

# **Synthesis, Characterisation and Bioconjugation of Rare earth complexes embedded Silica nanoparticles [MRP(S)-0241/12-13/KLKE002/UGC-SWRO]**

## **ABSTRACT**

Two Rare Earth (RE).luminescent complexes, Europium and Terbium complexes with the ligand Thenoyltrifluoroacetone (TTA) was synthesized by chemical precipitation method. The synthesized Eu-(TTA)<sub>3</sub>complex and Tb-(TTA)<sub>3</sub> complex was capped with Tetra Ethoxyorthosilane (TEOS). The optical properties of the complexes were characterized by UV-Visible spectra and Photoluminescence spectra. The FTIR analysis of the ligand and the complexes were also done. The antimicrobial analyses of the synthesized samples were done , and it was found that both complexes and the ligand itself exhibit high antimicrobial activity. Finally the complexes were conjugated with folic acid.

**Abha.K**  
**Assistant Professor**  
**Post Graduate Department of Chemistry**  
**Bishop Moore College**  
**Mavelikara- 690110**

