SnS DEPOSITION BY CHEMICAL SOLUTION ROUTE

Tin and sulfur binary compounds (Sn_xS_y) represent a rising class of electronic materials, that have been studied for some decades [1]. These materials are semiconductors. From all of tin sulfides, SnS is the most popular, because of non-toxicity [2], good chemical stability [3], high absorption coefficient [1], and typical *p*-type conductivity [2]. In addition, SnS has a multiple nature because of different structures (orthorhombic and cubic) by changing chemical parameters [2,4,5]. Moreover, different phases have their individual bandgap energy; for orthorhombic around 1.13 eV and for cubic around 1.73 eV [2]. So it shows the possibility to change the bandgap energy by changing the structure of SnS. Because of easy synthesis, the abundance of precursor elements, good properties have a possibility to use in a lot of areas, such as capacitors [6], solar cells [7], optoelectronic devices [8] and etc.

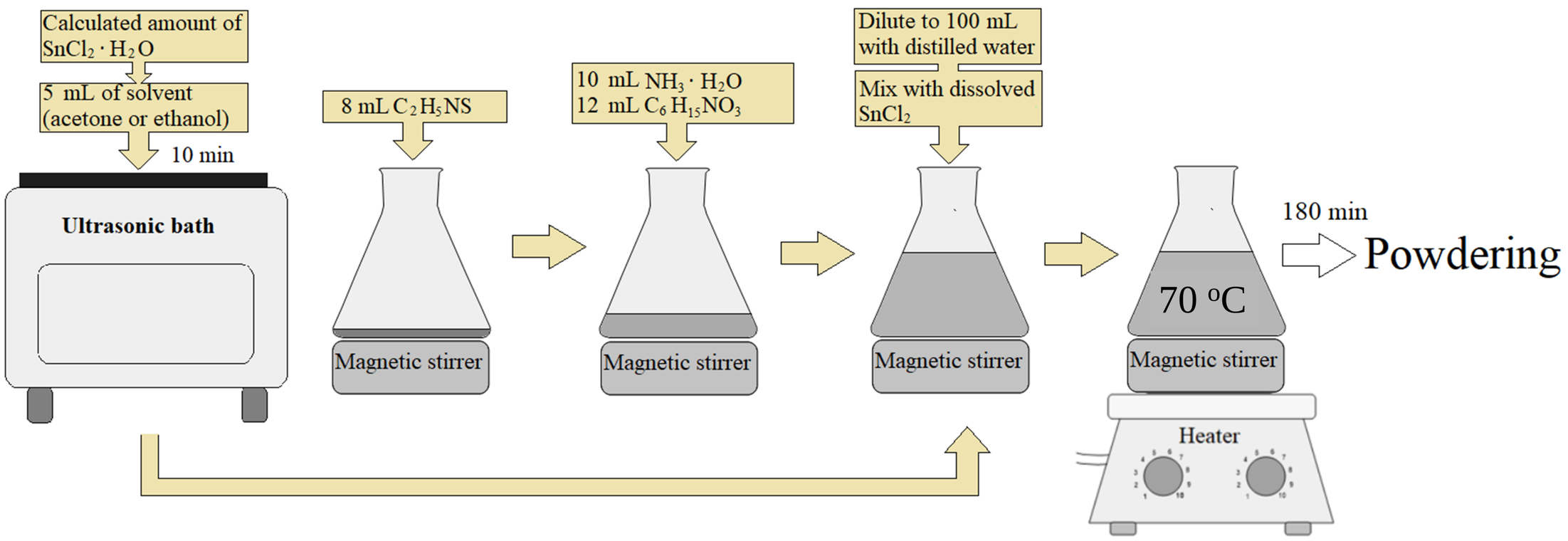

Fig. 1. Scheme of synthesis

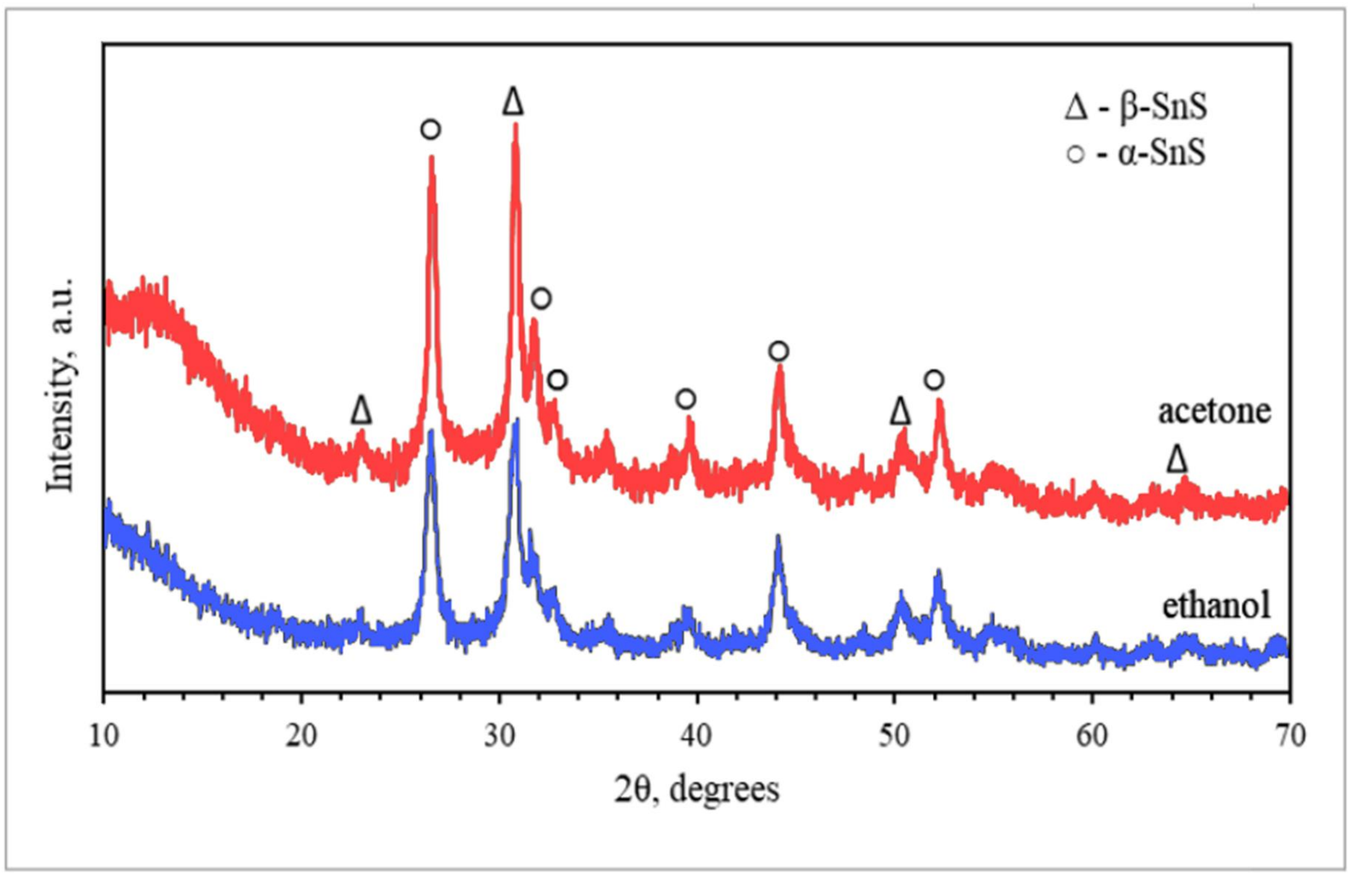

Fig. 2. XDR difrractograms of obtained powders

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