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Design and preparation of binary-binary $\text{SnO}_2\text{-ZnO:F/MgF}_2/\text{SiO}_2$ transparent conducting oxide coatings

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Abstract

In this study, we prepared the binary-binary TCO compounds of $\text{SnO}_2\text{-ZnO}$ by the spray pyrolysis technique. We also investigated the role of $\text{MgF}_2/\text{SiO}_2$ antireflection coatings in reducing optical reflectance in the visible region of TCO. Before preparation, we simulated the optical transmission of the films for optimizing the layer thicknesses. The results of this study showed increasing of optical transmittance in the visible region of TCO by adding antireflection coating layers.

Keywords: TCO, ZnO, SnO_2 , antireflection coating

For full article, refer to the Persian section