Photoluminescence of aromatic compounds under ultraviolet light emitting diode excitation

© V.V. Boyko¹, V.S. Gorelik, G.I. Dovbeshko¹, A.Yu. Pyatyshev

¹Institute of Physics National Academy of Sciences of Ukraine, Kiev, 03028, Ukraine

²Bauman Moscow State Technical University, Moscow, 105005, Russia

The spectra of photoluminescence of aromatic compounds were determined. The photoluminescence spectrum of such compounds contains a number of wide bands, located in the range 290-550 nm, which is typical of aromatic compounds. It was shown that the excitation of singlet level of aromatic molecules is observed.

Keywords: photoluminescence, pharmaceutical objects, aromatic substances, light emitting diode, ultraviolet emission, spectrum.

Boyko V.V., Junior Researcher of the Department of Physics of Biological Systems at the Institute of Physics of the National Academy of Sciences of Ukraine.

Gorelik V.S., Dr. Sci. (Phys. & Math.), Professor of the Physics Department of Bauman Moscow State Technical University, Head of the Combinational Scattering Laboratory of Lebedev Physical Institute of the Russian Academy of Sciences. Honored Scientist of the Russian Federation. e-mail: gorelik@sci.lebedev.ru

Dovbeshko G.I., Dr. Sci. (Phys. & Math.), Professor, Chief Researcher of the Department of Physics of Biological Systems Institute of Physics National Academy of Sciences of Ukraine.

Pyatyshev A.Yu., Student of the Physics Department of Bauman Moscow State Technical University. e-mail: gorelik@sci.lebedev.ru