

# Doped Cobalt Iron Tartrates As Efficient Catalyst in Synthesis of 3,3 Arylidene Bis (4-Hydroxy Coumarin) Derivatives

**Mahesh Walle**

Sundarrao More Arts, Commerce & Science College, Poladpur, Raigad, Maharashtra, India

**Abstract:** *The catalyst need to be green in the recent time hence in this search doped cobalt iron tartrates is a very efficient, water soluble and reusable catalyst for synthesis of 3,3 Arylidene Bis (4-hydroxycoumarin) through a one-pot condensation with various aromatic aldehydes. Catalyst used under solvent-free conditions and can be recovered by simply evaporation. Compared with other synthetic methods, this new method has advantages such as milder reaction conditions, good to excellent yields, short reaction times, and environmentally benign procedure.*

**Keywords:** Doped Cobalt Iron Tartrates; 3, 3 Arylidene Bis (4-hydroxycoumarin); Water Soluble Catalyst Reusable Catalyst.

## REFERENCES

- [1]. Cravotto, G., Nano, G.M., Palmisano, G. and Tagliapietra, S. (2003) The Reactivity of 4-Hydroxycoumarin under Heterogeneous High-Intensity Sonochemical Conditions. *Synthesis*, 8, 1286-1292.
- [2]. L. D. Chavan, B. B. Nagolkar, T. K. Chondhekar, S. G. Shankarwar(2016): Environmentally benign synthesis of 1,8-dioxooctahydroxanthene derivatives using 10-molybdo-2 vanadophosphoric acid as an efficient and reusable catalyst under solvent-free condition. *Iranian Journal of Catalysis* vol. 6(2),pp.99-105.
- [3]. Walle, M., Pansare, D., Khan, T., Pawar, R., Shelke, R., & Ingle, R. (2021). One-Pot Three-Component Synthesis of 2-Amino-5-oxo-4, 5-dihydropyrano [3, 2-c] chromene-3-carbonitrile Derivatives Catalyzed by Cobalt Doped Iron (III) Tartrate Complex.
- [4]. Sima Abbaspour, Mogharab Torabi Jafroudi, Shima Haghi, Sobhan Rezayati (2016):1-(1-Propylsulfonic)-3-methylimidazolium chloride Brønsted acidic ionic liquid catalyzed one-pot synthesis of 14-aryl-14H-dibenzo[a,j] xanthene derivatives under solvent-free conditions. *Iranian Journal of Catalysis*. vol.6(2), pp.181-187.
- [5]. Walle, M. R., Pansare, D. N., Kamble, S. S., Pawar, R. P., & Silaev, R. D. I. (2019). SYNTHESIS OF 1, 8-DIOXOOCTAHYDROXANTHENE AND 3, 3-ARYLIDENE BIS (4-HYDROXYCOUMARIN) DERIVATIVES. *European Chemical Bulletin*, 8(3), 101-104.
- [6]. Pimerova, E. V., Voronina, E. V.(2001): "Antimicrobial activity of pyrazoles and pyridazines obtained by interaction of 4-aryl-3-arylhydrazono-2, 4-dioxobutanoic acids and their esters with hydrazines" *Pharm Chem J*. 2001, vol.35 pp.18-20.
- [7]. Rangari, V., Gupta, V. N. and Atal, C. K.( 1990) : "Synthesis, anti-inflammatory and antiarthritic activity of newer  $\beta$ -Boswellic acid derivatives." *Ind. J. Pharm. Soc.* Vol.52, pp.158-160.
- [8]. Sheikhsosseini, E. (2012) Synthesis of 3,3-Arylidene bis(4-hydroxycoumarin) Catalyzed by LiClO<sub>4</sub>. *Trend in Modern Chemistry*, 3, 34-37.
- [9]. Mehrabi, H. and Abusaidi, H. (2010) Synthesis of Biscoumarin and 3,4 Dihydropyrano[c]chromene Derivatives Catalysed by Sodium Dodecyl Sulfate (SDS) in Neat Water. *Journal of Iranian Chemical Society*, 7, 890-894.
- [10]. Shamsaddini A, Sheikhsosseini E (2014) Synthesis of 3,3 Arylidene Bis(4 Hydroxycoumarin) Catalyzed by p-Dodecylbenzenesulfonic Acid (DBSA) in Aqueous Media and Microwave Irradiation. *Inter J Org Chem* 4: 135-141.