozano, A. Baeza, M. Colilla and M. Vallet-Regí.  
*Nanoscale*. **2017**, 9, 15967-15973

Medicago truncatula Molybdate Transporter type 1 (MtMOT1.3) is a plasma membrane molybdenum transporter required for nitrogenase activity in root nodules under molybdenum deficiency.

M. Tejada-Jiménez, P. Gil-Díez, J. León-Mediavilla, J. Wen, K.S. Mysore, J. Imperial, M. González-Guerrero.  
*New Phytologist*. **2017**, 216(4), 1223-1235.

Modified fullerenes for Efficient Electron Transport Layer-Free Perovskite: Fullerene Blend-Based Solar Cells.

R. Sandoval-Torrientes, J. Pascual, I. García-Benito, S. Collavini, I. Kosta, R. Tena-Zaera, N. Martín, J.L. Delgado.  
*ChemSusChem*. **2017**, 10, 2023-2029.

Photodiodes based in  $\text{La}_{0.7}\text{Sr}_{0.3}\text{MnO}_3$ /single layer  $\text{MoS}_2$  hybrid vertical heterostructures.

Y. Niu, R. Frisenda, S.A Svatek, G. Orfila, F. Gallego, P. Gant, N. Agraït, C. León, A. Rivera-Calzada, D. Pérez De Lara, J. Santamaría, A. Castellanos-Gómez.  
*2D Materials*. **2017**, 4(3), 034002.

Emission of Linearly Polarized Single Photons from Quantum Dots Contained in Nonpolar, Semipolar, and Polar Sections of Pencil-Like InGaN/GaN Nanowires.

Ž. Gačević, M. Holmes, E. Chernysheva, M. Müller, A. Torres-Pardo, P. Veit, F. Bertram, J. Christen, J.M. González Calbet, Y. Arakawa, E. Calleja, S. Lazić.  
*ACS Photonics*. **2017**, 4 (3), 657-664

Supramolecular Electronic Interactions in Porphyrin–SWCNT Hybrids 2 through Amidinium–Carboxylate Connectivity.

L. Rodríguez-Perez, S. Vela, C. Atienza, N. Martín.  
*Organic Letters*. **2017**, 19, 4810-4813.

Nanotechnology-based drug delivery of ropinirole for Parkinson's disease.

E. Barcia, L. Boeva, L. García-García, K. Slowing, A. Fernández-Carballido, Y. Casanova, S. Negro.  
*Drug Delivery*. **2017**, 24, 1112-1123.

Iron-loaded transferrin (Tf) is detrimental whereas iron-free Tf confers protection against brain ischemia by modifying blood Tf saturation and subsequent neuronal damage.

N. DeGregorio-Rocasolano, O. Martí-Sistac, J. Ponce, M. Castelló-Ruiz, M. Millán, V. Guirao, I. García-Yébenes, J.B. Salom, P. Ramos-Cabrer, E. Alborch, I. Lizasoain, J. Castillo, A. Dávalos, T. Gasull.  
*Redox Biology*. **2017**, 15, 143-158.

3D Scaffold with effective multidrug sequential release against bacteria biofilm.

R.P. García, I. Izquierdo, M. Vallet-Regí.

*Acta Biomaterialia*. **2017**, 49, 113-126.

Prevention of bacterial adhesion to zwitterionic biocompatible mesoporous glasses.

S. Sánchez, A. García, M. Vallet-Regí.

*Acta Biomaterialia*. **2017**, 57, 472-486.

Copper-containing mesoporous bioactive glass nanoparticles as multifunctional agent for bone regeneration.

A. Bari, N. Bloise, S. Fiorilli, G. Novajra, M. Vallet-Regí, G. Bruni, A. Torres-Pardo, J.M. González-Calbet, L. Visai, C. Vitale-Brovarone.

*Acta Biomaterialia*. **2017**, 55, 493-504.

The wet synthesis and quantification of ligand-free sub-nanometric Au clusters in solid matrices.

J. Oliver-Meseguer, I. Domínguez, R. Gavara, A. Doménech-Carbó, J.M. González-Calbet, A. Leyva-Pérez, A. Corma.

*Chemical Communications*. **2017**, 53, 1116-1119.

Mesoscopic helical architectures by self-assembly of porphyrin-based discotic systems.

S. Vela Gallego, J. Augusto Berrocal, C. Atienza, E. W. Meijer, N. Martín.

*Chemical Communications*. **2017**, 53, 4084-4087.

Fullerenes for catalysis: metallofullerenes in hydrogen transfer reactions.

S. Vidal, J. Marco-Martínez, S. Filippone, N. Martín.

*Chemical Communications*. **2017**, 53, 4842-4844.

Effect of incarcerated HF on the exohedral chemical reactivity of HF@C60.

S. Vidal, M. Izquierdo, S. Alom, M. Garcia-Borrás, S. Filippone, S. Osuna, M. Solá, R.J. Whitby, N. Martín.

*Chemical Communications*. **2017**, 53, 10993-10996.

Non-covalent graphene nanobuds from Q1 mono- and tripodal binding motifs.

M. Garrido, J. Calbo, L. Rodríguez-Pérez, J. Aragón, E. Ortí, M. A. Herranz, N. Martín. *Chemical Communications*. **2017**, 53, 12402-12405.

Natural silicate-TiO<sub>2</sub> hybrids for photocatalytic oxidation of formaldehyde in air.

R. Portela, I. Jansson, S. Suárez, M. Villarroel, B. Sánchez, P. Ávila.

*Chemical Engineering Journal*. **2017**, 310, 560-570.

Cannabinoid Type-2 Receptor Drives Neurogenesis and Improves Functional Outcome after Stroke.

I. Bravo-Ferrer, M.I. Cuartero, J.G. Zarruk, J.M. Pradillo, O. Hurtado, V.G. Romera, J. Díaz-Alonso, J.M. García-Segura, M. Guzmán, I. Lizasoain, I. Galve-Roperh, M.A. Moro.

*Stroke*. **2017**, 48(1), 204-212.

Toll-Like Receptor 4 Mediates Hemorrhagic Transformation After Delayed Tissue Plasminogen Activator Administration in *In Situ* Thromboembolic Stroke.

