MINISTERIO
DE ECONOMÍA
Y COMPETITIVIDAD

CSIC
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS
INSTITUTO DE CIENCIA DE MATERIALES
DE MADRID (ICMM)

Dear Magnetic Colleagues,

As every two years by the springtime, the one-day meeting about the activities on magnetism and magnetic materials will be shortly held in our Institute of Materials Science of Madrid. The main objective is to make visible those activities as well as to promote eventual collaborations among departments and lines of research. As a matter of fact, one can realize the multidisciplinary character of magnetism as it develops in various departments of the institute, from theory to applied research.

The 5th edition of this series of biannual spring meetings will be held on 23rd May 2018, starting at 9:30 h in the Salón de Actos with the program detailed below. This time we have introduced some modifications with regards to previous editions. First, the allotted time of each oral presentation has been extended at the expense of its total number to allow for a kind of tutorial lectures covering different emerging and topical areas in magnetism. Then, we have incorporated a poster session intended to promote more personal straightforward discussions among participants. We also expect that this forum could be profited as the starting point for potential actions or coordinated projects.

Finally, as in previous meetings, we count on the participation of few outstanding contributions of well known scientists from other institutions whose participation is kindly acknowledged.

We kindly invite all scientists at the ICMM and neighbouring research centers to attend and actively participate in the 5th Magnetism Spring Meeting.

Carmen Muñoz and Manuel Vazquez

PS.- If you feel that your contribution is not yet included, please go ahead and just send us a short note with indication of title and authors.

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"5th Magnetism Spring Meeting"

Instituto de Ciencia de Materiales de Madrid, CSIC

Salón de Actos, Wednesday May 23rd, 2018

9:30 Introduction (C. Muñoz, M. Vazquez)

9:40 *"Magnetic Skyrmionic Polarons",* Luis Brey (ICMM/CSIC)

10:25 "*Direct Observation of Magnetic Domains by XMCD–PEEM in Cylindrical Nanowires"*, Rafael Perez del Real (ICMM/CSIC)

11:10 Coffee Break & Posters

12:45 "*Nudging Nature: An Industry-Academic Partnership to Create a New Permanent Magnet*", Laura H. Lewis (Northeastern University, Boston)

13:30 Lunch

15:00 *"Thirty years of Spintronics",* Jose Luis Prieto (ISOM/UPM, Madrid)

15:45 "*Magnetism and superconductivity, a complicated relation*", Leni Bascones (ICMM/CSIC)

16:30 Final Remarks

Posters.-

1.- *"Investigation of magnetic coupling in FePt/spacer/FePt trilayers and in nanometer scale Cobalt/Permalloy magnetic antidots"*, A. Kaidatzis, R. Alvaro, F. Béron, R.P. del Real, J.L. Palma, E.M. Palmero, G. Giannopoulos, G. Varvaro, G. Dimitrakopulos, V. Psycharis, A.M. Testa, G. Barucca, T. Karakostas, P. Komninou, M.F. Velo, L.C.C. Arzuza, J. Escrig, K.R. Pirota, M. Vázquez, D. Niarchos and **J.M. Garcia-Martin**

2.- "*Competing Ga distributions at the second magnetostriction peak of Galfenol",* **S. Gallego** and J. Cerdá

3.- *"Understanding magnetic properties in nanostructures: from growth to hysteresis simulations*", E. Navarro, M. Sánchez-Agudo, M. Alonso, A. Ruiz, C. Magen, U. Urdiroz, F. Cebollada, L. Balcells, B. Martínez, **J.M. González** and F.J. Palomares

4.- "*A labile set of materials for hysteretic control: ultrathin amorphous, relaxed and crystallized FeB*", **U. Urdiroz**, E. Navarro, M. Alonso, A. Ruiz, M. Sánchez-Agudo, G. Martínez-Criado, F. Cebollada, F.J. Palomares and J.M. González

5.- "*Spin caloritronics in bilayer graphene flakes*", **L. Chico**, L. Rosales, P. Orellana and M. Pacheco

6.- "A*n environmentally friendly approach to extracting heavy metals from contaminated soils and water*", **E. Mazario**, J. Stémper, A. Mayoral, C. Lion, R. Losno, T. Le-Gall and M. Hémadi

7.- "*Magnetoliposomes for biomedical applications*", **M.E.F. Brollo**, S. Veintemillas-Verdaguer and M.P. Morales

8.- *"Ultrarapid quenched magnetic alloys for technological applications",* **E. Calle**, T. Sánchez, M. Vázquez and R.P. del Real

9.- "*Nanostructuration and phase transformation in gas-atomized and flash-milled MnAl(C) permanent magnet material: opening a new path to advanced 3D-printing technology*", J. Rial, E.M. Palmero, J. de Vicente, J. Camarero, P. Švec, P. Švec Sr. and **A. Bollero**

10.- "*Magnetization pinning in modulated nanowires: from topological protection to the Corkscrew mechanism",* **J.A. Fernandez-Roldan**, R. Perez del Real, C. Bran, M. Vazquez and O. Chubykalo-Fesenko

11.- *"Low Thermal Conductivity in CoSb3 Skutterudites Synthesized by High Pressure",* **F. Serrano-Sánchez**, J. Prado-Gonjal, N.M. Nemes, N. Biskup, M. Varela, O.J. Dura, J.L. Martínez, M.T. Fernández-Díaz, F. Fauth and J.A. Alonso

12.- "*Unraveling Magnetism in bare Au Nanoparticles",* **E. Navarro**, L. Martínez, R. Fernández-Ruiz, A. Mayoral, M. García-Hernández and Y. Huttel

13.- "*Non-standard MFM imaging: probes and methods",* **M. Jaafar**, E. Berganza and A. Asenjo

14.- *"Tunable correlated-electron phases in (111) LaAlO3-SrTiO3 heterostructure",* **J.I. Beltrán** and M.C. Muñoz

15.- *"MFM imaging of skyrmions at room temperature",* **E. Berganza**, M. Jaafar, M. Goiriena-Goikoetxea, J. Pablo-Navarro, A. García-Arribas, K. Gusliyenko, C. Magén, J.M. de Teresa, O. Chubykalo-Fesenko and A. Asenjo