Design, synthesis and antiviral potential of 14-aryl/heteroaryl-14H-dibenzo[a,j]xanthenes using an efficient polymer-supported catalyst.

ABSTRACT

Polyethyleneglycol bound sulfonic acid (PEG-OSO_3H), a chlorosulphonic acid-modified polyethylene glycol was successfully used as an efficient and eco-friendly polymeric catalyst in the synthesis of 14-aryl/heteroaryl-14H-dibenzo[a,j]xanthenes obtained from the reaction of 2-naphthol and carbonyl compounds under solvent-free conditions with short reaction times and excellent yields. The biological properties of these synthesized title compounds revealed that compounds 3b, 3c, 3f and 3i showed highly significant anti-viral activity against tobacco mosaic virus.

Keyword: Aldehyde; 2-Naphthol; PEG-OSO3H; Neat reaction; Xanthenes; Tobacco mosaic virus.