A. García-Culebras, S. Palma-Tortosa, A. Moraga, I. García-Yébenes, V. Durán-Laforet, M.I. Cuartero, J. de la Parra, A.L. Barrios-Muñoz, J. Díaz-Guzmán, J.M. Pradillo, M.A. Moro, I. Lizasoain.  
*Stroke*. **2017**, 48(6), 1695-1699.

Reparative effects of interleukin-1 receptor antagonist in young and aged/co-morbid rodents after cerebral ischemia.

J.M. Pradillo, K.N. Murray, G.A. Coutts, A. Moraga, F. Oroz-Gonjar, H. Boutin, M.A. Moro, I. Lizasoain, N.J. Rothwell, S.M. Allan, M. Sánchez, P. Rodríguez, D. Gómez, F. González.  
*Brain Behavior and Immunity*. **2017**, 61, 117-126.

Recovery and Reuse of 1-Allyl-3-methylimidazolium Chloride in the Fractionation of *Pinus radiata* Wood.

V. Rigual, T.M. Santos, J.C. Domínguez, M.V. Alonso, M. Oliet, F. Rodríguez.  
*ACS Sustainable Chemistry and Engineering*. **2017**, 5, 2384-2392.

Advances in mesoporous silica-based nanocarriers for co-delivery and combination therapy against cancer.

R. Castillo, M. Colilla, M. Vallet-Regí.  
*Expert Opinion on Drug Delivery*. **2017**, 14(2), 229-243.

CYP epoxygenase-derived H<sub>2</sub>O<sub>2</sub> is involved in the endothelium-derived hyperpolarization (EDH) and relaxation of intrarenal arteries.

M. Muñoz, E. López-Oliva, E. Pinilla, P. Martínez-Sainz, A. Sánchez, C. Rodríguez, A. García-Sacristán, L. Rivera, D. Prieto.  
*Free Radical Biology and Medicine*. **2017**, 106, 168-183.

Synthesis of polydopamine-like nanocapsules via removal of a sacrificial mesoporous silica template with water.

F. Nador, E. Guisasola, A. Baeza, M.A. Moreno, M. Vallet-Regí, D. Ruiz.  
*Chemistry - A European Journal*. **2017**, 23, 2753-2758.

Complexation and Electronic Communication between Corannulene-Based Buckybowls and a Curved Truxene-TTF Donor.

M. Gallego, J. Calbo, R.M. Krick Calderon, P. Pla, Y. Hsieh, E.M. Pérez, Y. Wu, E. Ortí, D.M. Guldi, N. Martín.  
*Chemistry - A European Journal*. **2017**, 23, 3666-3673.

Double sequential encrypted targeting sequence: a new concept for bone cancer treatment.

G. Villaverde, V. Nairi, A. Baeza, M. Vallet-Regí.  
*Chemistry - A European Journal*. **2017**, 23, 7174-7179.

Solvent-directed helical stereomutation discloses pathway complexity on N-heterotriangulene based organogelators.

J. S. Valera, R. Sánchez-Naya, F. J. Ramírez, J. L. Zafra, R. Gómez, J. Casado, L. Sánchez.  
*Chemistry - A European Journal*. **2017**, 23, 11141.

Hexakis [60] Fullerene Adduct-Mediated Covalent Assembly of Ruthenium Nanoparticles and Their Catalytic Properties.

F. Leng, I. C. Gerber, P. Lecante, A. Bentaleb, A. Muñoz, B. M. Illescas, N. Martín, G. Melinte, O. Ersen, H. Martinez, M. R. Axet, P. Serp.  
*Chemistry - A European Journal*. **2017**, 23, 13379-13386.

Ratiometric fluorescence detection of phosphorylated amino acids through excited-state proton transfer by using molecularly imprinted polymer (MIP) recognition nanolayers.  
W. Wan, A.B. Descalzo, S. Shinde, H. Weißhoff, G. Orellana, B. Sellergren, K. Rurack.  
*Chemistry - A European Journal*. **2017**, 23, 15974-15983.

Quantitative assessment of carbon allocation anomalies in low temperature bainite  
R. Rementeria, J.A. Jiménez, S.Y.P. Allain, J.D. Poplawsky, W. Guo, E. Urones-Garrote, C. García-Mateo, F.G. Caballero.  
*Acta Materialia*, **2017**, 133, 333-345.

Structural Characterization at the atomic level and optical properties of ZnIn<sub>2</sub>O<sub>4</sub>+3 (3≤k≤13) system.  
J. García-Fernández, J. Bartolomé, A. Torres-Pardo, A. Peche-Herrero, J. Moreno, J. Ramírez-Castellanos, A. Cremades, J.M. González-Calbet, J. Piqueras.  
*Journal of Material Chemistry C*. **2017**, 5, 10176-10184.

Magnetic Properties of Optimized Cobalt Nanospheres Grown by Focused Electron Beam Induced Deposition (FEBID) on Cantilever Tips.  
Sangiao, S.; Magén, C.; Mofakhami, D.; de Loubens, G.; De Teresa, J. M.  
*Beilstein J. Nanotechnol.* **2017**, 8 (1), 2106–2115.

Magnetically Responsive Biopolymeric Multilayer Films for Local Hyperthermia.  
Criado, M.; Sanz, B.; Goya, G. F.; Mijangos, C.; Hernández, R.  
*J. Mater. Chem. B* **2017**, 5 (43), 8570–8578.

Thin Films and PtMnSb/Pt Bilayers for Spin–Orbit Torque Investigations.  
Krieff, J.; Mendil, J.; Aguirre, M. H.; Avci, C. O.; Klewe, C.; Rott, K.; Schmalhorst, J. M.; Reiss, G.; Gambardella, P.; Kuschel, T. Co-Sputtered PtMnSb  
*Phys. Status Solidi - Rapid Res. Lett.* **2017**, 11 (4), 6.

