

## PUBLICATIONS

1. P. Velasco and N. Rubin "Visual motion integration" (in preparation).
2. P. Velasco, J.A. Alonso, M.T. Casais, M.J. Martínez-Lope and J.L. Martínez "Mechanisms for magnetism and magnetoresistance in  $Tl_2Mn_2O_7$ -related pyrochlores" (in preparation).
3. P. Velasco, J.A. Alonso, M.T. Casais, M.J. Martínez-Lope and J.L. Martínez "Analysis of magnetotransport data of  $Tl_2Mn_2O_7$  pyrochlore: evidence for half-metallicity." **J. Phys.: Cond. Matter** 8725 **16** (2004).
4. M. Venkatesan, P. Velasco, J.A. Alonso, J.L. Martínez and J.M.D. Coey "Powder magneto-resistance of  $Tl_2Mn_2O_7$  related compounds." **J. Phys.: Cond. Matter** 3465 **16** (2004).
5. A. P. Douvalis, M. Venkatesan, P. Velasco, C. B. Fitzgerald, and J. M. D. Coey "Combustion synthesis of the magnetoresistive double perovskite  $(Ba_{1.6}Sr_{0.4})FeMoO_6$ ." **J. App. Phys.** 8071 **93** (2003).
6. P. Velasco, J.A. Alonso, V.G. Tissen, W.G. Marshall, M.T. Casais, M.J. Martínez-Lope and J.L. Martínez "Pressure effect in the structure, transport properties and magnetic interactions of  $Tl_2Mn_2O_7$  pyrochlore derivatives." **Phys. Rev. B.** 104403 **67** (2003).
7. P. Velasco, J.A. Alonso, M.T. Casais, M.J. Martínez-Lope, J.L. Martínez and M.T. Fernández-Díaz "Influence of charge-carrier density on the magnetic and magneto-transport properties of  $Tl_{2-x}Cd_xMn_2O_7$  pyrochlores ( $x \leq 0.2$ )." **Phys. Rev. B.** 174408 **66** (2002).
8. P. Velasco, J. Mira, F. Guinea, J. Rivas, J.A. Alonso and J.L. Martínez "First order transition and phase separation in colossal magnetoresistance pyrochlores." **Phys. Rev. B.** 104412 **66** (2002).
9. P. Velasco, J.A. Alonso, M.J. Martínez-Lope, M.T. Casais, J.L. Martínez "Manganese pyrochlores with colossal magnetoresistance." **High Pressure Research**, 563 - 568 **22** (2002).
10. V. Tissen, P. Velasco, J.L. Martínez, A. de Andrés, C. Prieto, J.A. Alonso, M.T. Casais, M.J. Martínez-Lope, "Pressure dependence of the transport and magnetic properties of colossal magnetoresistance  $Tl_2Mn_2O_7$  pyrochlore system." **High Pressure Research**, 143-146 **22** (2002).
11. P. Velasco, J.A. Alonso, M.J. Martínez-Lope, M.T. Casais, J.L. Martínez, M.T. Fernández-Díaz "Magnetic and transport properties of a Pb substituted  $Tl_2Mn_2O_7$  pyrochlore." **Journal of Magnetism and Magnetic Materials**, 725-728 **242-245**, (2002).
12. M.C. Viola, M.J. Martínez-Lope, J. A. Alonso, P. Velasco, J.L. Martínez, J.C. Pedregosa, R.E. Carbonio, M.T. Fernández-Díaz "Induction of colossal magnetoresistance in the double perovskite  $Sr_2CoMoO_6$ ." **Chem. Mater.** 812 **14** (2002).
13. P. Velasco, J.A. Alonso, M.J. Martínez-Lope, M.T. Casais, J.L. Martínez, M.T. Fernández-Díaz "Synthesis and properties of  $Tl_2Mn_{2-x}Ti_xO_7$  pyrochlores with colossal magnetoresistance." **J. Phys.: Cond. Matter.** 10991 **13** (2001).
14. P. Velasco, J.A. Alonso, M.J. Martínez-Lope, M.T. Casais, J.L. Martínez, M.T. Fernández-Díaz, J.M. de Paoli "Electron injection in Te-doped derivatives of  $Tl_2Mn_2O_7$  pyrochlore." **Phys. Rev. B.** 184436 **64** (2001).
15. J.A. Alonso, P. Velasco, M.J. Martínez-Lope, M.T. Casais, J.L. Martínez, M.T. Fernández-Díaz "A novel series of Cd-substituted  $Tl_2Mn_2O_7$  pyrochlores with unprecedented magnetoresistance." **Appl. Phys. Lett.** 3274-3276 **76** (2000).

