

Phase purity of hydrazide **1**

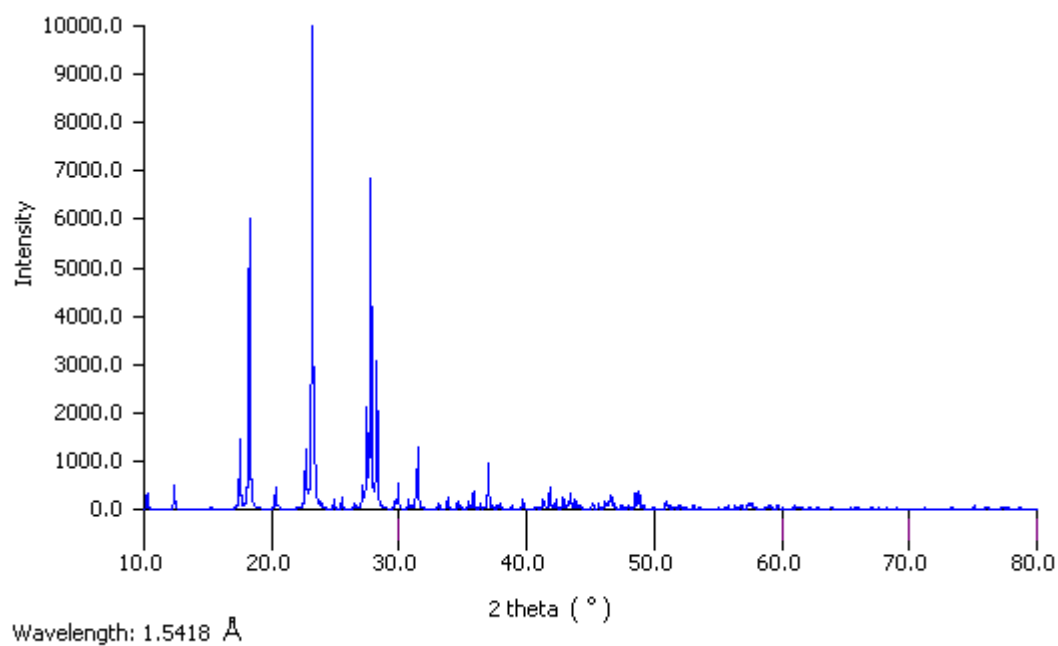


Fig. 1. Compound **1**. Room temperature. Powder X-ray diffraction pattern calculated from single crystal X-ray data. CuK α radiation.