Stability Assessment of Regenerated Hierarchical ZSM-48 Zeolite Designed by Post-Synthesis Treatment for Catalytic Cracking of Light Naphtha.  
Ahmed, M. H. M.; Muraza, O.; Nakaoka, S.; Jamil, A. K.; Mayoral, A.; Sebastian, V.; Yamani, Z. H.; Masuda, T.  
*Energy and Fuels* **2017**, 31 (12), 14097–14103.  
<https://doi.org/10.1021/acs.energyfuels.7b02796>.

55Mn NMR Observation of Colossal Magnetoresistance Effect in Sm<sub>0.55</sub>Sr<sub>0.45</sub>MnO<sub>3</sub>.  
Michalik, J. M.; Rybicki, D.; Tarnawski, Z.; Sikora, M.; De Teresa, J. M.; Ibarra, M. R.; Kapusta, C.  
*J. Phys. Condens. Matter* **2017**, 29 (26), 5.

Tuning Shape, Composition and Magnetization of 3D Cobalt Nanowires Grown by Focused Electron Beam Induced Deposition (FEBID).  
Pablo-Navarro, J.; Sanz-Hernández, D.; Magén, C.; Fernández-Pacheco, A.; De Teresa, J. M.  
*J. Phys. D: Appl. Phys.* **2017**, 50 (18), 1–9.

Expansion of the ADOR Strategy for the Synthesis of Zeolites: The Synthesis of IPC-12 from Zeolite UOV.  
Kasneryk, V.; Shamzhy, M.; Opanasenko, M.; Wheatley, P. S.; Morris, S. A.; Russell, S. E.; Mayoral, A.; Trachta, M.; Čejka, J.; Morris, R. E.  
*Angew. Chemie - Int. Ed.* **2017**, 56 (15), 4324–4327.

Core@shell, Au@TiO<sub>x</sub> Nanoparticles by Gas Phase Synthesis.  
Martínez, L.; Mayoral, A.; Espiñeira, M.; Roman, E.; Palomares, F. J.; Huttel, Y.  
*Nanoscale* **2017**, 9 (19), 6463–6470.

Nano-Crystalline Titanium(IV) Tungstomolybdate Cation Exchanger: Synthesis, Characterization and Ion Exchange Properties. *J.*

Kelta, B.; Tadesse, A. M.; Yadav, O. P.; Diaz, I.; Mayoral, Á.  
*Environ. Chem. Eng.* **2017**, *5* (1), 1004–1014.

Competition between Superconductor-Ferromagnetic Stray Magnetic Fields in YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7-x</sub> Films Pierced with Co Nano-Rods /639/301/119/1003 /639/301/357/997 /639/925/357/997 /639/766/119/1003 /120 /123 /142/126 /119 /128 /140/146 Article.

Rouco, V.; Córdoba, R.; De Teresa, J. M.; Rodríguez, L. A.; Navau, C.; Del-Valle, N.; Via, G.; Sánchez, A.; Monton, C.; Kronast, F.; Obradors, X.; Puig, T.; Palau, A.  
*Sci. Rep.* **2017**, *7* (1), 9.

Advanced Spectroscopic Analyses on a:C-H Materials: Revisiting the EELS Characterization and Its Coupling with Multi-Wavelength Raman Spectroscopy.

Lajaunie, L.; Pardanaud, C.; Martin, C.; Puech, P.; Hu, C.; Biggs, M. J.; Arenal, R.  
*Carbon N. Y.* **2017**, *112*, 149–161.

All-Carbon Electrode Molecular Electronic Devices Based on Langmuir–Blodgett Monolayers. Sangiao, S.; Martín, S.; González-Orive, A.; Magén, C.; Low, P. J.; De Teresa, J. M.; Cea, P.  
*Small* **2017**, *13* (7), 6.

Microwave Heating and the Fast ADOR Process for Preparing Zeolites.

Navarro, M.; Morris, S. A.; Mayoral, Á.; Čejka, J.; Morris, R. E.  
*J. Mater. Chem. A* **2017**, *5* (17), 8037–8043.

Noncovalent Stable Functionalization Makes Carbon Nanotubes Hydrophilic and Biocompatible.

Ernst, F.; Gao, Z.; Arenal, R.; Heek, T.; Setaro, A.; Fernandez-Pacheco, R.; Haag, R.; Cognet, L.; Reich, S.  
*J. Phys. Chem. C* **2017**, *121* (34), 18887–18891.

Surface/Interface Phenomena in Nano-Multilayer Coating under Severing Tribological Conditions.

Fox-Rabinovich, G. S.; Gershman, I. S.; Yamamoto, K.; Aguirre, M. H.; Covelli, D.; Arif, T.; Aramesh, M.; Shalaby, M. A.; Veldhuis, S.  
*Surf. Interface Anal.* **2017**, *49* (7), 584–593.

Building Blocks Strategy for Preparing Photocatalytically Active Anatase TiO<sub>2</sub>/Rutile SnO<sub>2</sub> de Mendonça, V. R.; Avansi, W.; Arenal, R.; Ribeiro, C. A Heterostructures by Hydrothermal Annealing.

*J. Colloid Interface Sci.* **2017**, *505*, 454–459.

Oxygen Vacancies in Strained SrTiO<sub>3</sub> Thin Films: Formation Enthalpy and Manipulation.

Iglesias, L.; Sarantopoulos, A.; Magén, C.; Rivadulla, F.  
*Phys. Rev. B* **2017**, *95* (16), 7.

Hybrid YBa<sub>2</sub>Cu<sub>3</sub>O<sub>7</sub> Superconducting–Ferromagnetic Nanocomposite Thin Films Prepared from Colloidal Chemical Solutions.

Bartolomé, E.; Cayado, P.; Solano, E.; Mocuta, C.; Ricart, S.; Mundet, B.; Coll, M.; Gázquez, J.; Meledin, A.; van Tendeloo, G.; Valvidares, S. M.; Herrero-Martín, J.; Gargiani, P.; Pellegrin, E.; Magén, C.; Puig, T.; Obradors, X.  
*Adv. Electron. Mater.* **2017**, *3* (7), 11.

STA-20: An ABC-6 Zeotype Structure Prepared by Co-Templating and Solved via a Hypothetical Structure Database and STEM-ADF Imaging.

