the SEM and TEM pictures of ZnO nanobelts.The nanoparticles were chemically synthesized from SnCl4 by inverse microemulsion using non–ionic surfactant, and have an average size of 10 nm and are highly agglomerated.Figure 4.7 shows SEM images of the synthesized ZnO nanobelt helical nanostructures, 20 Liu et al.21 synthesized SnO2 nanorods by converting nanoparticles at elevated temperatures.10 Kong and Wang 20 further demonstrated that by controlling growth kinetics, left–handed helical nanostructures and nano–rings can be formed by rolling up single crystal ZnO nanobelts.In (0001) facet–dominated single crystal nanobelts, positive and negative ionic charges are sponta– neously established on the zinc– and oxygen–terminated +–(0001) surfaces, respectively.Various oxide nanowires, such as ZnO, Ga2O3 and MgO, and CuO were synthesized by such evaporation–condensationNanobelts of other oxides such as Ga2O3 with a crystal structure of monoclinic and PbO2 (rutile) were also synthe– sized by the same technique.The growth of nanobelts cannot be attributed to either screw dislocation induced anisotropic growth, nor impurity inhib– ited growth.17 The typical thickness and width–to–thickness ratios of the ZnO nanobelts are in the range of 10 to 30 nm and ~5 to 10, respectively.No screw dislocation was found throughout the entire length of the nanobelt, except a single stacking fault parallel to the growth axis in the nanobelts grown along [0110] direction.

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