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Synthesis of NIS nanostructures by microwave-assisted hydrothermal technique

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Abstract content
   (Max 300 words)

Microwave addition to hydrothermal reactions provides quick, straightforward, and inexpensive ways of attaining the desired products from a given chemical reaction with high product yield as well as enhanced purity, while eliminating hazardous by products and promoting the use of greener solvents. This has made the microwave heating techniqe to chemical synthesis one of the efficient methods. Nickel sulphide (NiS) nanostructures obtained using this technique were analysed by various techniques. It was observed that a narrow size distribution of the materials varying from 20 to 40 nm particle size can be obtained at optimised microwave conditions using water as a solvent. The effect of using different solvents on NiS morphology, particle size and phase distribution is discussed. Electronic properties of NiS nanostructures doped with metal impurities have been studied. The effect of metal dopants on the phase transition of NiS has been studied and discussed.

Apply to be
 considered for a student
   award (Yes / No)?

Yes

Level for award
 (Hons, MSc,
   PhD)?

PhD

Main supervisor (name and email)
and his / her institution

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Would you like to <br> submit a short paper <br> for the Conference
 Proceedings (Yes / No)?

Yes

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