Turrina, A.; Garcia, R.; Watts, A. E.; Greer, H. F.; Bradley, J.; Zhou, W.; Cox, P. A.; Shannon, M. D.; Mayoral, A.; Casci, J. L.; Wright, P. A.



*Chem. Mater.* **2017**, *29* (5), 2180–2190.

Functionalized Akiyama Tips for Magnetic Force Microscopy Measurements.

Stiller, M.; Barzola-Quiquia, J.; Esquinazi, P. D.; Sangiao, S.; De Teresa, J. M.; Meijer, J.; Abel, B. *Meas. Sci. Technol.* **2017**, *28* (12), 7.

On the Advantages of Spring Magnets Compared to Pure FePt: Strategy for Rare-Earth Free Permanent Magnets Following a Bottom-up Approach.

Pousthomis, M.; Garnero, C.; Marcelot, C. G.; Blon, T.; Cayez, S.; Cassignol, C.; Du, V. A.; Krispin, M.; Arenal, R.; Soulantica, K.; Viau, G.; Lacroix, L. M. *J. Magn. Magn. Mater.* **2017**, *424*, 304–313.

Ultrathin Composite Polymeric Membranes for CO<sub>2</sub>/N<sub>2</sub> Separation with Minimum Thickness and High CO<sub>2</sub> Permeance.

Benito, J.; Sánchez-Laínez, J.; Zornoza, B.; Martín, S.; Carta, M.; Malpass-Evans, R.; Téllez, C.; McKeown, N. B.; Coronas, J.; Gascón, I. *ChemSusChem* **2017**, *10* (20), 4014–4017.

Generation of Subnanometric Platinum with High Stability during Transformation of a 2D Zeolite into 3D.

Liu, L.; Díaz, U.; Arenal, R.; Agostini, G.; Concepción, P.; Corma, A. *Nat. Mater.* **2017**, *16* (1), 132–138.

Cell Damage Produced by Magnetic Fluid Hyperthermia on Microglial BV2 Cells

Calatayud, M. P.; Soler, E.; Torres, T. E.; Campos-Gonzalez, E.; Junquera, C.; Ibarra, M. R.; Goya, G. F.

*Sci. Rep.* **2017**, *7* (1), 16.

Simultaneous Use of MOFs MIL-101(Cr) and ZIF-11 in Thin Film Nanocomposite Membranes for Organic Solvent Nanofiltration.

Echaide-Górriz, C.; Navarro, M.; Téllez, C.; Coronas, J. *Dalt. Trans.* **2017**, *46* (19), 6244–6252.

Cs-Corrected STEM Imaging of Both Pure and Silver-Supported Metal-Organic Framework MIL-100(Fe).

Mayoral, A.; Mahugo, R.; Sánchez-Sánchez, M.; Díaz, I. *ChemCatChem* **2017**, *9* (18), 3497–3502.

The Effect of PEGylated Hollow Gold Nanoparticles on Stem Cell Migration: Potential Application in Tissue Regeneration.

Encabo-Berzosa, M. D. M.; Sancho-Alberro, M.; Crespo, A.; Andreu, V.; Sebastian, V.; Irusta, S.; Arruebo, M.; Martín-Duque, P.; Santamaria, J. *Nanoscale* **2017**, *9* (28), 9848–9858.

Photoluminescence from an Individual Double-Walled Carbon Nanotube.

Levshov, D. I.; Parret, R.; Tran, H. N.; Michel, T.; Cao, T. T.; Nguyen, V. C.; Arenal, R.; Popov, V. N.; Rochal, S. B.; Sauvajol, J. L.; Zahab, A. A.; Paillet, M. *Phys. Rev. B* **2017**, *96* (19), 7.

The FAD Synthetase from the Human Pathogen *Streptococcus Pneumoniae*: A Bifunctional Enzyme Exhibiting Activity-Dependent Redox Requirements.

Sebastián, M.; Lira-Navarrete, E.; Serrano, A.; Marcuello, C.; Velázquez-Campoy, A.; Lostao, A.; Hurtado-Guerrero, R.; Medina, M.; Martínez-Júlvez, M. *Sci. Rep.* **2017**, *7* (1), 15. <https://doi.org/10.1038/s41598-017-07716-5>.

Structurally Oriented Nano-Sheets in Co Thin Films: Changing Their Anisotropic Physical Properties by Thermally-Induced Relaxation.

Vergara, J.; Favieres, C.; Magén, C.; de Teresa, J. M.; Ibarra, M. R.; Madurga, V.

*Materials (Basel)*. **2017**, 10 (12), 15.

Magnetite as a Platform Material in the Detection of Glucose, Ethanol and Cholesterol.

Jaime, J.; Rangel, G.; Muñoz-Bonilla, A.; Mayoral, A.; Herrasti, P.

*Sensors Actuators, B Chem.* **2017**, 238, 693–701.

Structural and Magnetic Properties of [001] CoC R2 O4 Thin Films.

Guzman, R.; Heuver, J.; Matzen, S.; Magén, C.; Noheda, B.

*Phys. Rev. B* **2017**, 96 (10), 11.

Evidence of a Minority Monoclinic LaNiO<sub>2.5</sub> Phase in Lanthanum Nickelate Thin Films.

López-Conesa, L.; Rebled, J. M.; Pesquera, D.; Dix, N.; Sánchez, F.; Herranz, G.; Fontcuberta, J.;

Magén, C.; Casanove, M. J.; Estradé, S.; Peiró, F.

*Phys. Chem. Chem. Phys.* **2017**, 19 (13), 9137–9142.

Chemical Disorder in Topological Insulators: A Route to Magnetism Tolerant Topological Surface States.

Martínez-Velarte, M. C.; Kretz, B.; Moro-Lagares, M.; Aguirre, M. H.; Riedemann, T. M.;

Lograsso, T. A.; Morellón, L.; Ibarra, M. R.; Garcia-Lekue, A.; Serrate, D.

*Nano Lett.* **2017**, 17 (7), 4047–4054.

Platinum Tripods as Nanometric Frequency Multiplexing Devices.

Camargo, B. C.; Lassagne, B.; Arenal, R.; Gatel, C.; Blon, T.; Viau, G.; Lacroix, L. M.; Escoffier, W.

