

ARTICLES IN JOURNALS - 1993.

A.- Superconducting Oxides.

1.- Electrochemical oxidation of lanthanum cuprates. Superconductivity versus thermal treatment in $\text{La}_2\text{CuO}_4+d$.

Physica C, vol. 216 - (1993), p. 478-490.

N. Casañ-Pastor, P. Gómez-Romero, A. Fuertes, J.M. Navarro, M.J. Sanchis, and S. Ondoño.

2.- Lead substitution in 30 K-superconductor $\text{Bi}_2\text{Sr}_4-y\text{Cu}_2\text{CO}_3\text{O}_8-d$.

Physica C, vol. 217 - (1993), p. 27-33.

D. Pelloquin, M.T. Caldés, C. Michel, A. Maignan, M. Hervieu, and B. Raveau.

3.- $\text{YBa}_2\text{Cu}_3\text{O}_7-d$ wires by electrodeposition of metallic elements and by electrophoresis.

Solid State Ionics, vol. 66 - (1993), p. 241-246.

N. Casañ-Pastor, P. Gómez-Romero, A. Fuertes, and M. Brossa.

4.- Towards the synthesis of layered perovskites. Synthesis, structure and magnetic properties of $\text{La}_2\text{CuTiO}_6$.

Solid State Ionics, vol. 67 - (1993), p. 603-608.

P. Gómez-Romero, M.R. Palacín, N. Casañ, A. Fuertes, and B. Martínez.

5.- Synthesis of a reduced niobium "blue" with a layered perovskite structure.

Solid State Ionics, vol. 63-65 - (1993), p. 424-428.

P. Gómez-Romero, M.R. Palacín, N. Casañ, and A. Fuertes.

6.- Electrochemical oxidation of La_2CuO_4 . Influence of thermal treatment on superconductivity.

Solid State Ionics, vol. 63-65 - (1993), p. 938-944.

N. Casañ-Pastor, P. Gómez-Romero, A. Fuertes, and J.M. Navarro.

7.- Syntheses of the perovskite $\text{La}_2\text{CuTiO}_6$ by the ceramic, oxide precursors and Sol-Gel

methods, and study of the structure and Cu-Ti distribution by X-Ray and neutron diffraction.

Journal of Materials Chemistry, vol. 3 (11) - (1993), p. 1171-1177.

M.R. Palacín, J. Bassas, J. Rodríguez-Carvajal, and P. Gómez-Romero.

8.- The resistive transition of $\text{Sm}_{1.85}\text{Ce}_{0.15}\text{CuO}_4-y$ single crystal.

Physica C, vol. 213 - (1993), p. 403-420.

M.A. Crusellas, J. Fontcuberta, and S. Piñol

9.- Two-Band conduction in the normal state of a superconducting $\text{Sm}_{1.85}\text{Ce}_{0.15}\text{CuO}_4$ single crystal.

Physica C, vol. 210 - (1993), p. 221-227.

M.A. Crusellas, J. Fontcuberta, S. Piñol, M. Cagigal, and J.L. Vicent.

10.- Electron spin resonance of $\text{La}_{2-x}\text{Sr}_x\text{NiO}_4+d$.

Physica B, vol. 190 - (1993), p. 177-182.

R.D. Sánchez, M.T. Causa, M.J. Sayagués, J.M. González-Calbet, M. Vallet-Regí, and X. Obradors.

11.- Transport properties of $\text{Ln}_{2-x}\text{Ce}_x\text{CuO}_4-y$ single crystals under high pressure.

Physica C, vol. 209 - (1993), p. 537-548.

M.A. Crusellas, J. Fontcuberta, S. Piñol, J. Beille, and T. Grenet.

12.- The bismuth oxycarbonate $\text{Bi}_2\text{Sr}_6-x\text{Cu}_3\text{O}_{10}(\text{CO}_3)_2$. A new 40 K superconductor, second

member of the series $(\text{Bi}_2\text{Sr}_2\text{CuO}_6)_n(\text{Sr}_2\text{CuO}_2\text{CO}_3)_n'$.

Physica C, vol. 212 - (1993), p. 199-205.

