

## Magnetic Properties of EuS Nanoparticles Synthesized by Thermal Decomposition of Molecular Precursors

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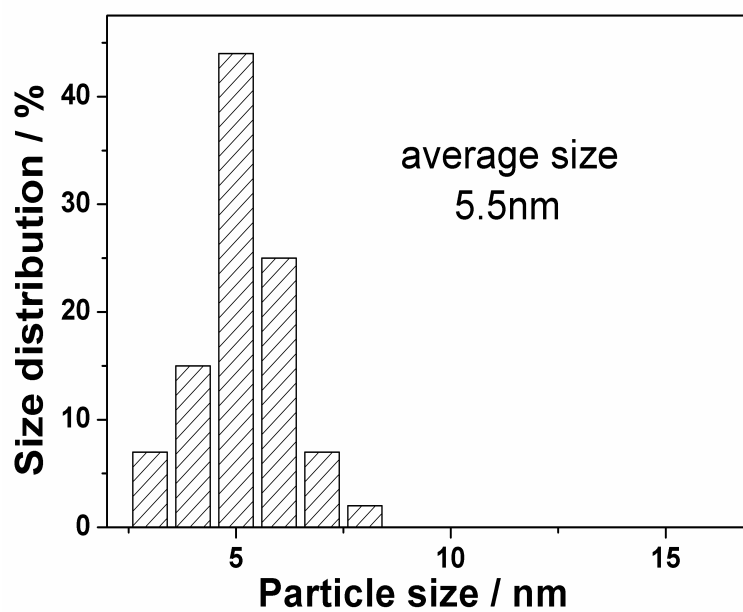
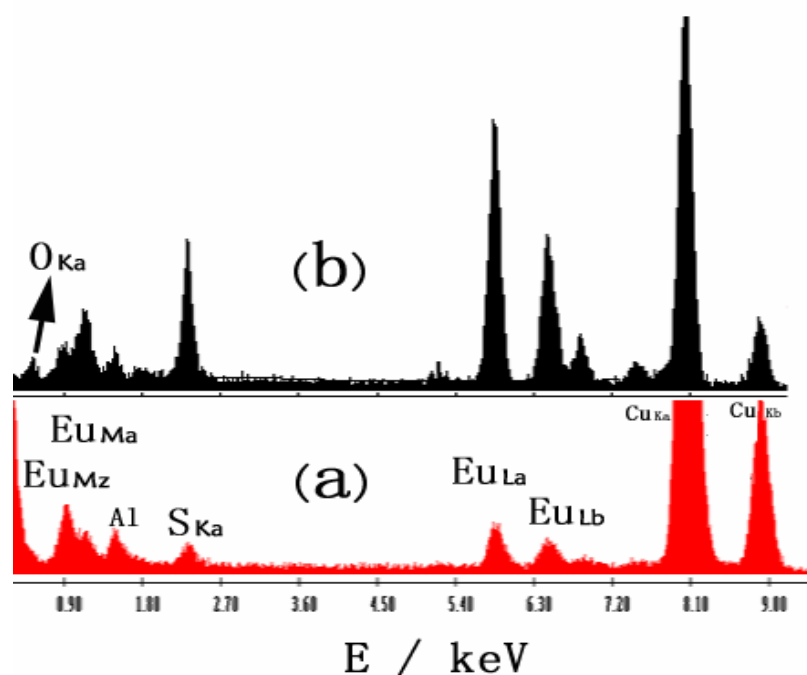
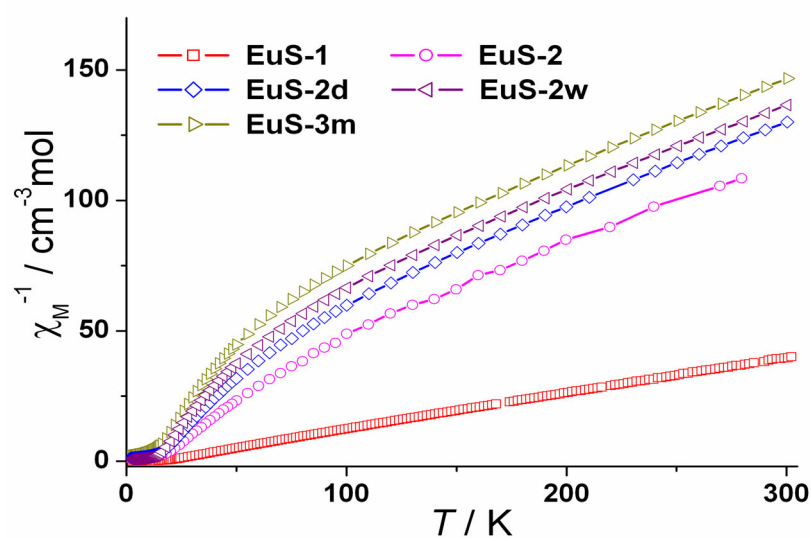


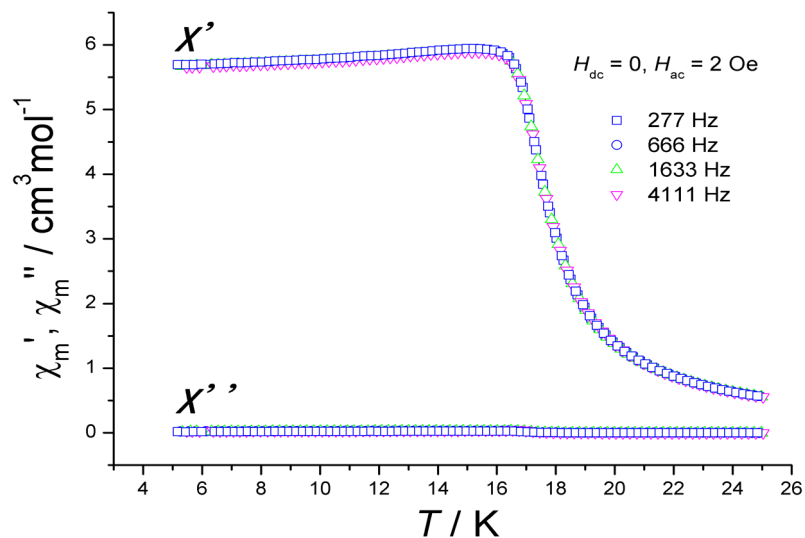
Figure 1S. Size distribution of sample *EuS-2*.



