

THERMAL DESORPTION OF MOLECULES  
FROM METAL SURFACES INDUCED  
BY THE SEQUENCE OF LASER  
PULSES

*M. Kapitonova, L. Robur*

Taras Shevchenko National University of Kyiv,  
Faculty of Physics  
(64, Volodymyrska Str., Kyiv 01601, Ukraine;  
e-mail: robur@univ.kiev.ua)

S u m m a r y

The thermal desorption kinetics of adsorbed molecular layers from the surface of bulk metals and metal films under the sequence of short laser pulses is considered. Analytical expressions for the activation energy of desorption of molecules for both types of samples are obtained. We carried out the experimental investigation in the reflection geometry of the second harmonic generation by silver and gold films, as well as bulk samples of copper and aluminum with adsorbed layers of pyridine molecules during the laser-induced thermal desorption. The values of energy of desorption activation of pyridine molecules on the surface of noble metals and aluminum are calculated.