

# **Towards an industrial process of CdTe solar cells in Mexico<sup>§</sup>**

**Juan Luis Peña**

**Departamento de Fisica Aplicada, CINVESTAV-IPN, Unidad Merida. Km. 6 Carretera Antigua a Progreso, C.P. 97310 Cordemex. Merida, Yucatan, Mexico**

**The photovoltaic (PV) industrial production has been developed constantly in the last decades with a about 50% growth per year. As a part of this process the PV thin-film industry has grown, as well.**

**A recent survey on the PV industry in the world is presented. In particular, it is emphasized the rapid development of the PV industry of thin films, which has been showing a constant and vigorous growth in the recent years. After is presented a technological panorama of the efforts of research and development realized in several academic institutions in Mexico. Are presented the results obtained by our group in CINVESTAV-IPN Unidad Merida, as a part of this efforts in developing a process for manufacturing CdTe/CdS solar cells. This process is based on technologies that might be feasible of application in a PV Mexican industry. In particular, we report a solar cell with an area of 0.6 cm<sup>2</sup> with an 12.9% efficiency. An analysis and a preliminary conclusions are done on the feasibility of an industrial photovoltaic development of thin films of CdTe/CdS solar cells in Mexico.**

**§ Acknowledgements: This work has been supported by CONACyT-Mexico under contract FORDECYT-116157. Juan Luis Peña would thank financial sabbatical support to CONACyT-México under contract Estancias sabaticas No -128592.**