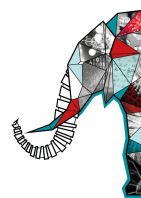




25^e Congrès Général de la Société Française de Physique *SFP*



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Nanocrystalline silicon thin films for photovoltaic solar energy conversion

Nowadays, the nanocrystalline silicon appears as one of the most promising semiconductors in the technology of solar cells and flat video screens because the control of its elaboration in thin films deposited at low substrate temperature, is not to be any more demonstrated. The films (560nm thick) were deposited on glass substrates (corning 1737) by PECVD method (Plasma Enhanced Chemical Vapor Déposition) The Ar proportion is varied from 20 to 100sccm with a step of 20sccm). During the growth process, the deposition temperature was kept at 165°C. which is close to the record observed in the literature. Electro optical study indicates that the material is quite good photoconductor. Characterisation of these films with Raman spectroscopy revealed that Ar dilution of silane in PECVD endorses the growth of crystallinity.

Choix de session parallèle

Autres: Matière Condensée

Auteur principal: Dr AYED, HAMIDA (LABORATOIR LESIMS)

Co-auteurs: Prof. MAHDJOUBI, LYAMINE (LABORATOIRE LESIMS); Prof. TAYEDB, Mohammed-Brahim (LABORATOIR 2GM-IETR); Prof. BENSLIM, NOURDINE (LABORATOIRE LESIMS); Prof. BECHÉRI, lakhdar (laboratoire LESIMS)

Orateurs: Dr AYED, HAMIDA (LABORATOIR LESIMS); Prof. MAHDJOUBI, LYAMINE (LABORATOIRE LESIMS); Prof. TAYEDB, Mohammed-Brahim (LABORATOIR 2GM-IETR); Prof. BENSLIM, NOURDINE (LABORATOIRE LESIMS); Prof. BECHÉRI, lakhdar (laboratoire LESIMS)

Classification de Session: Séance Poster