

**Title :**

Application of the immobilized acidic reagent on the graphene oxide support in the synthesis of organic heterocyclic compounds containing nitrogen atom

**Abstract :**

Recently using the nano sheet grapheme oxide attractive many attention of chemists due to catalytic activity and suitable support in the the synthesis of heterogenous catalyst. According to the important of green chemistry, researchers follow environmentally benign methods for synthesis of organic materials. Multi components synthesis of heterocyclic compound such as imidazols is very important because of medicinal application. Therefore, in this project, first grapheme oxide functionalized, then, GO-Si(CH<sub>2</sub>)<sub>3</sub>SO<sub>3</sub>H characterized by IR, SEM, XRD, TGA, TEM analysis and its catalytic activity investigated in the one-pot multi component synthesis of imidzol derivatives from the reaction of different aldehyds with ammonium acetate or p-methyl Anilin and benzyl at 120°C. Solvent-free condition, high yields, short reaction time and simple work-up are advantages of this method

**Keywords :**

graphene oxide, imidazol, graphene oxide functionalized, one-pot reaction, multi component reaction