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General Review Article

Schiff Base Metal Complexes Precursor for Metal Oxide Nanomaterials: A Review

Author(s): Meghshyam K. Patil, Vijay H. Masand and Atish K. Maldhure*

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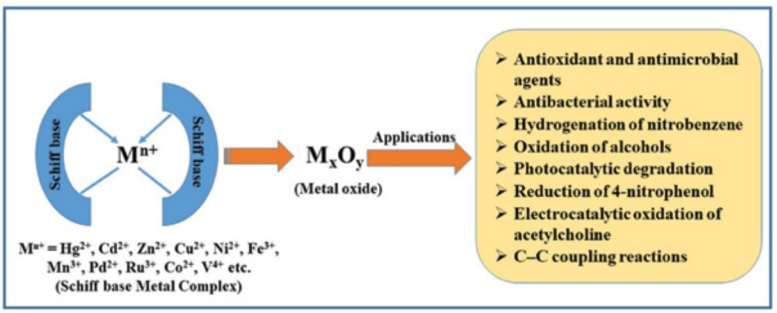
Abstract

Schiff bases and their complexes are versatile compounds, which have been synthesized from the condensation of carbonyl compounds with amino compounds and exhibit a broad range of applications in biological, medicinal, catalysis, and industrial purposes. Furthermore, Schiff basemetal complexes have been used as a precursors for the synthesis of different metal oxides, which include oxides of iron, cobalt, copper, nickel, manganese, vanadium, cadmium, zinc, mercury, etc. and ferrites such as Fe_3O_4, $ZnFe_2O_4$, and $ZnCo_2O_4$. These metal oxides have been utilized for several applications as a catalyst for several organic transformations and for biological activity. This review encompasses different methods of synthesis of metal oxides using Schiff base metal complexes precursor, their characterization, and various applications in detail.

Keywords: Schiff base, metal complexes, metal oxide, nanomaterial, synthesis, characterization, applications.

« Previous Next »

Graphical Abstract



Method of synthesis of metal oxides using Schiff base metal complexes precursor.

References