

MIXED SURFACE PLASMON-PHONON
MODES ON ADSORPTION OF MOLECULES
ON THE SURFACE OF SEMICONDUCTOR.
2. ABSORPTION OF ELECTROMAGNETIC
FIELD BY A MOLECULAR FILM

O.M. Getsko, Yu.V. Demidenko, V.Z. Lozovski

Institute of Semiconductor Physics,
Nat. Acad. Sci. of Ukraine
(45, Nauky Prosp., Kyiv 03028, Ukraine)

S u m m a r y

The absorption line shape at excitation of surface waves at the surface of semiconductor which is covered by a molecular layer is studied. The influence of lateral interactions on the absorption of electromagnetic field is considered. A gap in the absorption spectrum for p-polarized light is numerically obtained. The gap is caused by a molecular layer and can be considered as an analog to a gap in the so-called photonic band gap systems.