

Thin films of InSe were obtained by vacuum evaporation of polycrystalline material onto well cleaned glass substrates. After deposition on a cold substrate the samples were placed in a vacuum-sealed Pyrex tube for the annealing process. Physico-chemical and electrical properties of the InSe layers have been investigated. RBS and X-ray diffraction measurements showed that the InSe phase could be obtained. Electrical properties of the InSe layers are studied for different annealing temperatures. Conductivity measurements show that the behaviour of the films is sensitive to their thermal environment. The conductivity is controlled by grain boundaries. © 2004 Elsevier Ltd. All rights reserved