

NTUU “Igor Sikorsky Kyiv Polytechnic Institute”

Faculty of Physics and Mathematics

Abstract report of the practice

Topic: The optical properties of quantum dots based on ZnS

Practice Leader:

Assoc. Pecherska-Hromadska K.Yu.

student 5th year

OF-61m group

Yuliia Satyr

In modern society more and more attention given nanotechnology. Thanks to the developments in this area it is possible to create new diagnostic equipment, ultra-precision optoelectronic devices, quantum-size computers and the like. Now there are active studies of the properties of quantum dots (QDs), quantum wires and pits, created by different methods and therefore have different properties. Besides fundamentally important, their sizes and the material that was used to create them.

During internship was explored photoluminescent capacitor and photos characteristics of QD based on ZnS studied the working principle of various instruments, in particular MGS -12, LIE-23. Studied the possibility of using such QD in Biophysics, biochemistry, medicine and optoelectronics. Reviewed literature on the establishment of QD, their stability and improve their performance in various ways.

For processing of measurement results was used the program Origin 16, all graphics and pictures were recorded and normalized.