D. Pelloquin, A. Maignan, M. Caldés, M. Hervieu, C. Michel, and B. Raveau.

13.- The bismuth oxycarbonate $\text{Bi}_2\text{Sr}_4\text{Cu}_2\text{CO}_3\text{O}_8$. A new superconductor with a Tc onset of

30 K.

Physica C, vol. 208 - (1993), p. 121-129.

D. Pelloquin, M. Caldés, A. Maignan, C. Michel, M. Hervieu, and B. Raveau.

14.- Bridgman growth and enhanced critical currents in textured $\text{YBa}_2\text{Cu}_3\text{O}_7-\text{YBa}_2\text{CuO}_5$

composites.

Journal of Alloys and Compounds, vol. 195 - (1993), p. 11-14.

S. Piñol, V. Gomis, B. Martínez, A. Labarta, J. Fontcuberta, and X. Obradors.

15.- Persistent magnetic flux and mapping of intergranular junctions in melt textured $\text{YBa}_2\text{Cu}_3\text{O}_7$.

IEEE Transactions on Applied Superconductivity, vol. 3 (1) - (1993), p. 1632-1635.

V. Gomis, D. Castello, I. Catalán, B. Martínez, J. Fontcuberta, and X. Obradors.

16.- Anisotropic magnetization and weak links in melt textured $\text{YBa}_2\text{Cu}_3\text{O}_7$.

Cryogenics, vol. 33 (1) - (1993), p. 39-45.

V. Gomis, I. Catalán, F. Pérez, B. Martínez, J. Fontcuberta, A. Fuertes, and X. Obradors.

- 17.- Field-Induced diamagnetic fluctuations at low temperature in Pr_{1.85}Ce_{0.15}CuO_{4-y} superconductor.
Europhysics Letters, vol. 24 (7) - (1993), p. 595-600.
L. Fábrega, J. Fontcuberta, X. Obradors, S. Piñol, U. Welp, and W. Crabtree.
- 18.- Transport and Magnetic properties of polycrystalline Nd_{1.85}Ce_{0.15}CuO_{4-y} under applied magnetic fields.
Journal of Applied Physics, vol. 73 (10) - (1993), p. 6639-6641.
V.B. Barbeta, C.H. Westphal, R.F. Jardim, M.B. Maple, and X. Obradors.
- 19.- Field induced decoupling of superconducting bands in oxygen deficient melt-textured YBa₂Cu₃O_{7-x}.
Applied Physics Letters, vol. 63 (22) - (1993), p. 3081-3083.
B. Martínez, V. Gomis, S. Piñol, I. Catalán, J. Fontcuberta, and X. Obradors.
- 20.- High-pressure transport properties of M_{2-x}Ce_xCuO_{4-y} single crystals.
Physical Review B, vol. 48 (1) - (1993), p. 615-618.
M.A. Crusellas, J. Fontcuberta, S. Piñol, J. Beille, and T. Grenet.
- 21.- ac response of the vortex system in a Pr_{0.85}Ce_{0.15}CuO_{4-y} single crystal.
Physical Review B, vol. 47 (22) - (1993), p. 15250-15255.
L. Fábrega, J. Fontcuberta, S. Piñol, C.J. van der Beek, and P.H. Kes.
- 22.- Metallic state and metal-insulator transition of NdNiO₃.
Physical Review B, vol. 48 (16) - (1993), p. 11666-11672.
X. Granados, J. Fontcuberta, X. Obradors, Ll. Mañosa, and J.B. Torrance.
- 23.- Pressure dependence of the metal-insulator transition in the charge transfer oxides RNiO₃ (R=Pr, Nd, Nd_{0.7}La_{0.3}).
Physical Review B, vol. 47 (18) - (1993), p. 12353-12356.
X. Obradors, L.M. Paulius, M.B. Maple, J.B. Torrance, A.I. Nazzal, J. Fontcuberta, and X. Granados.
- 24.- The cuprate Bi₆Ba₄Cu₂₀15: A Double Collapsed 2201-Type Structure.
Journal of Solid State Chemistry, vol. 107 - (1993), p. 117-126.
M. Hervieu, C. Michel, M.T. Caldés, A.Q. Pham, and B. Raveau.
- 25.- Interband transitions in YBa₂Cu₃O₇.
Physica C, vol. 192 - (1993), p. 473-480.
J. Kircher, J. Humlicek, M. Garriga, M. Cardona, D. Fuchs, H.U. Habermeier, O. Jepsen, S. Gopalan, O.K. Andersen, Y. Fang, U. Welp, K.G. Vandervoort, and G.W. Crabtree.
- 26.- Elastic flux creep in a Sm_{1.85}Ce_{0.15}CuO_{4-y} single crystal.
Physical Review B, vol. 48 (6) - (1993), p. 4223-4226.
M.A. Crusellas, J. Fontcuberta, and S. Piñol.
- 27.- Nature of magnetic relaxation in a superconducting Pr_{0.85}Ce_{0.15}CuO_{4-y} single crystal.
Physical Review B, vol. 48 (18) - (1993), p. 13840-13847.
L. Fábrega, B. Martínez, J. Fontcuberta, and S. Piñol.
- 28.- Rare-earth magnetic ordering in the R₂CuO₄ cuprates (R=Tb, Dy, Ho, Er and Tm).
Physica C, vol. 213 - (1993), p. 81-87.
X. Obradors, P. Visani, M.A. de la Torre, M.B. Maple, M. Tovar, F. Pérez, P. Bordet, J. Chenavas, and D. Chateigner.
- 29.- Weak ferromagnetism induced by the external field above T_N in GdZCuO₄.
Journal Applied Physics, vol. 73 (10) - (1993), p. 5710-5712.
L.B. Steren, A. Fainstein, M. Tovar, A. Rouco, F. Pérez, X. Obradors, J. Miras, J. Rivas, S.B. Oseroff, and Z. Fisk.

