

FACILE AND EFFICIENT SYNTHESIS OF XANTHENE DERIVATIVES MEDIATED BY LANTHANUM(III) NITRATE HEXAHYDRATE UNDER SOLVENT FREE CONDITIONS

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Abstract: The present paper shows that lanthanum(III) nitrate hexahydrate can be used as mild and environment friendly homogeneous catalyst for an efficient one-pot multi-component synthesis of biologically active 1,8-dioxo-octahydroxanthene and 14*H*-dibenzo[*a,j*]xanthene derivatives. The solvent free condensation reaction of aromatic aldehydes and dimedone or β -naphthol was carried out at 70-80°C during 10-30 min. The obtained compounds were analysed by mass and NMR spectroscopic techniques. The advantages of this eco-friendly synthesis route are numerous, and include the use of an inexpensive catalyst, high to excellent yield, short reaction time and high catalytic activity that can make this method an interesting alternative to multi-step approaches.

Keywords: lanthanum(III) nitrate, xanthene derivative, dimedone, β -naphthol, solvent free condition.

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