*Nanoscale* **2017**, 9 (38), 14635–14640.

Reversible Monolayer-Bilayer Transition in Supported Phospholipid LB Films under the Presence of Water: Morphological and Nanomechanical Behavior.

Ruiz-Rincón, S.; González-Orive, A.; De La Fuente, J. M.; Cea, P.

*Langmuir* **2017**, 33 (30), 7538–7547.

MoS<sub>2</sub>-Carbon Nanotube Hybrid Material Growth and Gas Sensing.

Deokar, G.; Vancsó, P.; Arenal, R.; Ravaux, F.; Casanova-Cháfer, J.; Llobet, E.; Makarova, A.;

Vyalikh, D.; Struzzi, C.; Lambin, P.; Jouiad, M.; Colomer, J. F.

*Adv. Mater. Interfaces* **2017**, 4 (24), 10.

Thermoelectric Skutterudite/Oxide Nanocomposites: Effective Decoupling of Electrical and Thermal Conductivity by Functional Interfaces.

Moure, A.; Rull-Bravo, M.; Abad, B.; Del Campo, A.; Rojo, M. M.; Aguirre, M. H.; Jacquot, A.;

Fernandez, J. F.; Martin-Gonzalez, M.

*Nano Energy* **2017**, 31, 393–402.

On the Porous Silicate HPM-5.

Jo, D.; Mayoral, A.; Hong, S. B.; Cambor, M. A

*Eur. J. Inorg. Chem.* **2017**, 2017, (19), 2525–2531.

Controlled Growth of Nano-Hydroxyapatite on Stilbite: Defluoridation Performance. Sani, T.;

Gómez-Hortigüela, L.; Mayoral, Á.; Chebude, Y.; Pérez-Pariente, J.; Díaz, I.

*Microporous Mesoporous Mater.* **2017**, 254, 86–95. <https://doi.org/10.1016/j.micromeso.2017.05.011>

Assembly-Disassembly-Organization-Reassembly Synthesis of Zeolites Based on Cfi-Type Layers.

Firth, D. S.; Morris, S. A.; Wheatley, P. S.; Russell, S. E.; Slawin, A. M. Z.; Dawson, D. M.;

Mayoral, A.; Opanasenko, M.; Položij, M.; Čejka, J.; Nachtigall, P.; Morris, R. E.

*Chem. Mater.* **2017**, 29 (13), 5605–5611.

In-Situ Preparation of Ultra-Small Pt Nanoparticles within Rod-Shaped Mesoporous Silica Particles: 3-D Tomography and Catalytic Oxidation of n-Hexane.

Uson, L.; Hueso, J. L.; Sebastian, V.; Irusta, S.; Arruebo, M.; Santamaria, J.; Arenal, R.; Florea, I.

*Catal. Commun.* **2017**, *100*, 93–97.

In Situ Solid-State NMR and XRD Studies of the ADOR Process and the Unusual Structure of Zeolite IPC-6.

Morris, S. A.; Bignami, G. P. M.; Tian, Y.; Navarro, M.; Firth, D. S.; ĀĀejka, J.; Wheatley, P. S.; Dawson, D. M.; Slawinski, W. A.; Wragg, D. S.; Morris, R. E.; Ashbrook, S. E.  
*Nat. Chem.* **2017**, *9* (10), 1012–1018.

ISelf-Assembled Core-Shell CdTe/Poly(3-Hexylthiophene) Nanoensembles as Novel Donor-Acceptor Light-Harvesting Systems.

stif, E.; Kagkoura, A.; Hernandez-Ferrer, J.; Stergiou, A.; Skaltsas, T.; Arenal, R.; Benito, A. M.; Maser, W. K.; Tagmatarchis, N.  
*ACS Appl. Mater. Interfaces* **2017**, *9* (51), 44695–44703.

Titania-Coated Gold Nanorods with Expanded Photocatalytic Response. Enzyme-like Glucose Oxidation under near-Infrared Illumination.

Ortega-Liebana, M. C.; Hueso, J. L.; Arenal, R.; Santamaria, J.  
*Nanoscale* **2017**, *9* (5), 1787–1792.

NanoSQUID Magnetometry of Individual Cobalt Nanoparticles Grown by Focused Electron Beam Induced Deposition.

Martinez-Pérez, M. J.; Müller, B.; Schwebius, D.; Korinski, D.; Kleiner, R.; Sesé, J.; Koelle, D.  
*Supercond. Sci. Technol.* **2017**, *30* (2), 10.

Proximity-Induced Superconductivity in Bismuth Nanostripes.

Sangiao, S.; Casado, L.; Morellón, L.; Ibarra, M. R.; De Teresa, J. M.  
*J. Phys. D: Appl. Phys.* **2017**, *50* (12), 6.

Sustainable Preparation of MIL-100(Fe) and Its Photocatalytic Behavior in the Degradation of Methyl Orange in Water.

Guesh, K.; Caiuby, C. A. D.; Mayoral, Á.; Díaz-García, M.; Díaz, I.; Sanchez-Sanchez, M.  
*Cryst. Growth Des.* **2017**, *17* (4), 1806–1813.

Magnetic Hyperthermia Enhances Cell Toxicity with Respect to Exogenous Heating.

Sanz, B.; Calatayud, M. P.; Torres, T. E.; Fanarraga, M. L.; Ibarra, M. R.; Goya, G. F.  
*Biomaterials* **2017**, *114*, 62–70. <https://doi.org/10.1016/j.biomaterials.2016.11.008>.

Simulation of STEM-HAADF Image Contrast of Ruddlesden-Popper Faulted LaNiO<sub>3</sub> Thin Coll, C.; López-Conesa, L.; Rebled, J. M.; Magén, C.; Sánchez, F.; Fontcuberta, J.; Estradé, S.; Peiró, F. Films. *J. Phys. Chem. C* **2017**, *121* (17), 9300–9304.

Influence of Surface Coverage on the Formation of 4,4'-Bipyridinium (Viologen) Single Molecular Junctions.