16. J.A. Alonso, M.T. Casais, M.J. Martínez-Lope, J.L. Martínez, P. Velasco, A. Muñoz, M.T. Fernández-Díaz "Preparation, crystal structure, magnetic and magnetotransport properties of the double perovskite  $\text{Ca}_2\text{FeMoO}_6$ ." **Chem. Mater.** 161-168 **12** (2000).
17. J.A. Alonso, M.J. Martínez-Lope, M.T. Casais, P. Velasco, J.L. Martínez, M.T. Fernández-Díaz, J.M. de Paoli, "Enhancement of ferromagnetic coupling in Sb-substituted  $\text{Tl}_2\text{Mn}_2\text{O}_7$  pyrochlores." **Phys. Rev. B.** R15 024-027 **60** (1999).
18. M. Rodríguez, P. Velasco, C. Aroca, E. López, M.C. Sánchez, P. Sánchez, "Different mechanism of induced helical anisotropy in low-magnetostriction amorphous ribbons." **J. Magn. Magn. Mat.** 220-222 **177-181** (1998).

#### PRESENTATIONS AT CONFERENCES

19. P. Velasco and N. Rubin, "Perception of the Motion of a Rotating Ellipse." Poster at the **IV Vision Sciences Society Meeting**. Sarasota (FL) 30 April-5 May 2004.
20. P. Velasco, J.A. Alonso, V.G. Tissen, W.G. Marshall, M.T. Casais, M.J. Martínez-Lope, A. de Andrés, C. Prieto and J.L. Martínez, "The effect of pressure on the structure, transport properties and magnetic interactions in the  $\text{Tl}_2\text{Mn}_2\text{O}_7$ -related pyrochlores." Poster at the **Second National Meeting of Solid State Physics**. Calella (Spain) 6-8 February 2002.
21. P. Velasco, J.L. Martínez, J.A. Alonso, M.T. Casais and M.J. Martínez-Lope, "CMR in the pyrochlores  $\text{Tl}_2\text{Mn}_2\text{O}_7$ ." Presentation at the **Second Meeting of the Spanish Magnetoresistance Network**. Calella (Spain) 5 February 2002.
22. V. Tissen, P. Velasco, J.L. Martínez, A. de Andrés, C. Prieto, J.A. Alonso, M.T. Casais, M.J. Martínez-Lope, "Pressure dependence of the transport and magnetic properties of colossal magnetoresistance pyrochlore system." Presentation at the **XXXIX European High Pressure Meeting**. Santander (Spain) 16-19 September 2001.
23. P. Velasco, J.A. Alonso, M.J. Martínez-Lope, M.T. Casais, J.L. Martínez "Manganese pyrochlores with colossal magnetoresistance." Poster at the **XXXIX European High Pressure Meeting**. Santander (Spain) 16-19 September 2001.
24. P. Velasco, J.A. Alonso, M.J. Martínez-Lope, M.T. Casais, J.L. Martínez, M.T. Fernández-Díaz "Magnetotransport properties for  $\text{Tl}_{2-x}\text{Pb}_x\text{Mn}_2\text{O}_7$  pyrochlores." Poster at the **Joint European Magnetic Symposia**. Grenoble (France) 28 August-1 September 2001.
25. P. Velasco, J.L. Martínez, J.A. Alonso, M.T. Casais, M.J. Martínez-Lope, M.T. Fernández-Díaz "Direct experimental relation between low density carrier and CMR in  $\text{Tl}_2\text{Mn}_2\text{O}_7$  compounds." Presentation at the **18th General Conference of the Condensed Matter Division of the European Physical Society**. Montreux (Switzerland) 13-17 March 2000.
26. M. García-Hernández, A. de Andrés, L. Martín-Carrón, A. Muñoz-Martín, P.J. Velasco-Pérez, C. Prieto, J.L. Martínez, "Magnetic and optical properties of magnetoresistive manganese perovskites thin films with nanometric grains." Presentation at the **Eighth European Conference on Applications of Surface and Interface Analysis (ECASIA'99)**. Seville (Spain) 4-8 October 1999.
27. M. Rodríguez, P. Velasco, E. López, M.C. Sánchez, P. Sánchez, C. Aroca, "Mechanism of induction of large Barkhausen discontinuities in amorphous

ribbons.” Poster at the **International Conference on Magnetism (ICM'97)**. Cairns (Australia) 27 July-1 August 1997.

#### **INVITED TALKS**

- “Visual Motion Integration”, at the **New York State Psychiatric Institute**, December 2004.
- “Powder Magnetoresistance of  $Tl_2Mn_2O_7$  related compounds”, at **Columbia University** (Applied Physics Department), 2 December 2004.
- “Visual Motion Integration”, at **Princeton University** (Physics Department), 18 July 2004.