

Abstract

The present invention relates to the field of fine chemical industry. Specifically disclosed are a method for synthesizing 2-methylpyridine from aniline, and a method for selectively and continuously producing 2-methylpyridine and diphenylamine from aniline. The method comprises: in a hydrogen-containing atmosphere, enabling aniline and a catalyst to undergo a contact reaction at a temperature of 100-400°C, wherein the catalyst is β zeolite carrying a metal component, and the metal component comprises an active metal component selected from at least one of W, Mo, Ni, and Co; controlling the temperature of the contact reaction to be 100-240°C to obtain a product mainly consisting of 2-methylpyridine; and controlling the temperature of the contact reaction to be 260-400°C to obtain a product mainly consisting of diphenylamine. In the method of the present invention, switching of aniline and 2-methylpyridine products can be conveniently and effectively realized by controlling the temperature, reaction conditions are mild, the yield of 2-methylpyridine is high, and the reaction selectivity is good, and a good industrial application prospect is realized.