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PROCEEDINGS

INFLUENCE OF THE SOLID-STATE REACTION METHOD ON NICKEL VANADATE SAMPLES

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Nickel vanadate is a material increasingly used in sensors, batteries and other applications. This work aims to obtain and stabilize nickel vanadates using the solid-state reaction method. Three samples were synthesized. Sample BI was annealed at 700°C and samples BII and BIII at 800°C, all for 6 hours. The XRD results show that all the samples formed the Ni₃V₂O₈ phase, with an average crystallite of 112 nm for BI and 114 nm for BII and BIII. The SEM data show that sample BI has spherical grains with an average of 0.573 μm, while samples BII and BIII have rectangular grains with an of 3 μm. Given these results, the solid-state reaction synthesis showed promising results for nickel vanadate [1]. It is hoped that this work will contribute to further research into these materials.

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References:

[1] Sudakar, C. et al. Taylor & Francis Group 87., 223-229 (2007).