magnetic field (H aprox. 1 mG) and temperature (20 K <T<Tc) . We have obtained too from this analysis the critical current density in the range of temperature studied. Plots of the third harmonic against H are presented. We observed a shift of the maximum as temperature was varied.

S15-7 POWDER X-RAY DIFFRACTION STUDY OF DISILVER (1^+) PENTACYANONITROSYL FERRATE (2^-). V. Venegas, A. Gómez* and E. Reguera. IPN. Escuela Superior de Física y Matemáticas (ESFM). UP. A. López Mateos. Edificio 9. Col. Lindavista 07738, México DF. *C.N.I.C. P.O. Box 6990, La Habana Cuba.

Metal pentacyanonitrosylferrates, usually known as nitroprusside is a well studied family of coordination complexes. Disilver(1^+) pentacyanonitrosylferrate(2^-) is an important intermediate during the preparation of other members of this family of compounds. However, its structural characterization has not previously been reported. In this communication we present the study of disilver(1^+) pentacyanonitrosylferrate(2^-), $Ag_2[Fe(CN)_5NO]$, using XRD, IR spectroscopy, Mössbauer spectroscopy, thermogravimetric analysis and density measurements. The titled compound is monoclinic and its lattice parameters are: a=10.986(3) Å, b=6.4080(10) Å, c=7.4545(19) Å, $\alpha=\delta=90°$, $\beta=102.54°(2)$. IR spectra show characteristic bands of nitroprusside anion, CN stretching at 2100 cm^{-1} and NO stretching at 1900 cm^{-1}. Its ^{57}Fe Mössbauer spectra is a doublet with isomer shift (δ) of 0.008(2) mm/s (relative to sodium nitroprusside) and quadrupole splitting (Δ) of 1.779(4) mm/s.

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S15-8 SYNTHESIS AND CHARACTERIZATION OF Hg NITROPRUSSIDE, $Hg_2[Fe(CN)_5NO]$. V. Venegas and E. Reguera. IPN. Escuela Superior de Física y Matemáticas (ESFM). UP. A. López Mateos. Edificio 9. Col. Lindavista 07738, México DF.

Nitroprussides are important functional materials which have received an increasing attention in the last years. However, some members of this family remain poorly characterized. In this work, the synthesis and characterization by X-ray diffraction, IR and Mössbauer spectroscopies of $Hg_2[Fe(CN)_5NO]$ is reported. The titled compound crystallize in orthorhombic symmetry with lattice parameters: a=16.5947 (10) Å, b=12.3096 (9) Å, c=8.7585 (10) Å. The least-squares refinement unit cell gave figure of merit of M(20) = 34.9 and F(30) = 52.6. IR spectrum shown that the titled compounds is anhydrous and its Mössbauer parameters are typical of metal pentacyanonitrosylferrates. The cation ratio Hg/Fe (2/1) was determined by EDS measurements. A spatial group for this compound is also suggested.

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S15-9 TEMPERATURE DEPENDENCE OF THE LEVITATION HEIGHT OF A PERMANENT MAGNET OVER A SUPERCONDUCTING SAMPLE. Victor Sosa and Jorge Lugo. CINVESTAV-IPN Unidad Mérida , A.P. 73 Cordernex, C.P. 97310, Mérida Yucatán, México.

The levitation height of a small Sm-Co magnet over a superconducting YBaCuO pellet was measured. The sample had a critical temperature Tc - 85 K. The experiment was first conducted in typical conditions, i,e., in atrnospheric pressure at 77 K, both under zero-field-cooling (ZFC) and field-cooling (FC) conditions. Levitation experiments under FC conditions were performed also in vacuum and varying the sample temperature T in the range 20K<T<Tc. The levitation height h(T) was measured in this range. It was observed a monotonic increase of has T was lowered. The h(T=20K)/h(T=77K) ratio was about 2, Results were interpreted using models of full flux expulsion or penetration.

S15-10 A STUDY FOR THE SURFACE STRUCTURE OF RARE EARTH SUBSTITUTED DERIVATES OF MCM-41 MESOPORUS MOLECULAR SIEVES. Hernández V.,D. Cedeño C.L., Ramírez S.J. UNICAT, Fac. de Química, UNAM, México, D.F., MÉXICO

The application of Transmission Electron Microscopy (TEM) to study of the structure of mesoporous La-, Ce- and Sm-substituted derivates of MCM-41 which have been hidrothermally synthesized at 373 °K by an electrostatic assembly pathway using cetyltrimethylammonium cation as the templating agent show that all rare earth metal substituted products exhibit improved cristallynity and narrower pore size distribution relative to the enlargement of the hexagonal unit cell and an increase in the degree of crosslinking in the mesopore walls.

Transmission electron micrographs show hexagonal arrangement of uniform pores with particle size varies between 3 and 4 nm. Also, hexagonal electron diffraction patterns were well