

N°802 / PC

TOPIC(s) : Clean reactions / Homogenous, heterogenous and biocatalysis

Synthesis of fully-substituted pyridin-2(1H)-one in a highly chemoselective approach utilize multicomponent reaction (MCRs) strategy

## AUTHORS

Hitendra M. PATEL / DEPARTMENT OF CHEMISTRY, SARDAR PATEL UNIVERSITY, UNIVERSITY CAMPUS, VALLABH VIDYANAGAR, ANAND

Ruturajsinh M. VALA / DEPARTMENT OF CHEMISTRY, UNIVERSITY CAMPUS, VALLABH VIDYANAGAR, ANAND

Mayank G. SHARMA / DEPARTMENT OF CHEMISTRY, SARDAR PATEL UNIVERSITY, UNIVERSITY CAMPUS, VALLABH VIDYANAGAR, ANAND

Divyanag M. PATEL / DEPARTMENT OF CHEMISTRY, SARDAR PATEL UNIVERSITY, UNIVERSITY CAMPUS, VALLABH VIDYANAGAR, ANAND

## PURPOSE OF THE ABSTRACT

(Oral Presentation or Invited Talk and Publication in Green Chemistry Journal)

Advantageous medicinal heterocyclic scaffolds based on the core structures of pyridin-2(1H)-one derivative has been prepared using piperidinium acetate and ethanol within 2-3 hrs. The corresponding pyridin-2(1H)-one derivative has been synthesized in a highly chemo-selective approach utilizing multi-component reaction (MCRs) strategy using readily available aldehydes, malononitrile and prepared 2-cyano-N-phenylacetamide derivatives. These procedures provide a divergent but straightforward access to a wide range of fully substituted pyridin-2(1H)-one derivative via amide based chemo-selective strategy. The applicability to a wide range of substrates (5) with the finger of chemo-selectivity makes this present protocol more original from existing. This reaction does not involve any perilous organic solvent and noxious catalyst.

## FIGURES

FIGURE 1

FIGURE 2

---

### KEYWORDS

Heterocyclic scaffolds | Pyridin-2(1H)-one Derivatives | Chemoselective approach | Multicomponent reactions

---

### BIBLIOGRAPHY

- [1] Divyang M.Patel, Mayank G.Sharma, Raturajsinh M.Vala , IreneLagunes, AdriánPuerta, José M.Padrón, Dhanji P.Rajani, Hitendra M.Patel. *Bioorganic Chemistry*, Volume 86, May 2019, Pages 137-150.
- [2] Divyang M. Patel, Raturajsinh M. Vala, Mayank G. Sharma, Dr. Dhanji P. Rajani, Prof. Hitendra M. Patel.*Chemistry Select*, Volume 4, Issue 3,22 January 2019.
- [3] Mayank G. Sharma, Raturajsinh M. Vala, Divyang M. Patel, Irene Lagunes, Miguel X. Fernandes, José M. Padrón, Venkatachalam Ramkumar, Ramesh L. Gardas,Hitendra M. Patel. *Chemistry Select*, Volume 3, Issue 43, 19 November 2018.