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Effect of annealing temperature on microstructure and optical properties of ZnO thin films prepared by sol-gel method. IDRIS SORAR, FATMA Z. TEPEHAN, Istanbul Technical University, GALIP G. TEPEHAN, Kadir Has University — Transparent ZnO thin films were prepared on Corning 2947 substrates by sol-gel spin coating method. ZnO films were annealed for 1 hour at 100, 250, 350 and 550°C. These temperatures were determined from TGA results. Effect of annealing temperature on microstructure and optical properties were investigated. Optical properties of the films were determined by an NKD spectrophotometer and their structural properties were investigated by an X-ray diffractometer and atomic force microscopy. All ZnO thin films were highly transparent and had Rms values 7.497, 1.158, 0.528 and 3.287 nm for annealing temperatures of 100, 250, 350 and 550°C, respectively.

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