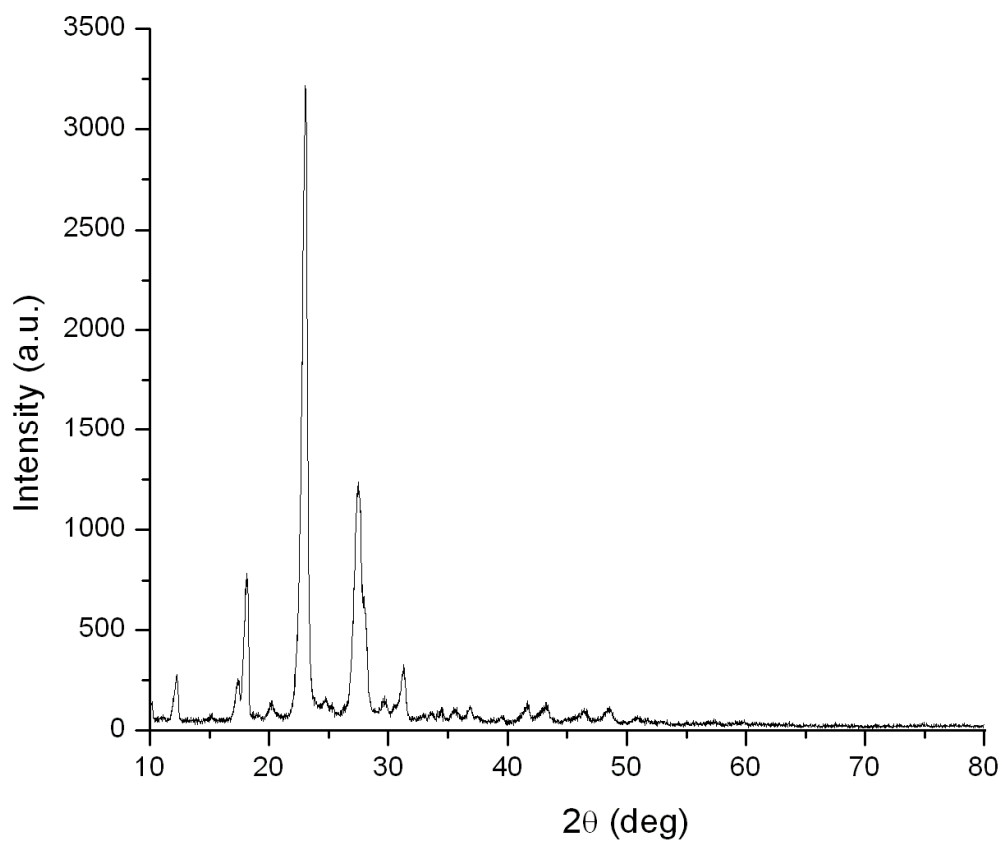


Fig. 2. Compound **1**. X-ray diffraction pattern of the as prepared powders. Room temperature, CuK α radiation.

Phase purity of hydrazide **2**

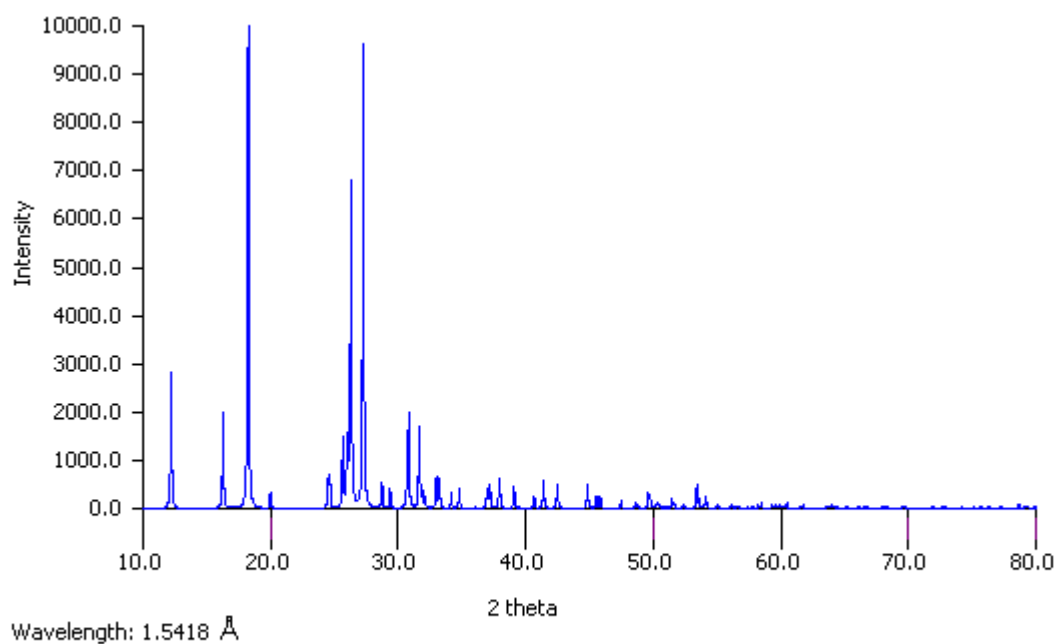


Fig. 1. Compound **2**. Room temperature. Powder X-ray diffraction pattern calculated from single crystal X-ray data. CuK α radiation.

