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NEODYMIUM OXIDE THIN FILMS DEPOSITED BY PLD: OPTICAL AND STRUCTURAL EVOLUTION ANALYSIS

Neodymium oxide is a material highly used in different applications fields, such as, optoelectronics and biomedical.
Pulsed laser deposition (PLD) was used as a synthesis method to grow thin films at different pressures, going from $2x10^{-5}$ Torr to $1x10^{-2}$ Torr. For the experiments, a 2 inches neodymium disk was used as target. It was ablated with a pulsed Nd:YAG laser emitting at 1064 nm with an energy per pulse of 190 mJ. Experiments were carried out in vacuum and in oxygen/argon background gas. To control the plasma parameters a Langmiür planar probe was used.
The obtained neodymium oxide thin films were analized optically and structurally to evaluate the pressure effect in the chemical grow mechanism.

Keywords

NEODIMIUM OXIDE, PLD, THIN FILMS, OPTICAL PROPERTIES, STRUCTURAL PROPERTIES

Reference

No reference

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Author approval

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