

GREEN SYNTHESIS OF POLYSUBSTITUTED QUINOLINES AND XANTHENE DERIVATIVES PROMOTED BY TARTARIC ACID AS A NATURALLY GREEN CATALYST UNDER SOLVENT-FREE CONDITIONS

Farzaneh Mohamadpour ^a, Malek Taher Maghsoodlou ^{a*}, Mojtaba Lashkari ^b,
Reza Heydari ^a, Nourallah Hazeri ^a

^aFaculty of Science, University of Sistan and Baluchestan, Zahedan 98135-674, Iran

^bFaculty of Science, Velayat University, Iranshahr 9911131311, Iran

*e-mail: mt_maghsoodlou@yahoo.com, mt_maghsoodlou@chem.usb.ac.ir;

phone: (+98) 541 2446565; fax: (+98) 541 2446565

Abstract. Tartaric acid was employed as a naturally green catalyst for economical and facile preparation of polysubstituted quinolines *via* Friedländer hetero-annulation/condensation, 12-aryl-tetrahydrobenzo[*a*]xanthene-11-ones, 1,8-dioxo-octahydroxanthenes and 14-aryl-14*H*-dibenzo[*a,j*]xanthenes in solvent-free, one-pot multi-component reactions. This environmental friendly protocol provides high to excellent yields, short reaction times, clean reactions, simplicity and easy work up and mild conditions compared to the traditional method of synthesis. Furthermore, naturally green, low-cost and non-toxic catalyst made this protocol economic and sustainable.

Keywords: tartaric acid, polysubstituted quinoline, 12-aryl-tetrahydrobenzo[*a*]xanthene-11-one, 1,8-dioxo-octahydroxanthene, 14-aryl-14*H*-dibenzo[*a,j*]xanthene.

Received: 07 September 2017/ Revised final: 24 April 2018/ Accepted: 25 April 2018
