عنوان مقاله:

Fabrication of multi-layer antireflection coating consisting of ZnS and MgF۲

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نویسندگان:

Reza Zarei Moghadam – Thin Film Lab, Faculty of Physics, University of Semnan, Semnan, Islamic Republic of Iran

Amir Hosein Omrany – Thin Film Lab, Faculty of Physics, University of Semnan, Semnan, Islamic Republic of Iran

Mahdiyeh Taherkhani – Thin Film Lab, Faculty of Physics, University of Semnan, Semnan, Islamic Republic of Iran

Fatemeh Shokrian – Education of Semnan province, Semnan, Iran

خلاصه مقاله:

In this study, Magnesium Fluoride (MgF۲) and Zinc Sulfide (ZnS) multi-layer antireflection coatings were prepared using Glancing Angle Deposition (GLAD) technique. MgF۲ and ZnS materials have been coated in a Hind – Hivac coating unit (model ۱۵F) on glass substrates. Antireflection coatings were prepared at different oblique incident flux angles (α = ۴۰˚, ۶۵˚,۷۰˚, ۸۰˚) by the thermal evaporation method. The Grazing incidence X-ray diffraction (GIXRD)analysis indicated that the thin films coated at different incident angles were crystallized in a single phase with an orthorhombic structure. The XRD results showed improvement of the film crystallinity upon grain size increment. Optical properties were investigated throughout the measurement of transmission spectra and refractive index and extinction in the visible region. The refractive index of films decreased from ۲.۸ to ۱.۶۶ as the flux angle increased from ۴۰˚to ۸۰˚. The extinction coefficient of films increased from ۰.۰۳۸۴۹ to ۰.۰۵۹۹۷ as the flux angle increased from ۴۰˚to ۸۰˚.

کلمات کلیدی:

Antireflection coating, GLAD technique, XRD analysis, refractive index

لینک ثابت مقاله در پایگاه سیویلیکا: