

SULFATED POLYBORATE: A HOMOGENOUS CATALYST FOR VARIES ORGANIC TRANSFORMATION

Manisha Patil and Ganesh Chaturbhuj

Institute of Chemical Technology Mumbai, India

The present study describes the application of sulfated polyborate. The development of the green, practical, and convenient catalytic methods for the commercial process of current interest and organic synthesis is valuable. Hence, the sulfated polyborate was prepared from readily available boric acid, as an economic and non-toxic starting material, characterized and effectively applied for various organic transformations. Herein, we report its applicability in the promotion of clean, efficient, environmentally benign, and high yielding rapid reaction procedure using cost-effective and recyclable catalyst is very much desirable for of 3-methyl 4-(hetero)arylisoxazol-5(4H)-ones, 4-substituted-1,5-benzodiazepines, 2,3-dihydroquinazolin -4(1H)-ones and xanthenes and its derivatives. We have developed a rapid, simple, efficient, and environmentally benign one-pot three-component protocol for the synthesis of above reaction with good to excellent yields. The new homogeneous catalyst, sulfated polyborate is simple, highly efficient and recyclable in this protocol. The main advantages of this approach are of solvent free conditions, cheap raw materials, easy workup, non-hazardous and environment-friendly reaction conditions, recyclable catalyst, excellent yields, and short reaction time.

msp214@gmail.com