**PYRENE-APPENDED RUTHENIUM(II) COMPLEX DESIGN**

Halil İsmet Uçan1, Ali Hussein Al-Oabidi1 and Aslıhan Yılmaz Obalı1,

1Department of Chemistry, Selcuk University, Konya 42075, Turkey

Ruthenium (II) polypyridine complexes have been the focus of considerable attention over the last few decades. They have been widely used as DNA sensors, ion sensors, catalysis and drug development because their outstanding photophysical and electrochemical properties are quite sensitive. Fluorescent property is an excellent indicator for scientific studies. It is known that pyrene molecule has a remarkable fluorescent property [1-2]. So in this work we have synthesized highly fluorescent pyrene-appended molecular sensor which have N-donor groups for ion sensitivity mechanism and Ruthenium(II) complexes. Highly fluorescent Schiff base polypyridine ligand has remarkable photophysical behaviours. From their spectroscopic studies, it was observed that the fluorescence intensities of the ligand is higher than their metal complexes. This is because of quenching effect of Ruthenium (II) metal on chromophore groups [3].

**Keywords:** Fluorescent, sensor, spectroscopy, environment.

**References**

**1.**Li F, Chen W, Tang C, Zhang S, ‘Recent development of interaction of transition metal complexes with DNA based on biosensor and its applications’, Talanta, 2008, 77, 1–8.

**2.**Obali, A.Y., Ucan H.I.,‘Ruthenium (II) Complexes of Mono-, Di- and Tripodal Polypyridine Ligands:Synthesis, Characterization, and Spectroscopic Studies, Journal of Fluorescence, 25, 2015, 647-655.

**3.**Obali, A.Y.; Ucan, H.I.; Preparationof Different Substitued Polypyridine Ligands, Ruthenium(II)-Bridged Complexes and Spectoscopic Studies, Journal of Fluorescence, 26, 2016, 1685–1697.