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Bis(2-hydroxy-1-naphthaldehydato)zinc(II) as a precursor for the synthesis of ZnO Nanoparticles and Aerosol-Assisted Chemical Vapour Deposition (AACVD) of ZnO thin films

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Zinc(II) complexes were prepared and used as precursors for the synthesis of zinc oxide nanoparticles via thermal decomposition method using hexadecylamine as a stabilizing agent. The prepared complexes were also used as single source precursors to deposit ZnO films on glass substrates at 350, 400, and 450 ^{0}C using the aerosol assisted chemical vapour deposition (AACVD) technique. The TEM images of the synthesized nanoparticles revealed different shapes of the particles when the decomposition temperature is increased. The diffraction patterns of all ZnO thin films prepared at different temperatures show the simple cubic structures with the lattice parameter of a = b = c = 4.278 A°.

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