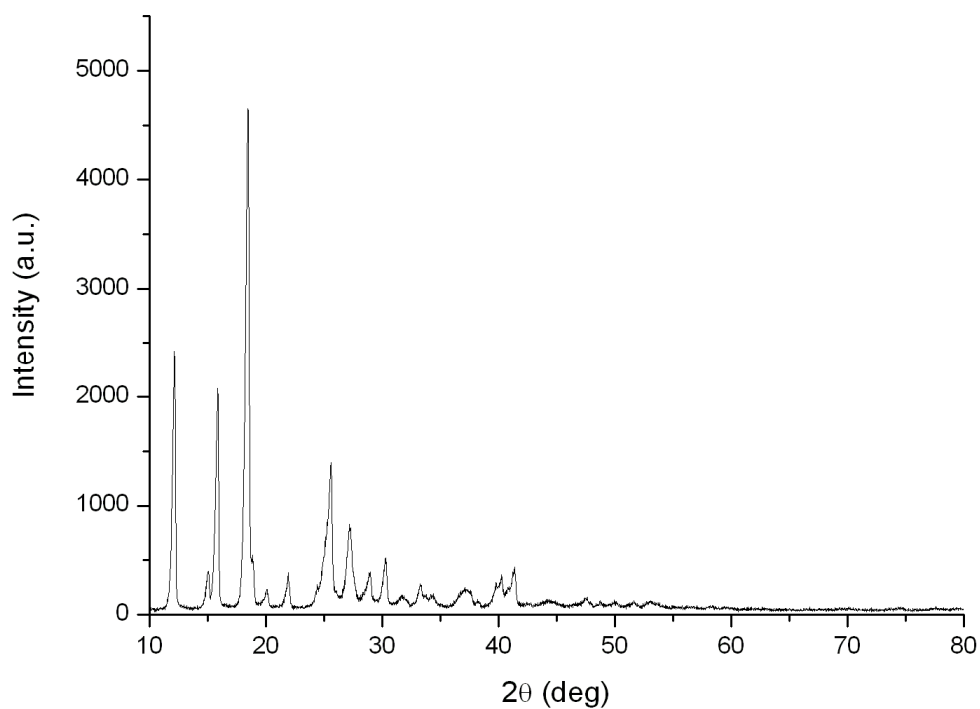


Fig. 2. Compound **2**. Room temperature. X-ray diffraction pattern of the as prepared powders. CuK α radiation.

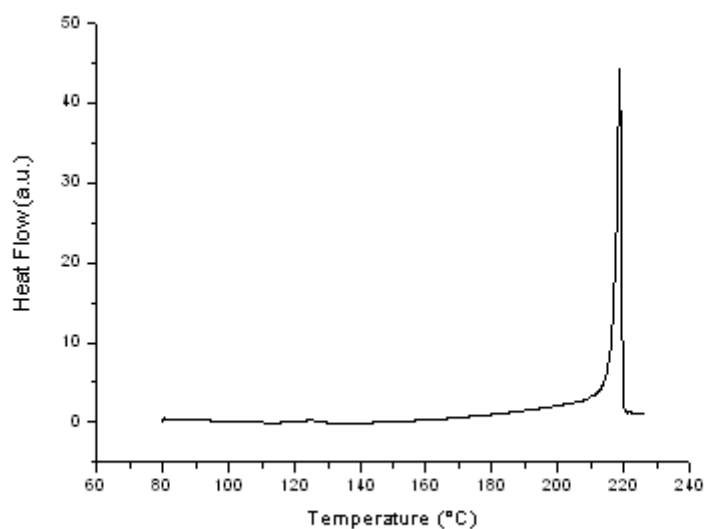


Fig. 3. DSC thermogram, on heating, of a crystallized sample of **2**.

The small endothermic peak between 120 °C and 140 °C is enhanced in the figure below (Fig. 4), and corresponds to a crystal-crystal transition.

Actually, as proved by optical microscopy under polarized light, the as prepared sample contains crystals of two different habits: large plates (which were selected for the single crystal analysis) and small rods. According to optical observations, the crystal-crystal transition at 125 °C is given only by the rods.

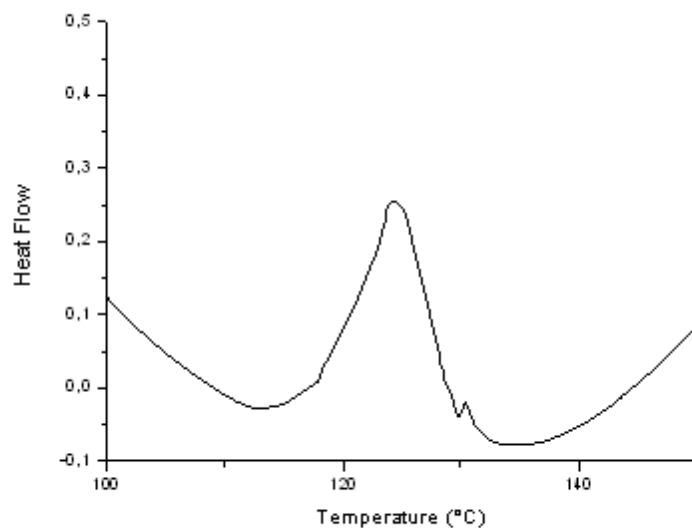


Fig. 4

The powder X-ray diffraction pattern of Fig. **2** was recorded from a sample containing predominantly rod shaped crystals.

