

Abstract

In order to highlight the presentation of this thesis and provide detailed investigation on the formation of complexes of cerium using cerium nitrate salt with ligand 1,2,4,5-benzenetetracarboxylic acid and co-ligand 2-[(hydroxyl-2-methyl-5-phosphonoxymethyl-pyridine-4-ylmethyl)-amino]-propionic acid (PDA) with sonication method. The whole thesis has been divided in five chapters. The synthesis of the complexes has been done by using the techniques of sonication, reflux and hydrothermal method using different concentration and different mediums. The confirmation of synthesized cerium complexes was done by using Fourier-transform infrared spectroscopy (FTIR), Ultraviolet-Visible spectroscopy (UV-Vis spectroscopy) and XRD.