

List of publications

The work of this Ph. D. Thesis has been published in the following articles:

1. Fèlix Casanova, Xavier Batlle, Amílcar Labarta, Jordi Marcos, Lluís Mañosa, and Antoni Planes
Entropy change and magnetocaloric effect in $Gd_5(Si_xGe_{1-x})_4$
Physical Review B **66**, 100401(R) (2002).
2. Fèlix Casanova, Xavier Batlle, Amílcar Labarta, Jordi Marcos, Lluís Mañosa, and Antoni Planes
Scaling of the entropy change at the magnetoelastic transition in $Gd_5(Si_xGe_{1-x})_4$
Physical Review B **66**, 212402 (2002).
3. Fèlix Casanova, Xavier Batlle, Amílcar Labarta, Jordi Marcos, Lluís Mañosa, and Antoni Planes
Change in entropy at a first-order magnetoelastic phase transition: Case study of $Gd_5(Si_xGe_{1-x})_4$ giant magnetocaloric alloys
Journal of Applied Physics **93**, 8313 (2003).
4. Jordi Marcos, Fèlix Casanova, Xavier Batlle, Amílcar Labarta, Antoni Planes, and Lluís Mañosa
A high-sensitivity differential scanning calorimeter with magnetic field for magnetostructural transitions
Review of Scientific Instruments **74**, 4768 (2003).
5. Fèlix Casanova, Amílcar Labarta, Xavier Batlle, Jordi Marcos, Lluís Mañosa, Antoni Planes, and Sophie de Brion
Effect of the magnetic field on the magnetostructural phase transition in $Gd_5(Si_xGe_{1-x})_4$
Physical Review B, submitted.
6. Fèlix Casanova, Amílcar Labarta, Xavier Batlle, Jordi Marcos, Lluís Mañosa, Antoni Planes, and Sophie de Brion
Short-range antiferromagnetism in Ge-rich magnetocaloric $Gd_5(Si_xGe_{1-x})_4$

alloys

Physical Review B, submitted.

7. Fèlix Casanova, Amílcar Labarta, Xavier Batlle, Eduard Vives, Jordi Marcos, Lluís Mañosa, and Antoni Planes
Dynamics of the magnetostructural phase transition in $Gd_5(Si_xGe_{1-x})_4$
The European Physical Journal B, invited paper, submitted.

Other articles related to this work are:

1. Jordi Marcos, Antoni Planes, Lluís Mañosa, Fèlix Casanova, Xavier Batlle, Amílcar Labarta, and Benjamín Martínez
Magnetic field induced entropy change and magnetoelasticity in Ni-Mn-Ga alloys
Physical Review B **66**, 224413 (2002).
2. Jordi Marcos, Lluís Mañosa, Antoni Planes, Fèlix Casanova, Xavier Batlle, and Amílcar Labarta
Multiscale origin of the magnetocaloric effect in Ni-Mn-Ga shape-memory alloys
Physical Review B **68**, 094401 (2003).
3. Jordi Marcos, Antoni Planes, Lluís Mañosa, Fèlix Casanova, Xavier Batlle, Amílcar Labarta, and Benjamín Martínez
Magnetic field induced entropy change and magnetoelasticity in Ni-Mn-Ga alloys
Journal of Magnetism and Magnetic Materials, accepted.
4. Jordi Marcos, Lluís Mañosa, Antoni Planes, Fèlix Casanova, Xavier Batlle, Amílcar Labarta, and Benjamín Martínez
Magnetocaloric and shape-memory effects in Ni-Mn-Ga ferromagnetic alloys
Journal de Physique IV, accepted.