

Abstract Submitted  
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**Correlation between energy of depositing particles and mobility of ITO films in the Reactive Plasma Deposition with dc arc discharge**  
HISASHI KITAMI, KAZUYA TAKI, TOSHIYUKI SAKEMI, YASUSHI AOKI, TAKANORI KATO, Sumitomo Heavy Industries, ltd. — A correlation between the energy of depositing particle and the mobility of ITO film has been investigated in order to elucidate the optimal energy required to form high-quality ITO film. ITO films were deposited with controlling the energy of depositing particles and according to it the condition of oxygen atmosphere was changed to get a constant carrier density of the deposited ITO films. The mobility of ITO film deposited at the substrate temperature of 200°C was found dependent on the energy of depositing particles and we concluded that the optimal energy is greater than 13 eV for ITO film deposition.

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