

IOP Conference Series: Materials Science and Engineering 2014 vol.69 N1

Magnetron discharge volt-ampere characteristic investigation at thin film coating process

Kashapov N., Luchkin A., Luchkin G.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© Published under licence by IOP Publishing Ltd. Magnetron discharge at reactive and working gases mixture atmosphere current-voltage characteristic (I-U) for different sputtering parameters is investigated. It is shown, that form of volt-ampere characteristic doesn't depend on gas supply scheme at vacuum chamber pressure $4-6 \cdot 10^{-2}$ Pa. Reactive gas (oxygen) flow increasing leads to making I-U transition part wider and amplification of difference between top and bottom parts of hysteresis loop I-U. Discharge voltage is less at oxygen and argon gases mixture atmosphere than at argon atmosphere.

<http://dx.doi.org/10.1088/1757-899X/69/1/012030>
