SURFACE POTENTIAL OF MgO SEMIBOUNDED CRYSTALS

V.Ya. Antonchenko, N.V. Gloskovskaya, V.V. Ilyin[1]

Bogolyubov Institute for Theoretical Physics,
Nat. Acad. Sci. of Ukraine
(*03143, Kyiv, Ukraine*),
[1]The Weizmann Institute of Science
(*76100, Rehovot, Israel*)

S u m m a r y

Surface properties of MgO semibounded crystals are studied within the polarization model. Electrostatic and dipole potentials of the MgO (001) surface are calculated. The values of induced dipole moments show a strong dependence on the atom remoteness from the boundary of the crystal. Our calculations indicate that the near-surface region with the properties differing from the bulk ones contains three layers of atoms.