Osorio, H. M.; Martín, S.; Milan, D. C.; González-Orive, A.; Gluyas, J. B. G.; Higgins, S. J.; Low, P. J.; Nichols, R. J.; Cea, P.  
*J. Mater. Chem. C* **2017**, *5* (45), 11717–11723.

Graphene Oxide-Carbon Nanotube Hybrid Assemblies: Cooperatively Strengthened OH...O=C Hydrogen Bonds and the Removal of Chemisorbed Water.

Núñez, J. D.; Benito, A. M.; Rouzière, S.; Launois, P.; Arenal, R.; Ajayan, P. M.; Maser, W. K.  
*Chem. Sci.* **2017**, *8* (7), 4987–4995.

JSpin Seebeck Effect in Insulating Epitaxial  $\Gamma$ -Fe<sub>2</sub>O<sub>3</sub> Thin Films.

iménez-Cavero, P.; Lucas, I.; Anadón, A.; Ramos, R.; Niizeki, T.; Aguirre, M. H.; Algarabel, P. A.; Uchida, K.; Ibarra, M. R.; Saitoh, E.; Morellón, L.  
*APL Mater.* **2017**, *5* (2), 8.

Control of Reactivity through Chemical Order in Very Small RuRe Nanoparticles.

Ayvali, T.; Fazzini, P. F.; Lecante, P.; Mayoral, A.; Philippot, K.; Chaudret, B.  
*Dalt. Trans.* **2017**, *46* (43), 15070–15079.

TEMPO-Oxidized Cellulose Nanofibers as Interfacial Strengthener in Continuous-Fiber Reinforced Polymer Composites.

Uribe, B. E. B.; Chiromito, E. M. S.; Carvalho, A. J. F.; Arenal, R.; Tarpani, J. R.  
*Mater. Des.* **2017**, *133*, 340–348.

Designing Strontium Titanate-Based Thermoelectrics: Insight into Defect Chemistry Mechanisms.

Kovalevsky, A. V.; Aguirre, M. H.; Populoh, S.; Patrício, S. G.; Ferreira, N. M.; Mikhalev, S. M.; Fagg, D. P.; Weidenkaff, A.; Frade, J. R.  
*J. Mater. Chem. A* **2017**, *5* (8), 3909–3922.

Active Magnetoplasmonic Split-Ring/Ring Nanoantennas.

Feng, H. Y.; Luo, F.; Arenal, R.; Henrard, L.; García, F.; Armelles, G.; Cebollada, A.  
*Nanoscale* **2017**, *9* (1), 37–44.

Extraordinary Sensitizing Effect of Co-Doped Carbon Nanodots Derived from Mate Herb: Application to Enhanced Photocatalytic Degradation of Chlorinated Wastewater Compounds under Visible Light.

Ortega-Liebana, M. C.; Hueso, J. L.; Ferdousi, S.; Arenal, R.; Irusta, S.; Yeung, K. L.; Santamaria, J.  
*Appl. Catal. B Environ.* **2017**, *218*, 68–79.

Tagmatarchis, N. Design and Development of Multi-Walled Carbon Nanotube-Liposome Drug Delivery Platforms.

Pippa, N.; Chronopoulos, D. D.; Stellas, D.; Fernández-Pacheco, R.; Arenal, R.; Demetzos, C.;  
*Int. J. Pharm.* **2017**, *528* (1–2), 429–439.

Anisotropic Self-Assembly of Supramolecular Polymers and Plasmonic Nanoparticles at the Liquid-Liquid Interface.

Armao IV, J. J.; Nyrkova, I.; Fuks, G.; Osypenko, A.; Maaloum, M.; Moulin, E.; Arenal, R.; Gavati, O.; Semenov, A.; Giuseppone, N.  
*J. Am. Chem. Soc.* **2017**, *139* (6), 2345–2350.

Pumping Metallic Nanoparticles with Spatial Precision within Magnetic Mesoporous Platforms: 3D Characterization and Catalytic Application.

Miguel-Sancho, N.; Martinez, G.; Sebastian, V.; Malumbres, A.; Florea, I.; Arenal, R.; Ortega-Liebana, M. C.; Hueso, J. L.; Santamaria, J.  
*ACS Appl. Mater. Interfaces* **2017**, *9* (47), 41529–41536.

Functionalization of MoS<sub>2</sub> with 1,2-Dithiolanes: Toward Donor-Acceptor Nanohybrids for Energy Conversion.

Canton-Vitoria, R.; Sayed-Ahmad-Baraza, Y.; Pelaez-Fernandez, M.; Arenal, R.; Bittencourt, C.; Ewels, C. P.; Tagmatarchis, N.  
*npj 2D Mater. Appl.* **2017**, *1* (1), 9.

Spin Seebeck Effect in Y-Type Hexagonal Ferrite Thin Films.

Hirschner, J.; Maryško, M.; Hejtmánek, J.; Uhrecký, R.; Soroka, M.; Buršík, J.; Anadón, A.; Aguirre, M. H.; Knížek, K.  
*Phys. Rev. B* **2017**, *96* (6), 8.

Modification of Anatase Using Noble-Metals (Au, Pt, Ag): Toward a Nanoheterojunction Exhibiting Simultaneously Photocatalytic Activity and Plasmonic Gas Sensing.

Karmaoui, M.; Lajaunie, L.; Tobaldi, D. M.; Leonardi, G.; Benbayer, C.; Arenal, R.; Labrincha, J. A.; Neri, G.

*Appl. Catal. B Environ.* **2017**, *218*, 370–384.

Suspended Tungsten-Based Nanowires with Enhanced Mechanical Properties Grown by Focused Ion Beam Induced Deposition.

Córdoba, R.; Lorenzoni, M.; Pablo-Navarro, J.; Magén, C.; Pérez-Murano, F.; De Teresa, J. M. *Nanotechnology* **2017**, *28* (44), 10.

High Surface Coverage of a Self-Assembled Monolayer by: In Situ Synthesis of Palladium Nanodeposits.

Herrer, L.; Sebastian, V.; Martín, S.; González-Orive, A.; Pérez-Murano, F.; Low, P. J.; Serrano, J. L.; Santamaría, J.; Cea, P. *Nanoscale* **2017**, *9* (35), 13281–13290.

