The interest in the development of inorganic–organic composite materials has grown rapidly owing to a wide range of potential use of these materials. Conducting polymers, like polyaniline, polyfluorene etc., are usually used as the organic part in these materials. On the other hand, nano-sized materials due to their unique electronic and optical properties are preferred as the inorganic part of the composite. In this study, as a first step, fluorene and thiophene based monomers are functionalized with thiol groups and their electrochemical behaviors are investigated. Then, gold nanoparticles are synthesized by reduction method and mixed with thiol containing monomers. Characterization of these composite materials is achieved using spectroscopic techniques (UV, IR and thermal analysis methods) and the fluorescence property of the composite is also investigated.

Reference