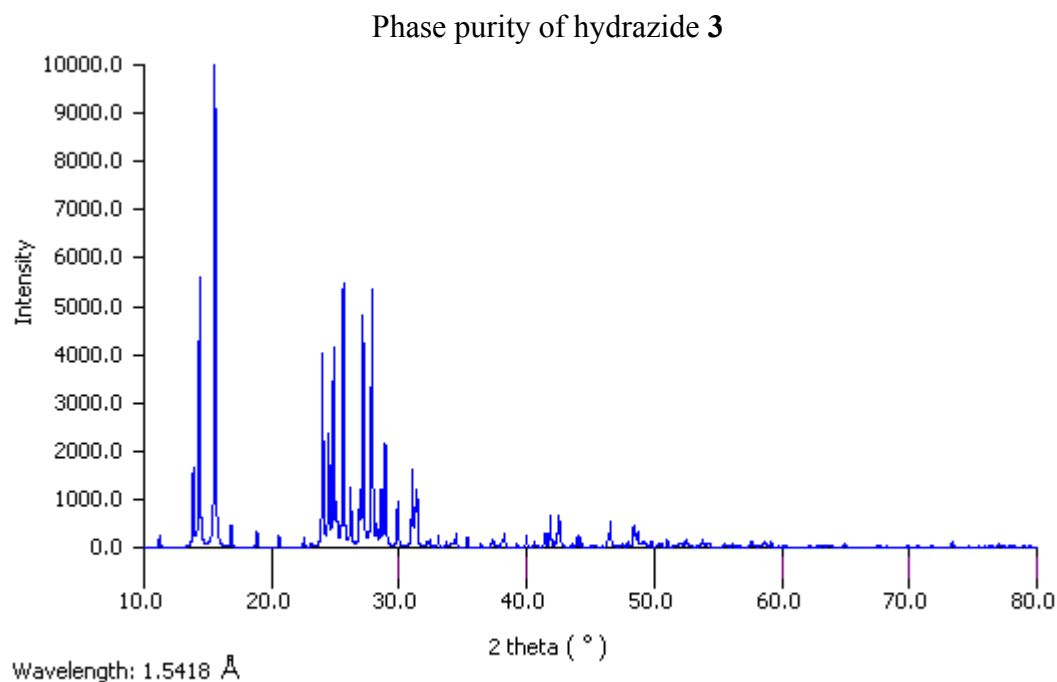


Fig. 1. Compound **3**. Room temperature. Powder X-ray diffraction pattern calculated from single crystal X-ray data. CuK α radiation.

