Green protocol: Metal free one pot multicomponent synthesis of quinoline styrenes and applications under deep eutectic solvent (DES) as sustainable media, as well as catalyst

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Abstract:

Under the deep eutectic mixture (1,3-Di methyl urea +L-tartaric acid with 3:1 ratio) as catalyst and as well as solvent, green protocol the efficient synthesis of quinoline styrenes by one-pot MCR approach ,Friedlander annulations followed by knoevenagel condensation to gives a quinoline styrene with good to excellent yields through activation of SP^3 C-H carbon in 2-methyl quinoline.

Quinoline and their derivative are important role in the class of heterocyclic compound because of wide range of presence in nature as natural compounds[1 (a-c)]. The quinoline styrene motif present in biological active molecules [2] and natural products. The most of the quinoline styrene compounds are exhibits specific activity in pharmaceutical field and medicinally. Polyhydroxylated styrylquinolines are example for the micro molar inhibitors for the enzyme of HIV-1 integrase as anti-HIV [5]. These quinoline moieties are predominate in specific activity of antiviral[6] (mappicine ketone), antimalarial.

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