



## Asymmetric Synthesis of Dihydropyrimidines Using Chiral Schiff Base Copper(II) Complex as a Chiral Catalyst

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**Abstract:** Asymmetric Biginelli reaction was performed to afford the corresponding chiral 3,4-dihydropyrimidine-2-ones (**DHPOs**), and their sulfur analogs 3,4-dihydropyrimidine-2-thiones (**DHPTs**). These compounds were obtained in high yields with good enantioselectivities (up to 79 ee%, dominant enantiomers: S-configuration and dextrorotatory) in the presence of bis{(S)-(+)-(1-phenylethyl)-[(2-oxo-1H-benzo-1-ylidene)methyl]aminato}copper(II) (**BPACu**) as a chiral catalyst, under the solvent-free conditions. This method has several advantages, for example good enantioselectivities, high to excellent products yields, short times reaction, easy work up and solvent free condition. Also, this catalyst was recyclable for three consecutive runs.

**Keywords:** Enantioselective synthesis, Asymmetric synthesis, 3,4-dihydropyrimidine-2-one, 3,4-dihydropyrimidine-2-thione, Chiral Schiff Base Copper(II) Complex.

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