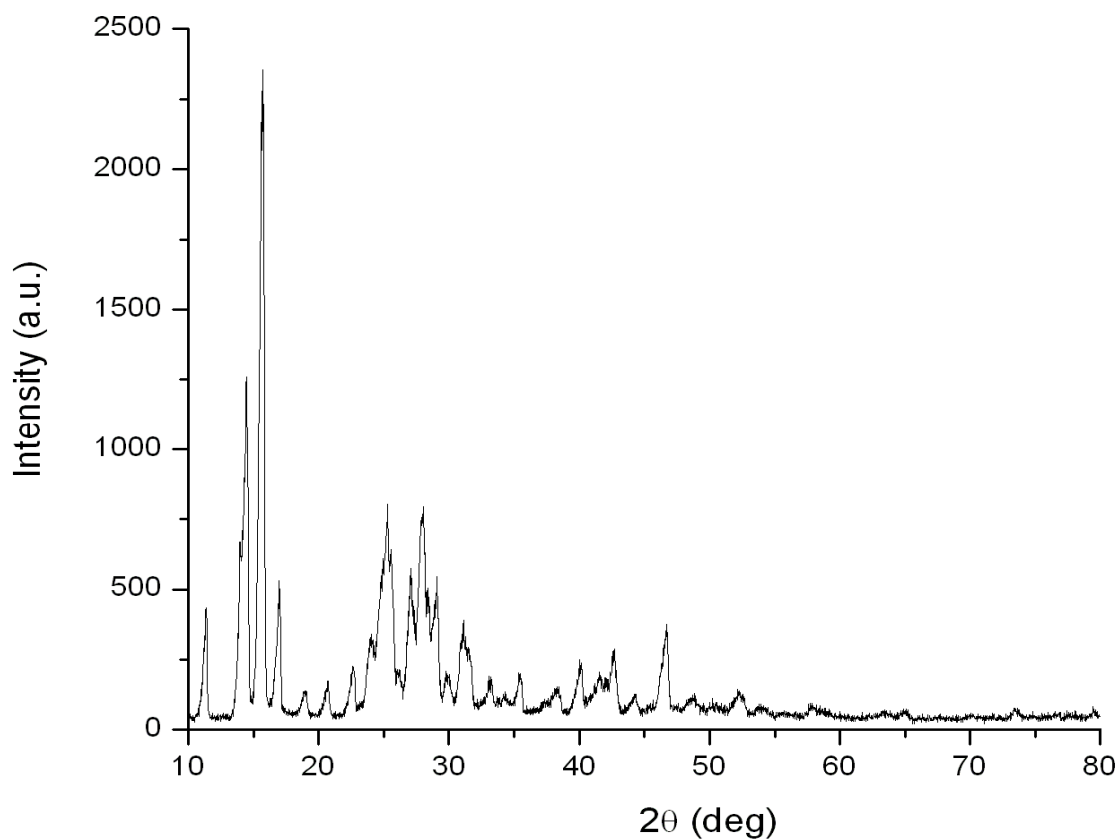


Fig. 2. Compound **3**. Room temperature. X-ray diffraction pattern of the as prepared powders. CuK α radiation.

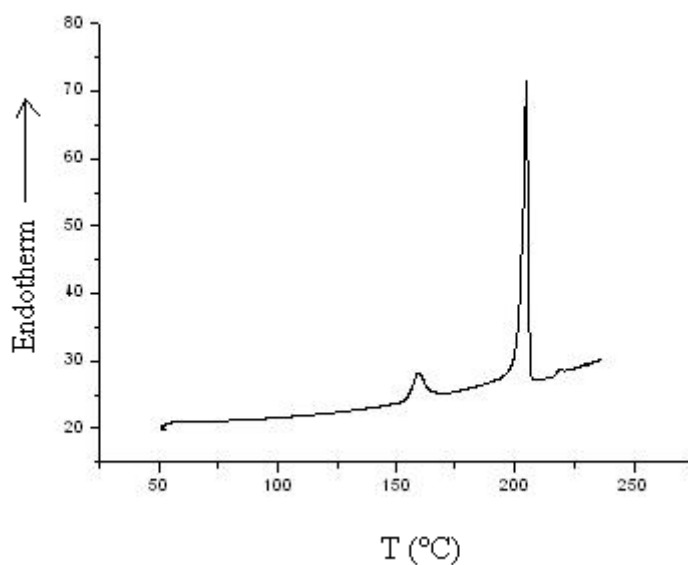


Fig. 3. Compound **3**. DSC thermogram, on heating, of the as prepared powders. Heating rate 10 K/min.

A crystal-crystal phase transition is evident at 160 °C; so the as prepared sample contains two different crystal phases and this accounts for the difference in the X-ray diffraction spectra of Figs 1 and 2.

