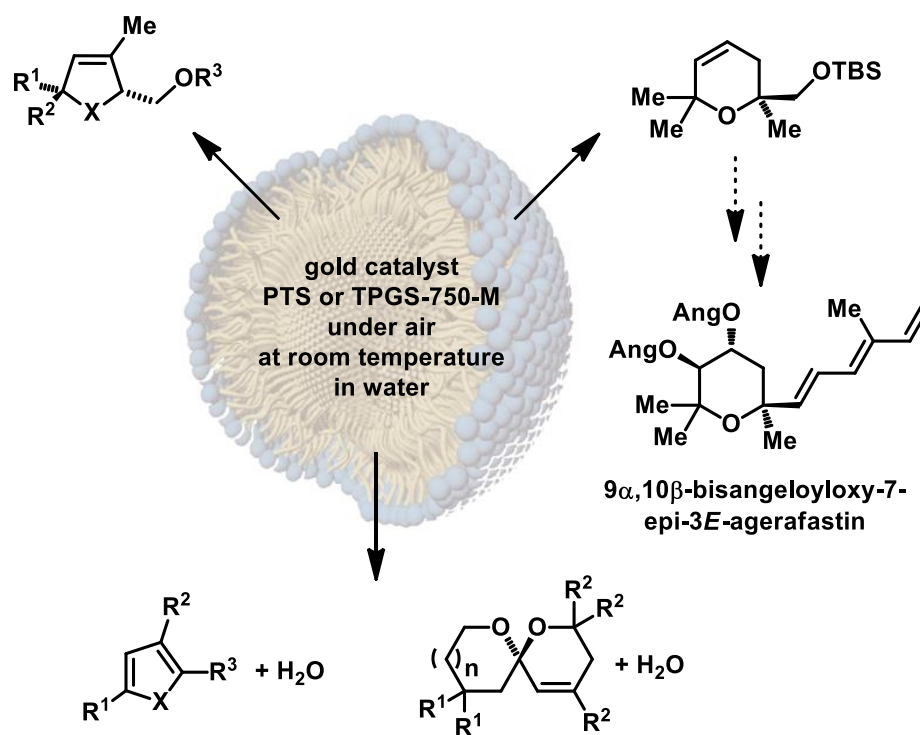


Abstract

Gold catalysis in micellar systems offers many preparative opportunities and can be performed under sustainable conditions. The amphiphiles PTS and TPGS-750-M are employed and have already been used successfully in many transition metal-catalyzed reactions.



Under very mild conditions α -hydroxy- and protected aminoallenes can be cyclized to the corresponding 2,5-dihydrofuranes and 3-pyrrolines. It was possible to increase the micelle diameter by addition of simple table salt. Moreover it was also possible to decrease the reaction time and the catalyst loading. Fortunately the gold-catalyst solution can be recycled.

A key step of the total synthesis of $9\alpha,10\beta$ -bisangeloyloxy-7-epi-3*E*-agerafastin can be realized by this sustainable system.

Because of the hydrophobic effect inside the micelle it is even possible to perform reactions where water is formed. In this way diols, amino alcohols and triols can be transformed to the corresponding furanes, pyrrols and spiroacetals.