

자기 조립 마이크로 로드 의 광발광 향상 특성 및
이를 이용한 유기분자 감지

박상우, 이상엽*
연세대학교
(leessy@yonsei.ac.kr*)

Recently, we have developed a novel pyrrole derivative which works as a building block for the microrod fabrication through the evaporation induced self-assembly (EISA). In this study, we investigated photoluminescence property of the microrod that is working as a host matrix to incorporate photosensitizers and/or lanthanide ions. The microrod showed an antenna effect enhancing photoluminescence of the lanthanide ion complexes. The photoluminescence of the microrod was applied as an indicator to detect target organic species. Several organic molecules of pyrrole, pyridine, furan, and thiophene were tested as target molecules. The photoluminescence of the microrods reduced with increment of the concentration of these molecules due to the adsorption on the microrods. This finding suggests that the photoluminescent microrod can be exploited as a visual indicator to detect a target species with quantification.