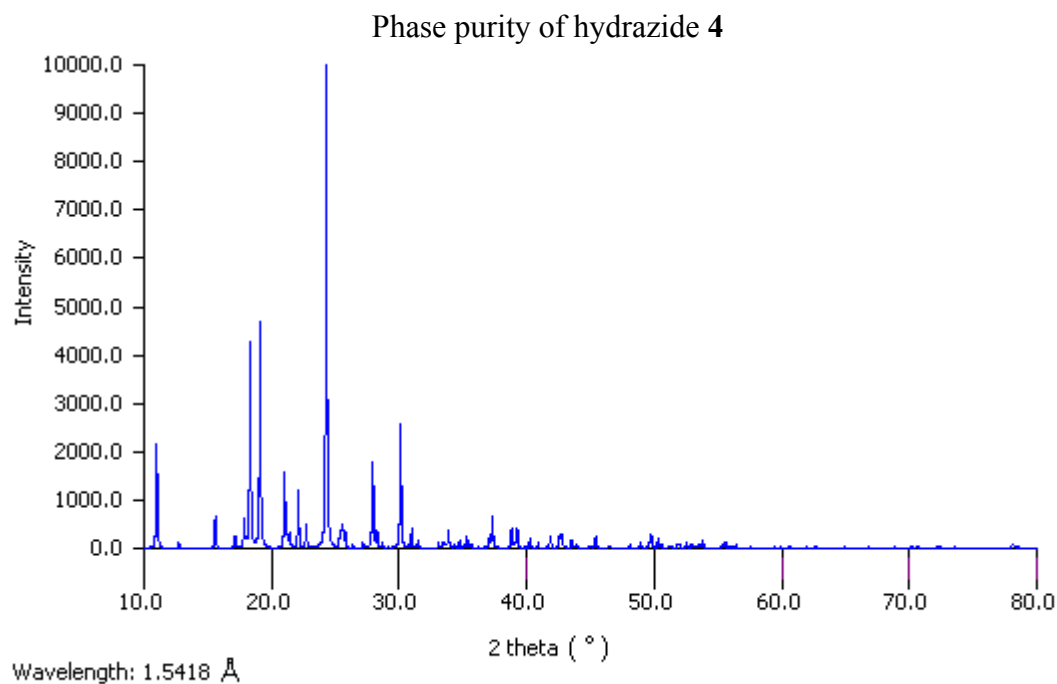


Fig. 1. Compound **4**. Room temperature. Powder X-ray diffraction pattern calculated from single crystal X-ray data. CuK α radiation.

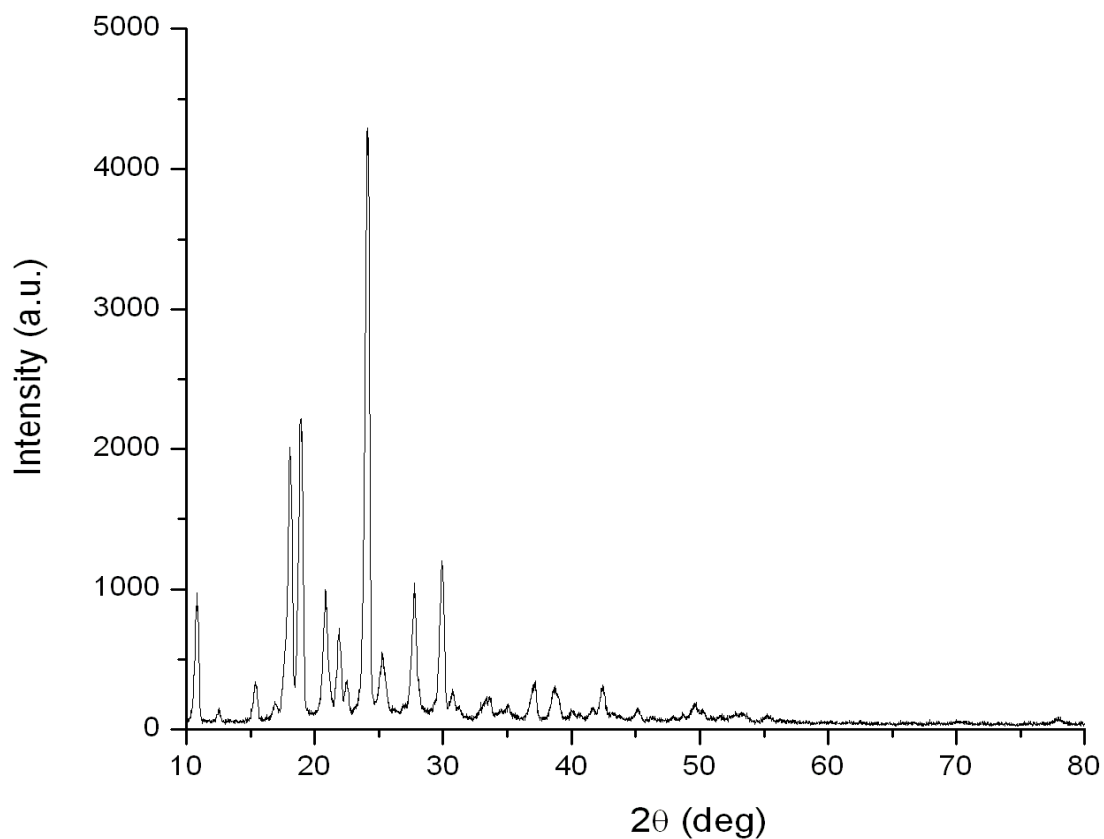


Fig. 2. Compound **4**. Room temperature. X-ray diffraction pattern of the as prepared powders. CuK α radiation.