

It is known that metallo-organics as additives to engine oils such as the alkylsulphates, the dialkylphenyldithiophosphates etc.. have some inconveniences that appear during the lubrication and particularly in the case where the oil is used under severe conditions, this can cause its decomposition as ashes leading to eventual engine wear. The specifications of new engines, working under severe conditions constitute an imperative of the synthesis of additives with high thermal and oxidative stabilities, longer lubrication life, universal application and a lower consumption of the additives. Today's engines requirements on lubrication oils with more and more performance have attracted our interest to synthesize a series of metallo-organic products used as polyfunctional additives for engine oils. Their synthesis is carried out following three steps namely: alkenylation, amidation and esterification of alkenylmaleic anhydride, and finally neutralization. The different metals used are Ca, Mg, Ba, Cu, Zn, Hg. The synthesized products have been identified using physical and chemical analysis methods, and their use as additives for engine oils confirmed through exploitation testing. This permitted to propose them as polyfunctional additives for lubricating oils