

The Synthesis of 1,3-Alternate Calix[4]arene Pyrene Urea Derivatives for Fluorescent Chemosensor

Hyoung Min Yeo and Kye Chun Nam

*Department of Chemistry, Chonnam National University, Yongbong 300, Gwangju,
Korea*

e-mail address: yhm007@korea.com

Sensors based on the anion-induced changes in fluorescence appear to be particularly attractive due to the simplicity and high detection limit of the fluorescence. Accordingly, the fluorescent chemosensors, which can detect these phosphate derivatives have been actively studied for recent few years. Various approaches utilizing hydrogen bonding, metal ions, π - π interaction, or combination of these interactions have been adapted to the development of fluorescent chemosensors for anion such as pyrophosphate, phosphate ions, ATP/GTP, or phosphorylated peptide.

To develop an effective anion fluorescent chemosensor, we synthesized a series of calix[4]arene pyrene urea derivatives and compared their binding properties toward various anions.