

Publication

A Versatile Approach to the Solution-Phase Combinatorial Synthesis of Substituted Pyridines: The Cobalt-Catalyzed Cyclotrimerization of Alkynes with a Nitrile

JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)**ID** 116720**Author(s)** Braendli, Christof; Ward, Thomas R.**Author(s) at UniBasel** [Ward, Thomas R.](#) ;**Year** 2000**Title** A Versatile Approach to the Solution-Phase Combinatorial Synthesis of Substituted Pyridines: The Cobalt-Catalyzed Cyclotrimerization of Alkynes with a Nitrile**Journal** Journal of Combinatorial Chemistry**Volume** 2**Number** 1**Pages / Article-Number** 42-47**Keywords** Cyclotrimerization (prepn. of pyridine library by cobalt-catalyzed soln.-phase cyclotrimerization of alkynes with nitrile); Alkynes; Nitriles Role: RCT (Reactant), RACT (Reactant or reagent) (prepn. of pyridine library by cobalt-catalyzed soln.-phase cyclotrimerization of alkynes with nitrile); Combinatorial library (pyridine library prepn. by cobalt-catalyzed soln.-phase cyclotrimerization of alkynes with nitrile); pyridine combinatorial library soln phase prepn; alkyne nitrile cobalt catalyzed

The cobalt-catalyzed trimerization of two alkynes and one nitrile was exploited to produce solution-phase libraries of pyridines. Upon addition of 2 equiv of a CO scavenger (i.e., an amine-N-oxide), the commercially available [CpCo(CO)₂] proved to be an attractive catalyst, as the required reaction temperatures, side product formation (i.e., carbocycles), and oxygen sensitivity are moderate. Purification of the reaction mixture was performed with an acidic cation-exchange resin.

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