

## عنوان مقاله:

An efficient facile and one-pot synthesis of 2-arylsubstituted benzimidazole derivatives using 1-methyl-3-(2-oxyethyl)-1H-imidazol-3-ium-borate sulfonic acid as a recyclable and highly efficient ionic liquid catalyst at green condition

## محل انتشار:

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## خلاصه مقاله:

Methyl-3-(2-oxyethyl)-1H-Imidazol-3-ium-Borate Sulfonic Acid ([MOEI]-BSA) was easily prepared and used as a new and highly efficient solid acid catalyst for the synthesis of benzimidazole derivatives with high isolated yields. Various substituted benzimidazoles were synthesized by a combination of o-phenylenediamines and aldehydes in the presence of [MOEI]-BSA with excellent yields in water and under a mild and green reaction conditions. This method is also applicable for precursors such as aromatic and unsaturated aldehydes and o-phenylenediamines. Addition of organic part to BSA and synthesis of [MOEI]-BSA as a new Bronsted acidic ionic liquid (BAIL) improved the efficiency of this catalyst. 1-Methyl-3-(2-oxyethyl)-1H-Imidazol-3-ium-Borate Sulfonic Acid ([MOEI]-BSA) was easily prepared and used as a new and highly efficient solid acid catalyst for the synthesis of benzimidazole derivatives with high isolated yields. Various substituted benzimidazoles were synthesized by a combination of o-phenylenediamines and aldehydes in the presence of [MOEI]-BSA with excellent yields in water and under a mild and green reaction conditions. This method is also applicable for precursors such as aromatic and unsaturated aldehydes and o-phenylenediamines. Addition of organic part to BSA and synthesis of [MOEI]-BSA as a new Bronsted acidic ionic liquid (BAIL) improved the efficiency of this catalyst.

## کلمات کلیدی:

Methyl-3-(2-Oxyethyl)-1H-imidazol-3-ium-borate sulfonic acid, [MOEI]-BSA, BAIL, solid acid, benzimidazole-1 synthesis, green chemistry

## لینک ثابت مقاله در پایگاه سیویلیکا:

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