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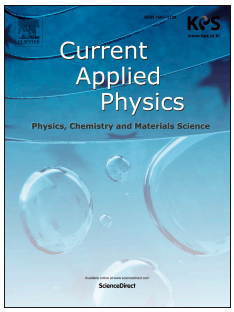

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Post-annealing effect on the optical property of indium tin oxide sputtered films

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ABSTRACT

By using the spectroscopic ellipsometric technique, we investigated the excimer laser annealing (ELA) effect on the electronic properties of indium tin oxides (ITO) films fabricated by the DC-sputtering method, which is the one of the most commonly known methods for the commercial ITO films. We found that while the ELA process was helpful for enhancing the electronic property of the sputtered films, the degree of the enhancement was not so sizable as the case of the sol-gel films. This result appeared to originate from the difference in the physical properties of the sol-gel and sputtered amorphous films. We also examined the thermal annealing (TA) effect on the sputtered amorphous films in various ambient conditions, and compared their physical properties with those of the TA sol-gel films.