

(01_PP15)

The Chemical Effect on the Fluorescence Yield Parameters of Ligands of Malonic Acid[(CH₂(COOH)₂] and Phenylmalonic Acid [C₆H₅NCH(COOH)₂]

M. R. Kaçal¹, E. G. Özdemir², F. Akman³, C. Baydere⁴

¹Giresun University, Arts and Sciences Faculty, Department of Physics, 28100, Giresun/Turkey, mustafakacal@hotmail.com

²Gazi University, Polatlı Science and Arts Faculty, Physics Department, 06900 Polatlı, Ankara/Turkey evrengorkemozdemir@gmail.com

³Bingöl University, Vocational School of Technical Sciences, Department of Electronic Communication Technology, 12000, Bingöl/Turkey, fakman@bingol.edu.tr

⁴Ondokuzmayıs University, Arts and Sciences Faculty, Department of Physics, 55139, Samsun/Turkey, cemle28baydere@hotmail.com

In the present work, the ligands of Ligands of Malonic Acid[(CH₂(COOH)₂] and Phenylmalonic Acid [C₆H₅NCH(COOH)₂] derivatives were obtained by the slow evaporation and neutralization method. The ligands were coordinated to the metal Er and Dy atoms. The K shell fluorescence yields of Er and Dy atoms and their metal complexes obtained by the coordination were measured at 59,54 keV incident photon energy. The experimental K shell fluorescence yields have been determined using the measured X-ray production cross sections and theoretical K shell photoionization cross section values. The results were compared with theoretical, the semi-empirical and recommended values. The changing in chemical structure of the pure and metal complexes depending on the chemical condition was found to cause some changes on the measured fluorescence yield parameters.