Systematic Study of Oxygen Vacancy Tunable Transport Properties of Few-Layer MoO<sub>3-x</sub> Enabled by Vapor-Based Synthesis.

Hanson, E. D.; Lajaunie, L.; Hao, S.; Myers, B. D.; Shi, F.; Murthy, A. A.; Wolverton, C.; Arenal, R.; Dravid, V. P. *Adv. Funct. Mater.* **2017**, *27* (17), 10.

Preserving  $\pi$ -Conjugation in Covalently Functionalized Carbon Nanotubes for Optoelectronic Applications.

Setaro, A.; Adeli, M.; Glaeske, M.; Przyrembel, D.; Bisswanger, T.; Gordeev, G.; Maschietto, F.; Faghani, A.; Paulus, B.; Weinelt, M.; Arenal, R.; Haag, R.; Reich, S. *Nat. Commun.* **2017**, *8*, 7.

Chemical Solution Synthesis and Ferromagnetic Resonance of Epitaxial Thin Films of Yttrium Iron Garnet.

Lucas, I.; Jiménez-Cavero, P.; Vila-Fungueiriño, J. M.; Magén, C.; Sangiao, S.; De Teresa, J. M.; Morellón, L.; Rivadulla, F. *Phys. Rev. Mater.* **2017**, *1* (7), 6.

Single-Molecule Conductance Studies of Organometallic Complexes Bearing 3-Thienyl Contacting Groups.

Bock, S.; Al-Owaedi, O. A.; Eaves, S. G.; Milan, D. C.; Lemmer, M.; Skelton, B. W.; Osorio, H. M.; Nichols, R. J.; Higgins, S. J.; Cea, P.; Long, N. J.; Albrecht, T.; Martín, S.; Lambert, C. J.; Low, P. J. *Chem. - A Eur. J.* **2017**, *23* (9), 2133–2143.

Interlayer Interaction Effects on the G Modes in Double-Walled Carbon Nanotubes With Different Electronic Configurations.

Levshov, D. I.; Tran, H. N.; Michel, T.; Cao, T. T.; Nguyen, V. C.; Arenal, R.; Popov, V. N.; Sauvajol, J. L.; Zahab, A. A.; Paillet, M. *Phys. Status Solidi Basic Res.* **2017**, *254* (11), 8.

Quantum Interference Effects on the Intensity of the G Modes in Double-Walled Carbon Nanotubes.

Tran, H. N.; Blancon, J. C.; Arenal, R.; Parret, R.; Zahab, A. A.; Ayari, A.; Vallée, F.; Del Fatti, N.; Sauvajol, J. L.; Paillet, M. *Phys. Rev. B* **2017**, *95* (20), 9.

Accurate Determination of the Chiral Indices of Individual Carbon Nanotubes by Combining Electron Diffraction and Resonant Raman

Levshov, D. I.; Tran, H. N.; Paillet, M.; Arenal, R.; Than, X. T.; Zahab, A. A.; Yuzyuk, Y. I.; Sauvajol, J. L.; Michel, T. *Spectroscopy. Carbon N. Y.* **2017**, *114*, 141–159.

Effect of Sb-surfactant on GaInP CuPtB type ordering: assessment through dark field TEM and aberration corrected – HAADF

C. Coll, E. Barrigón, Ll. López, L. Barrutia, I. Rey-Stolle, S. Estradé, C. Algora, F. Peiró  
Physical Chemistry Chemical Physics 2017, 19, 9806-9810  
Seeded growth synthesis of Au-Fe<sub>3</sub>O<sub>4</sub> heterodimers: rational design and mechanistic insights  
E. Fantechi, A. G. Roca, B. Sépulveda, P. Torruella, S. Estradé, F. Peiró, N.G. Bastús, J. Nogués, V. Puentes  
*Chemistry of Materials* **2017**, 29, 4022-4035

Tuning branching in ceria nanocrystals  
Berestok, T.; Guardia, P.; Blanco J.; López-Conesa, L.; Estradé, S.; Ibañez, M.; Nafria, R.; Luo, Z.; Kovalenko, M.V.; Peiró F. and Cabot, A.  
*Chemistry of Materials* **2017**, 29, 4418-4424

High Electrocatalytic Response of a Mechanically Enhanced NbC Nanocomposite Electrode Toward Hydrogen Evolution Reaction  
Coy, E.; Yate, L.; Valencia, D.P.; Aperador W.; Siuzdak K.; Torruella, P.; Azanza, E.; Estradé, S.; Iatsunskiy, I.; Peiró, F.; Zhang, X.; Tejada, X.; and Ziolo, R.F.  
*ACS Appl. Mater. Interfaces* **2017**, 9 (36), pp 30872–30879

Acetate-Induced Disassembly of Spherical Iron Oxide Nanoparticle Clusters into Monodispersed Core-Shell Structures upon Nanoemulsion Fusion  
Kertmen, A.; Torruella, P.; Coy, E.; Yate, L.; Nowaczyk, G.; Gapiński, J.; Vogt, C.; Toprak, M.; Estradé, S.; Peiró, F.; Milewski, S.; Jurga, S.; Andruszkiewicz, R.  
*Langmuir* **2017**, 33 (39), 10351–10365

Atomistic modelling Modelling and High Resolution Electron Microscopy simulations of CeO<sub>2</sub> Nanoparticles Octapods  
J. Blanco-Portals, T. Berestok, P. Torruella-Besa, C. Coll, L. López-Conesa, P. Guardia, A. Cabot, S. Estradé and F. Peiró  
*Appl. Phys. Lett.* **2017**, 111, 223107

Assessing oxygen vacancies in bismuth oxide through EELS measurements and DFT simulations"  
Torruella, P.; Coll, C.; Martín, G.; López-Conesa, L.; Vila, M.; Díaz-Guerra, C.; Varela, M.; Ruiz-González, M. L.; Piqueras, J.; Peiró, F.; Estradé, S.  
*Journal of Physical Chemistry C*, **2017**, 121, 24809-24815

