ARTICLES IN JOURNALS 2010

ICMAB's researchers published 235 articles in international scientific journals in 2010. In this report you can find them ordered by research sublines and ranked according their Impact Factor. 62 of them belong to two sublines and are repeated in each one.

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1. MATERIALS FOR INFORMATION SCIENCE AND ELECTRONICS

1.1 Nanostructured magnetic materials and novel functional oxides

1. Dix, N; Muralidharan, R; Rebled, JM; Estrade, S; Peiro, F; Varela, M; Fontcuberta, J; Sanchez, F
Selectable Spontaneous Polarization Direction and Magnetic Anisotropy in $BiFeO_3$-$CoFe_2O_4$ Epitaxial Nanostructures
(2010) *ACS Nano*, 4 (8), pp. 4955-4961
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2. Dubroka A., Rossle M., Kim K.W., Malik V.K., Schultz L., Thiel S., Schneider C.W., Mannhart J., Herranz G., Copie O., Bibes M., Barthelemy A., Bernhard C.,
Dynamical response and confinement of the electrons at the $LaAlO_3/SrTiO_3$ interface
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3. Martinez-Boubeta,C; Konstantinovic,Z; Balcells,L; Estrade, S; Arbiol, J; Cebollada, A; Martinez, B
Epitaxial Integration of $La_{2/3}Sr_{1/3}MnO_3$ and Fe Films by the Use of a MgO Spacer
(2010) *Crystal Growth & Design*, 10 (3), pp. 1017-1020
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Dipolar Driven Spontaneous Self Assembly of Superparamagnetic Co Nanoparticles into Micrometric Rice-Grain like Structures
(2010) *Langmuir*, 26 (1), pp. 109-116

5. Pascu, O; Caicedo, JM; Fontcuberta, J; Herranz, G; Roig, A
Magneto-Optical Characterization of Colloidal Dispersions. Application to Nickel Nanoparticles
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Aging of magnetic properties in MgO films
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7. Marti, X; Skumryev, V; Ferrater, C; Garcia-Cuenca, MV; Varela, M; Sanchez, F; Fontcuberta, J
Emergence of ferromagnetism in antiferromagnetic $TbMnO_3$ by epitaxial strain
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8. Gich, M; Gazquez, J; Roig, A; Crespi, A; Fontcuberta, J; Idrobo, JC; Pennycook, SJ; Varela, M; Skumryev, V; Varela, M
Epitaxial stabilization of epsilon-Fe_2O_3 (001) thin films on $SrTiO_3$ (111)
(2010) *Applied Physics Letters*, 96 (11)

9. Fina, I; Fabrega, L; Marti, X; Sanchez, F; Fontcuberta, J
Magnetic switch of polarization in epitaxial orthorhombic $YMnO_3$ thin films
(2010) *Applied Physics Letters*, 97 (23)

10. Foerster, M; Gutierrez, DF; Rigato, F; Rebled, JM; Peiro, F; Fontcuberta, J
Nontunnel transport through $CoFe_2O_4$ nanometric barriers
(2010) *Applied Physics Letters*, 97 (24)