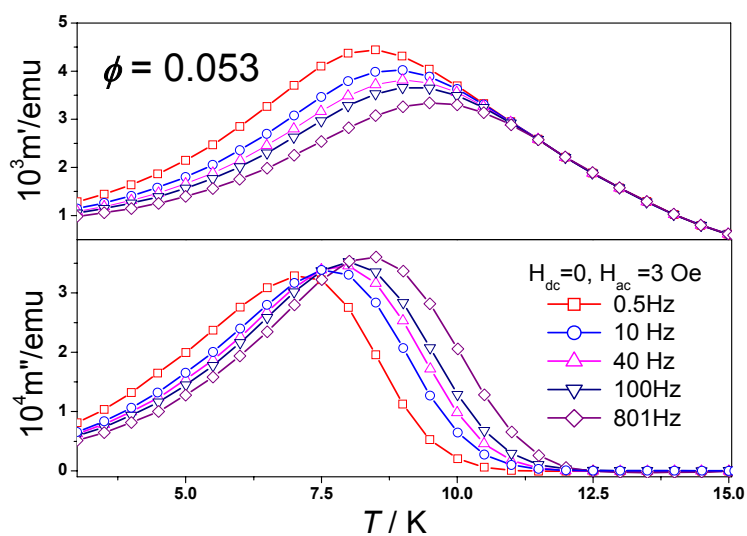
**Figure 2S.** Energy-dispersed X-ray (EDX) spectrum of *EuS-2* (a) and *EuS* put in air for one week (*EuS-2w*) (b). (The existence of Al is due to the sample platform).



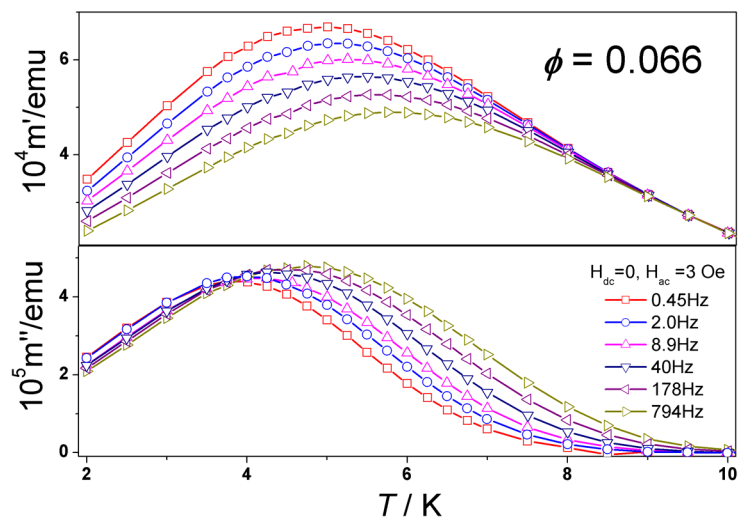
**Figure 3S.** Temperature dependence of the inverse magnetic susceptibility  $\chi^{-1}$  of *EuS* nanoparticles.



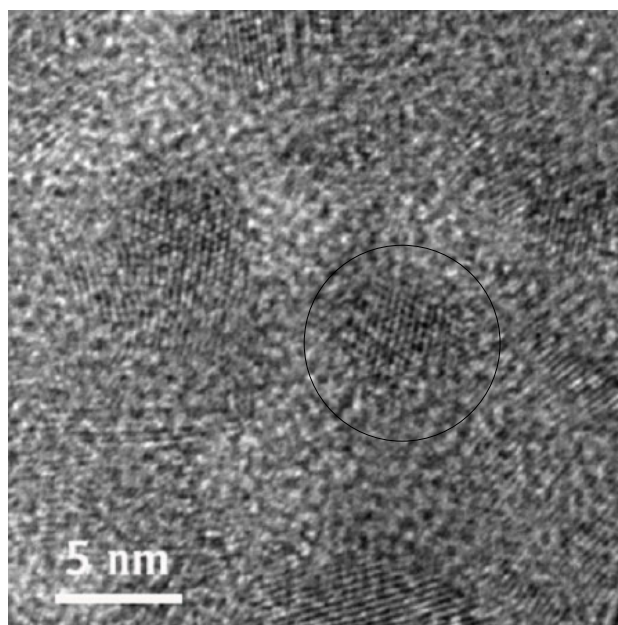
**Figure 4S.** Thermal variation of the ac susceptibility with a zero DC magnetic field at different frequencies of the oscillating magnetic field (2Oe) for *EuS-1*.



**Figure 5S.** Thermal variation of the ac susceptibility with a zero DC magnetic field at different frequencies of the oscillating magnetic field (3Oe) for *EuS-2*.



**Figure 6S.** Thermal variation of the ac susceptibility with a zero DC magnetic field at different frequencies of the oscillating magnetic field (3Oe) for *EuS-2m*.



**Figure 7S.** HRTEM images of *EuS-2* put in air for one month.