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Benzoylation reactions using Greener and Efficient catalyst

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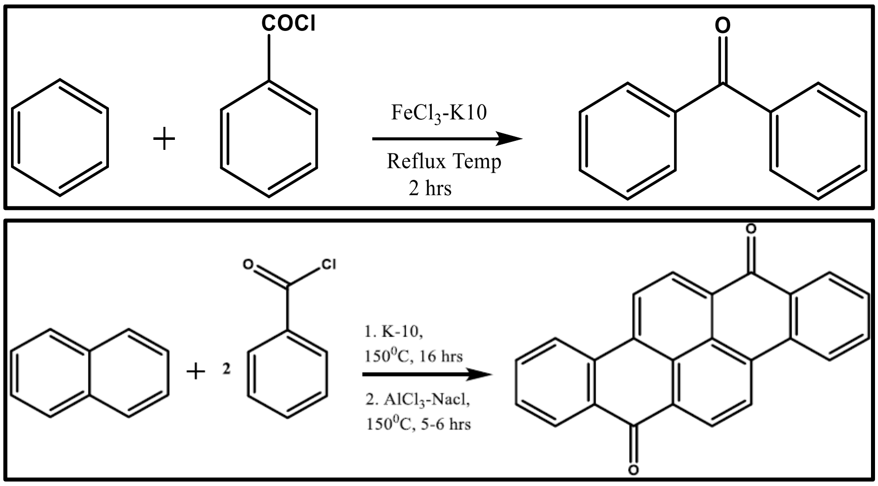
Abstract:

- Benzoylation of benzene and its various substituents by benzoyl chloride using solid acid catalyst $FeCl_3$-K10 has been investigated. This catalyst was environmentally friendly heterogeneous catalyst used for benzoylation reactions. The reactions take place at reflux temperature and benzophenone & its derivatives were synthesized using this catalyst. The catalyst can be reused up to four times and gives good yield of the product. Another protocol was synthesis of C.I. Vat yellow-4 and C.I. Vat orange-9 is in two steps. First step benzoylation was done using catalyst $FeCl_3$-K10 at 120° C using nitrobenzene as a solvent while second step was oxidative coupling also known as Scholl oxidation done by using $AlCl_3$ and NaCl melt as a catalyst at 160° C temperature.

Figure/Scheme (if any):



References and Notes:

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