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

Z Shahedi and S Hadavi

Department of Physics, University of Sistan and Baluchestan

(Received 7 May 2011; in final form 24 December 2012)

Abstract
In this study, we prepared the binary-binary TCO compounds of SnO$_2$-ZnO by the spray pyrolysis technique. We also investigated the role of MgF$_2$/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