

## V-CaHAp as a recyclable catalyst for the green multicomponent synthesis of benzochromenes

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A simple, efficient one-pot synthesis has been developed for the synthesis of benzochromenes (4a-k) using V-CaHAp as a heterogeneous catalyst by the condensation of aldehydes,  $\beta$ -naphthol and malonitrile in ethanol as solvent at R.T. for 20 mints. The reaction, with these catalysts was carried out under mild reaction conditions with very good to excellent yields (89-98%). The catalyst material can be recycled very easily and reused at least for 6 runs devoid of substantial loss in activity, which makes this methodology environmentally benign. We achieve that the cost-effective, minimal catalyst, non-toxic materials, easy handling and feasibility.

**Keywords:** Green synthesis, V-CaHAp catalyst, One-pot reaction, Recyclability, Benzochromenes.

