Green synthesis of metal oxides using plant extracts

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Nowadays, the development of efficient green chemistry methods for synthesis of metal oxides nanoparticles has become a major focus of researchers. They have investigated in order to find an eco-friendly technique for production of well-characterized nanoparticles. Green synthesis of nanoparticles is an eco-friendly approach which might provide the way for researchers all over the world to explore the potential of different herbs in order to synthesize nanoparticles. In this contribution, reports on the synthesis and the main physical properties of n-type Bismuth vanadate (BiVO4) nanoparticles for the first time by a completely green process using aqueous extracts of Callistemon viminalis as a chelating agent, Bi nitrate and Na orthovanadate salts. To ascertain the formation of BiVO4, if at all, XRD, SEM and HRTEM have been done.

Biography

Hamza Mohamed is pursuing MSc studies in Physics in University of South Africa. He is the recipient of the award from the African Institute for Mathematical Sciences – South Africa, (AIMS-SA), and the Post Graduate Support Grants (Top-Up). His current research is focused on studying morphological structures, and synthesizing nanoscaled metallic oxides using green process.

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