

Poster Presentation

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Synthesis and characterization of vanadium doped alkali metal tungsten bronzoid

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Attempts were made to prepare a series of vanadium doped alkali metal hexagonal tungsten bronzoid₁, AxVxW_{1-x}O₃ (A= K; Cs and x = 0.15-0.30), at comparatively low temperature by organic precursor method. The prepared samples were characterized by X-ray powder Diffraction, Fourier Transform Infrared spectroscopy, Energy-dispersive X-ray analysis and Scanning Electron Microscopy. XRD data of AxVxW_{1-x}O₃ reveals that pure hexagonal tungsten bronzoid phase could be formed at 400oC by this method. However, a second unknown phase along with the hexagonal bronzoid phase appeared with x= 0.30 composition when annealed at higher temperature.

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[1] Magne´li, A (1989) In: 12th European Crystallographic Meeting, Moscow

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