11. Bachelet, R; Pesquera, D; Herranz, G; Sanchez, F; Fontcuberta, J
Persistent two-dimensional growth of (110) manganite films
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Response to "Comment on 'On the strain coupling across vertical interfaces of switchable $BiFeO_3$-$CoFe_2O_4$ multiferroic nanostructures' " [Appl. Phys. Lett. 96, 076101 (2010)]
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Andreev reflection in ferrimagnetic $CoFe_2O_4$ spin filters
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Consequences of embedding Ti^{4+} 3d(0) centers in $Pr_{0.50}Ca_{0.50}MnO_3$: Phase competition in $Pr_{0.50}Ca_{0.50}Mn_{1-x}Ti_xO_3$
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15. Martinez-Boubeta, C; Beltran, JI; Balcells, L; Konstantinovic, Z; Valencia, S; Schmitz, D; Arbiol, J; Estrade, S; Cornil, J; Martinez, B
Ferromagnetism in transparent thin films of MgO
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16. Gentils, A; Copie, O; Herranz, G; Fortuna, F; Bibes, M; Bouzehouane, K; Jacquet, E; Carretero, C; Basletic, M; Tafra, E; Hamzic, A; Barthelemy, A
Point defect distribution in high-mobility conductive $SrTiO_3$ crystals
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17. Baron-Gonzalez, AJ; Frontera, C; Garcia-Munoz, JL; Blasco, J; Ritter, C
Role of A-site cations in the metal-insulator transition in $Pr_{0.5}Ca_{0.5}CoO_{3-\gamma}$ ($\gamma \approx 0$)
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Strong magnetorefractive and quadratic magneto-optical effects in $(Pr_{0.4}La_{0.6})_{0.7}Ca_{0.3}MnO_3$
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(2010) *Journal of Solid State Chemistry*, 183 (5), pp. 1083-1089
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Tunnel transport through $CoFe_2O_4$ barriers investigated by conducting atomic force microscopy
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Vacancy defect and carrier distributions in the high mobility electron gas formed at ion-irradiated $SrTiO_3$ surfaces
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The effects of exchange bias on Fe-Co/MgO magnetic nanoparticles with core/shell morphology
(2010) *Journal of Physics - Condensed Matter*, 22 (2)

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(2010) *Thin Solid Films*, 518 (16), pp. 4710-4713

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Strong magnetorefractive effect in epitaxial $La_{2/3}Ca_{1/3}MnO_3$ thin films
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Physico-chemical Properties of Iron-oxide-dextrin Thin Films
(2010) *Revista de Chimie*, 61 (12), pp. 1207-1211

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Singler-chamber SOFCs based on gadolinia doped ceria operated on methane and propane
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On the role of solid solution randomness on phase coexistence in B-site substituted manganites
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Structural properties, magnetic and oxygen-vacancies order in $Y(Ba_{1-x}Sr_x)Co_2O_{5.5}$ layered cobaltites
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1.2 Semiconductors and molecular materials with electronic, opto-electronic and magnetic functionalities

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(2010) *Soft Matter*, 6 (8), pp. 1605-1612

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Tuning the local frictional and electrostatic responses of nanostructured $SrTiO_3$-surfaces by self-assembled molecular monolayers
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On the assessment of hydroxyapatite fluoridation by means of Raman scattering
(2010) *Journal of Chemical Physics*, 132 (24)

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Tuning the aspect ratio of silver nanospheroids embedded in silica
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Optical constants of $Cu(In_{1-x}Ga_x)_5Se_8$ crystals
(2010) *Journal of Applied Physics*, 107 (3)

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2.1 Superconducting materials and electrical power applications

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Evolution of Metal-Trifluoroacetate Precursors in the Thermal Decomposition toward High-Performance $YBa_2Cu_3O_7$ Superconducting Films
(2010) *Chemistry of Materials*, 22 (5), pp. 1686-1694

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Vortex dynamics at high ac amplitudes of trifluoracetate route grown $YBa_2Cu_3O_{7-x}$ - $BaZrO_3$ nanocomposites
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Effective silver-assisted welding of YBCO blocks: mechanical versus electrical properties
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(2010) *Journal of Sol-Gel Science and Technology*, 53 (2), pp. 347-352

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65. F.T. Dias a, V.N. Vieira, M.L. de Almeida, A.L. Falck, P. Pureur, J.L. Pimentel Jr., X. Obradors
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Current distribution in HTSC tapes obtained by inverse problem calculation
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2.2 Chemically and electrochemically generated materials for energy harvesting, storage, fuel use, sensing and catalysis

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Electronic Tuning of Two Metals and Colossal Magnetoresistances in $EuWO_{1+x}N_{2-x}$ Perovskites
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Fast and efficient hydrogen generation catalyzed by cobalt talc nanolayers dispersed in silica aerogel
(2010) *Journal of Materials Chemistry*, 20 (23), pp. 4875-4883

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High rate performance of lithium manganese nitride and oxynitride as negative electrodes in lithium batteries
(2010) *Electrochemistry Communications*, 12 (2), pp. 315-318

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