# PAPERS PUBLISHED IN 2017

In the next tables the papers with impact factor higher than 5 are listed

JOURNAL	REFERENCE / DOI	IMPACT FACTOR	QUARTILE
NATURE MATERIALS	10.1038/NMAT4757	39,737	1
NAT NANOTECHNOL	12, 655	38,986	1
CHEM SOC REV	46, 4464	38,618	1
NATURE CHEMISTRY	10.1038/NCHEM.2761	25,87	1
ADV MATER	29(28), 1700486	19,791	1
ADV MATER	29, 1604745	19,791	1
ADV ENERGY MATER	7, 1601102	16,721	1
ADV ENERGY MATER	7, 1601674	16,721	1
J AM CHEM SOC	139, 3095	13,858	1
J AM CHEM SOC	139, 6018	13,858	1
J AM CHEM SOC	139, 10079	13,858	1
J AM CHEM SOC	139, 10432	13,858	1
J AM CHEM SOC	139, 17474	13,858	1
J AM CHEM SOC	10.1021/jacs.6b11179	13,858	1
AM J RESP CRIT CARE	195, A5838	13,204	1
NANO LETTERS	10.1021/acs.nanolett.7b00311	12,712	1
NANO ENERGY	10.1016/j.nanoen.2016.11.041	12,343	1
ADV FUNCT MATER	1704031	12,124	1
ADV FUNCT MATER	27(26), 1700664	12,124	1
ADV FUNCT MATER	10.1002/adfm.201605380	12,124	1
NATURE COMMUNICATIONS	10.1038/ncomms14281	12,124	1
ANGEW CHEM INT EDIT	56, 2136	11,994	1
ANGEW CHEM INT EDIT	56, 4438	11,994	1
ANGEW CHEM INT EDIT	56, 12240	11,994	1
ANGEW CHEM INT EDIT	10.1002/anie.201700590	11,994	1
ACS CATAL	7, 8653	10,614	1
P NATL ACAD SCI USA	114(2), 215	9,661	1
CHEMISTRY OF MATERIALS	10.1021/acs.chemmater.7b01181	9,466	1
CHEMISTRY OF MATERIALS	10.1021/acs.chemmater.6b04892	9,466	1
APPL CATAL B-ENVIRON	210, 306	9,446	1

APPL CATAL B-ENVIRON	10.1016/j.apcatb.2017.06.021	9,446	1
APPL CATAL B-ENVIRON	10.1016/j.apcatb.2017.06.010	9,446	1
J MATER CHEM A	5, 8317	8,867	1
J MATER CHEM A	5, 17973	8,867	1
J MATER CHEM A	10.1039/c7ta02344h	8,867	1
J MATER CHEM A	10.1039/c6ta09860f	8,867	1
CHEMICAL SCIENCE	10.1039/c7sc00223h	8,668	1
SMALL	13, 1603880	8,643	1
SMALL	13, 1701614	8,643	1
SMALL	10.1002/sml.201603207	8,643	1
BIOMATERIALS	10.1016/j.biomaterials.2016.11.008	8,402	1
BIOSENS BIOELECTRON	89, 343	7,78	1
ACS APPL MATER INTER	9(32), 26697	7,504	1
ACS APPL MATER INTER	9, 7897	7,504	1
ACS APPL MATER INTER	10.1021/acsami.7b11482	7,504	1
ACS APPL MATER INTER	10.1021/acsami.7b13506	7,504	1
NANOSCALE	9, 15967	7,367	1
NANOSCALE	9, 5528	7,367	1
NANOSCALE	10.1039/c6nr07864h	7,367	1
NANOSCALE	10.1039/c7nr04544a	7,367	1
NANOSCALE	10.1039/c6nr06300d	7,367	1
NANOSCALE	10.1039/c7nr03365f	7,367	1
NANOSCALE	10.1039/c7nr01853c	7,367	1
NANOSCALE	10.1039/c7nr01148b	7,367	1
NEW PHYTOL	216(4), 1223	7,33	1
CHEMSUSCHEM	10, 2023	7,226	1
CHEMSUSCHEM	10.1002/cssc.201701139	7,226	1
2D MATER	4(3), 034002	6,937	1
ACS PHOTONICS	4(3), 657	6,756	1
ORG LETT	19, 4810	6,579	1
DRUG DELIV	24, 1112	6,402	1
CARBON	10.1016/j.carbon.2016.11.076	6,337	1
CARBON	10.1016/j.carbon.2016.10.092	6,337	1
CARBON	10.1016/j.carbon.2017.03.017	6,337	1
REDOX BIOL	15, 143	6,337	1
ACTA BIOMATER	49, 113	6,319	1
ACTA BIOMATER	55, 493	6,319	1
ACTA BIOMATER	57, 472	6,319	1
ACTA BIOMATER	10.1016/j.actbio.2017.08.010	6,319	1
CHEM COMMUN	53, 1116	6,319	1
CHEM COMMUN	53, 4084	6,319	1
CHEM COMMUN	53, 4842	6,319	1
CHEM COMMUN	53, 10993	6,319	1



CHEM COMMUN	53, 12402	6,319	1
CHEM ENG J	310, 560	6,216	1
CHEM ENG J	10.1016/j.cej.2017.01.077	6,216	1
STROKE	48(1), 204	6,032	1
STROKE	48(6), 1695	6,032	1
BRAIN BEHAV IMMUN	61, 117	5,964	1
ACS SUSTAIN CHEM ENG	5, 2384	5,951	1
EXPERT OPIN DRUG DEL	14(2), 229	5,657	1
FREE RADICAL BIO MED	106, 168	5,606	1
SENSORS AND ACTUATORS B-CHEMICAL	10.1016/j.snb.2016.07.059	5,401	1
CHEM-EUR J	23, 2753	5,317	1
CHEM-EUR J	23, 3666	5,317	1
CHEM-EUR J	23, 7174	5,317	1
CHEM-EUR J	23, 11141	5,317	1
CHEM-EUR J	23, 13379	5,317	1
CHEM-EUR J	23, 15974	5,317	1
CHEM-EUR J	10.1002/chem.201604565	5,317	1
ACTA MATER	133, 333	5,301	1
J MATER CHEM C	5, 10176	5,256	1
J MATER CHEM C	10.1039/c7tc03624h	5,256	1