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In general film deposition method, most of these methods require a vacuum, such as physical vapor deposition (PVD). Among them, magnetron sputtering has been used to deposit films due to their various advantages such as high deposition rate, reducing electron bombardment of substrate, and extending the operating vacuum range [1]. Recently compared to conventional sputtering method, facing targets sputtering attracts attention because it can produce high quality film at low temperature and low pressure due to its unique system structure [2-3]. The plasma density in distributed magnetic field type is distributed uniformly in whole area between both targets. In case of the concentrated magnetic field, most of the λ -electrons are confined at center axis area of both targets, because the confining magnetic field density is higher than other area except near center axis. Therefore, the ionization rate of working gas is high at the center axis, between two targets, so the high-density plasma is formed in there [3].

In this work, we changed the confined magnetic field in FTS system and its effect on magnetic field (B) was analyzed as a function of axial and radial distances from the surface of cathode. And we deposited ITO thin film by various confined magnetic field and their structural, electrical, and optical properties were investigated.