B.- Magnetic Properties of Materials

- 30.- Surface spin canting in BaFe₁₂O₁₉ fine particles.
Journal of Magnetism and Magnetic Materials, vol. 124 - (1993), p. 228-238.
X. Batlle, X. Obradors, M. Medarde, J. Rodríguez-Carvajal, M. Pernet, and M. Vallet-Regí.
- 31.- Metamagnetism in single-crystal Pr₂NiO₄.
Physical Review B, vol. 47 (10) - (1993), p. 5834-5840.
M.T. Fernández-Díaz, J.L. Martínez, J. Rodríguez-Carvajal, J. Beille, B. Martínez, X. Obradors, and P. Odier.
- 32.- Entropy change of martensite transformations in Cu-based shape-memory alloys.
Physical Review B, vol. 48 (6) - (1993), p. 3611-3619.
Ll. Mañosa, A. Planes, J. Ortín, and B. Martínez.
- 33.- Magnetic behavior of the BaFe_{4-2x}Sn_{2+x}CoxO₁₁ system: From cluster glass to kagomé phase.
Physical Review B, vol. 48 (22) - (1993), p. 16440-16448.
B. Martínez, F. Sandiumenge, I. Golosovski, S. Galí, A. Labarta, and X. Obradors.

C.- Synthesis, Characterization, and Properties of Inorganic and Organometallic Compounds

- 34.- Interactions between Delocalized and Localized Electrons in Heteropoly Blues

Molecular Engineering, vol. 3 - (1993), p. 141-155.

N. Casañ-Pastor and L.C. Baker.

35.- Crystal structure and magnetic properties of $K_5.5Na_{1.5}[PW_{10}Cu_2(H_2O)_2O_{38}].13H_2O$ Substituted Keggin heteropolytungstates of the type $PW_{10}Cu_2$ containing exchange-coupled coppers pairs.

Inorganic Chemistry, vol. 32 - (1993), p. 89-93.

C.J. Gómez-García, E. Coronado, P. Gómez-Romero, and N. Casañ-Pastor.

36.- A tetranuclear rhomblike cluster of manganese (II). Crystal structure and magnetic

properties of the heteropoly complex $K_{10}[Mn_4(H_2O)_2(PW_9O_{34})_2].20H_2O$.

Inorganic Chemistry, vol. 32 - (1993), p. 3378-3381.

C.J. Gómez-García, E. Coronado, P. Gómez-Romero, and N. Casañ-Pastor.

37.- Synthesis of [7,8-(PPh₂)₂-7,8-C₂B₉H₁₀]-: A ligand analogous to 1,2-bis (diphenylphosphino) ethane with a "built-in" negative charge.

