

**S1-3.18****Structural, Optical and Electrical Properties of ZnO:Al Thin Films Synthesized by Sol-gel Method**

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The possibility of synthesis of active layers for solar cells by sol-gel method has been shown. The structural features of the surface (AFM), crystallization behavior (XRD) during the heating and properties of synthesized films are discussed. Achieved parameters suggest the possibility of using synthesized ZnO layers in solar cells. The perturbation imposed by Al atom incorporation leads to the atomic relaxation, which is computed and discussed in detail.