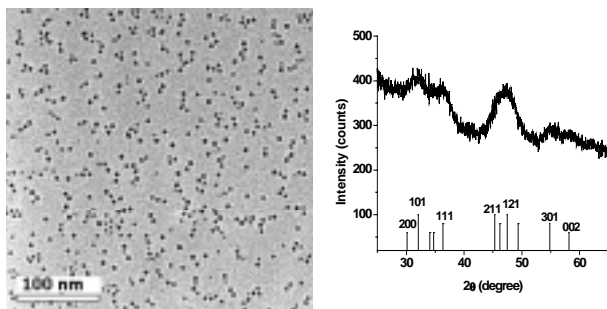
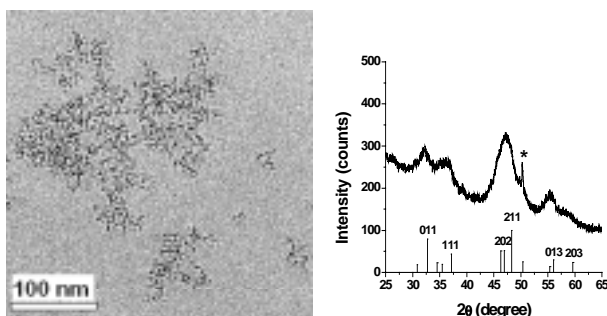


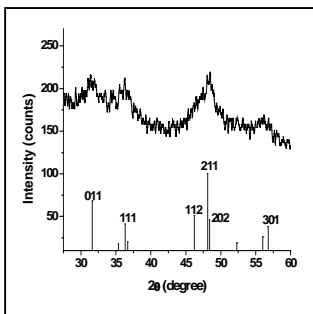
**Figure 1.** A TEM micrograph of nanocrystalline MnP synthesized using  $\text{Mn}_2(\text{CO})_{10}$  and TOP (trioctylphosphine) as the phosphide source. The synthesis was carried out at 280 °C with dodecylamine as the capping agent.



**Figure 2.** (A) A TEM micrograph showing 5.1(3) nm MnP nanoparticles synthesized at 220 °C using  $\text{Mn}_2(\text{CO})_{10}$  and MA (Mn:MA = 1:0.4 mol) as capping agent at X40 K. (B) The corresponding powder X-ray diffraction pattern of MnP nanoparticles (the line diagram is for JCDPS # 07-0384).



**Figure 3.** (A) A TEM micrograph showing 3.2(3) nm FeP nanoparticles synthesized using  $\text{Fe}(\text{CO})_5$  and DA as the capping agent at X40 K. (B) The corresponding powder X-ray diffraction pattern of FeP nanoparticles (the line diagram is for JCDPS # 39-0809). The (\*) denotes a background peak from the sample holder.



**Figure 4.** Powder X-ray diffraction pattern of CoP nanoparticles (the line diagram is for JCPDS # 29-0497).

Table 1. Summary of magnetic data for MnP nanoparticle samples.

Size (nm)	T <sub>b</sub> (K) 500 Oe	H <sub>c</sub> (Oe) 5 K	M <sub>s</sub> * (emu/mol) 5K	M <sub>r</sub> (emu/mol) 5K
5.1(5)	60.8	6000	3420	890
6.7(3)	74.3	4860	7620	930

\*Obtained from zero extrapolation of the plot of M vs. 1/H.