Organometallics, vol. 2 (9) - (1993), p. 3766-3768.

F. Teixidor, C. Viñas, M.M. Abad, M. López, and J. Casabó.

38.- Molecular modelling of carboranes using distance restraints: The molecular dynamics

simulation of appended thioether macrocycles.

Journal of Chemical Society - Dalton Transactions, (1993), p. 1451-1461.

J.D. Holbrey, P.B. Iveson, J.C. Lockhart, N.P. Tomkinson, F. Teixidor, A. Romerosa,

C. Viñas, and J. Rius.

39.- Co-ordination of the crown thioether 2,5,8-trithia[9]-o-benzenophane (L1).

Synthesis

and crystal structures of $[CuL_1(Cl)]$ and $[NiL_2][BF_4]_2$.

Journal of Chemical Society - Dalton Transactions, (1993), p. 2969-2974.

Ll. Escriche, M.P. Almajano, J. Casabó, F. Teixidor, J. Rius, C. Miravittles, R. Kivekäs,

and

R. Sillampää.

40.- Mixed bridged, dinuclear copper (II) complexes with dinucleating, pyrazole derived ligands.

Inorganica Chimica Acta, vol. 208 - (1993), p. 167-171.

J. Pons, F.J. Sánchez, A. Labarta, J. Casabó, F. Teixidor, and A. Caubet.

41.- Trapping of a carbanionic intermediate in the reaction of alkynylalkoxy carbene

metal

(Cr) complexes and ethyl diethoxyacrylate.

Journal of Organometallic Chemistry, vol. 444 - (1993), p. C28-C30.

L. Jordi, J.M. Moretó, S. Ricart, J.M. Viñas, E. Molins, and C. Miravittles.

42.- Disordered crystal structure of 2,11-Dithia [3.3] metapara cyclophane.

Acta Chemica Scandinavica, vol. 41 - (1993), p. 1035-1037.

R. Kivekäs, M. Klinga, M.P. Almajano, F. Teixidor, and J. Casabó.

D.- New Organic Materials with Electric, Magnetic, and Chiral Properties.

43.- Hydrogen Bonds as a crystal design element for organic molecular solids with intermolecular ferromagnetic interactions.

Angewandte Chemie, vol. 32 (6) - (1993), p. 882-884.

E. Hernández, M. Mas, E. Molins, C. Rovira, and J. Veciana.

44.- Stable polyradicals with High-Spin ground states. 2. Synthesis and characterization of a

complete series of polyradicals derived from 2,4,6

Trichloro-[[α]],[[α]],[[α]],[[α]],[[α]]"- hexakis

(pentaclorophenyl) mesitylene with $S=1/2$, 1, and $3/2$ ground states.

Journal of the American Chemical Society, vol. 115 (1) - (1993), p. 57-64.

J. Veciana, C. Rovira, N. Ventosa, M.I. Crespo, and F. Palacio.

45.- 2,2'-Bithienyl derivatives: EPR investigation of their radical ions in solution, electrochemical properties, and crystal structures.

Journal of Organic Chemistry, vol. 58 (11) - (1993), p. 3091-3099.

C. Alemán, E. Brillas, A.G. Davies, Ll. Fajarí, D. Giró, L. Juliá, J.J. Pérez, and J. Rius.

46.- Synthesis and study of a stable polyradical macromolecule with an helical structure. A

poly (iminomethylene) with verdazyl radicals as side groups.

Synthetic Metals, vol. 55-57 - (1993), p. 1141-1146.

J. Bosch, C. Rovira, J. Veciana, C. Castro, and F. Palacio.

47.- Crystal structure of the semiconducting radical salt $BTDMTTF.AsF_6$.

Synthetic Metals, vol. 55-57 - (1993), p. 1944-1949.

E. Molins, J. Llorca, N. Santaló, J. Veciana, C. Rovira, and C. Miravittles.

48.- Synthesis, solid state reactivity and magneto-structural correlations of symmetric diradical diacetylenes.

Synthetic Metals, vol. 55-57 - (1993), p. 761-766.

E. Hernández, A. Galan, C. Rovira, J. Veciana, M. Mas, E. Molins, and C. Miravittles.