

ELECTRON AND PHONON SPECTRA OF $\text{In}_x\text{Tl}_{1-x}\text{I}$
SUBSTITUTIONAL SOLID SOLUTIONS

A. Franiv, O. Bovgyra, O. Savchyn

Ivan Franko Lviv National University,
Faculty of Physics
(8a, Kyrylo and Mefodii Str., Lviv 79005, Ukraine;
e-mail: bovgyra@physics.wups.lviv.ua)

S u m m a r y

The dynamics of the parameters of the electron subsystem in substitutional solid solutions (SSSs) $\text{In}_x\text{Tl}_{1-x}\text{I}$ has been studied theoretically making use of the pseudopotential method. The non-linear behavior of the dependence of the band gap width on the solution composition has been described taking internal local deformations into consideration. The theoretical results are in a good agreement with experimental data.