1. Record Nr. UNINA9910698701403321 Autore Wei Su-Huai Titolo Design of Shallow p-type Dopants in ZnO (Presentation) [[electronic resource] /] / Su-Huai Wei, J. Li, and Y. Yan Pubbl/distr/stampa [Place of publication not identified], : Washington, D.C., : United States. Dept. of Energy, : Oak Ridge, Tenn., : distributed by the Office of Scientific and Technical Information, U.S. Dept. of Energy, 2008 Descrizione fisica 1 online resource (32 pages) : color illustrations Collana NREL/PR;;520-43248 Altri autori (Persone) LiJ YanYanfa Soggetti Semiconductor doping Doped semiconductors Crystals - Defects Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Published through the Information Bridge: DOE Scientific and Technical Note generali Information. "May 2008." Presented at the 33rd IEEE Photovoltaic Specialist Conference, 11-16 May 2008 in San Diego, California. National Renewable Energy Laboratory (NREL), Golden, CO. Sommario/riassunto ZnO is a promising material for short wave-length opto-electronic devices such as UV lasers and LEDs due to its large exciton binding energy and low material cost. ZnO can be doped easily n-type, but the realization of stable p-type ZnO is rather difficult. Using first-principles band structure methods the authors address what causes the p-type doping difficulty in ZnO and how to overcome the p-type doping

difficulty in ZnO.