

Ferrocene-appended Schiff bases for non-linear optics

문일식*, N. Palanisami

순천대학교

(reaction@sunchon.ac.kr*)

There is a considerable interest on molecular-based second-order nonlinear optical (NLO) chromophores have attracted much interest because of their potential applications in emerging optoelectronic technologies. Particularly, ferrocene-based donor-acceptor materials are efficient SHG organometallic compounds. We have synthesized ferrocenyl schiff-base derivatives $[\text{Fe}(\eta\text{-C}_5\text{H}_5)(\eta\text{-C}_5\text{H}_4\text{CR NR}')] [\text{R} = \text{H}, \text{CH}_3, \text{ and } \text{R}' = \text{NCH}(\text{C}_6\text{H}_3(\text{OH})\text{NO}_2\text{-p})]$ from ferrocenecarbaldehyde, acetylferrocene and characterized with the aid of elemental analysis and infrared, ultraviolet, fluorescence and nuclear magnetic resonance spectroscopic techniques. These derivatives contain the donor- π -acceptor-(D- π -A) structural motif desired for non-linear optical materials. The spectroscopic characterization, electrochemical and non-linear optical properties will be presented.