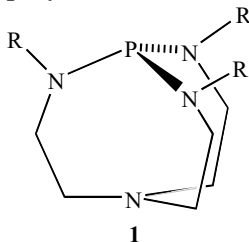


Recent Developments in the Usefulness of $P(RNCH_2CH_2)_3N$ in the Catalysis of Important Organic Reactions

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Over the past several years, we have been investigating the application of our commercially available proazaphosphatranes (**1**) as catalysts, co-catalysts and promoters in organic transformations of interest to synthetic chemists in industrial as well as academic laboratories. Derivatives of **1**, including polymer-bound versions that function



as efficient catalysts, have also been developed. In this lecture the usefulness of homogeneously and heterogeneously catalyzed transformations utilizing compounds of type **1** or its derivatives will be summarized. These transformations, which are generally facilitated under quite mild conditions, include C-C, C-N, C-O, and C-S bond formation; the reduction and the cyanosilylation of aldehydes and ketones; the hydrosilylation of acetylenic linkages;

cascade reactions and the synthesis of heterocycles. A rationale (based on recent evidence) for the unique properties of proazaphosphatranes as catalysts will also be presented.