Catalysis of organic transformations by supported gold nanoparticles

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Apart from being superb catalysts in aerobic oxidative processes,[1] supported gold nanoparticles (Au NPs) have recently found to exhibit novel and unprecedented catalytic properties to a variety of other organic transformations.[2] We will present the recent achievements in catalysis by gold nanoparticles supported on TiO_2 (Au/TiO_2) from our research group in epoxide,[3] alkyne,[4] silane,[5] and borohydride[6] activation. Emphasis will be given to the nature of the possible active catalytic sites, as this aspect is highly obscure and controversial among the researchers in the field.

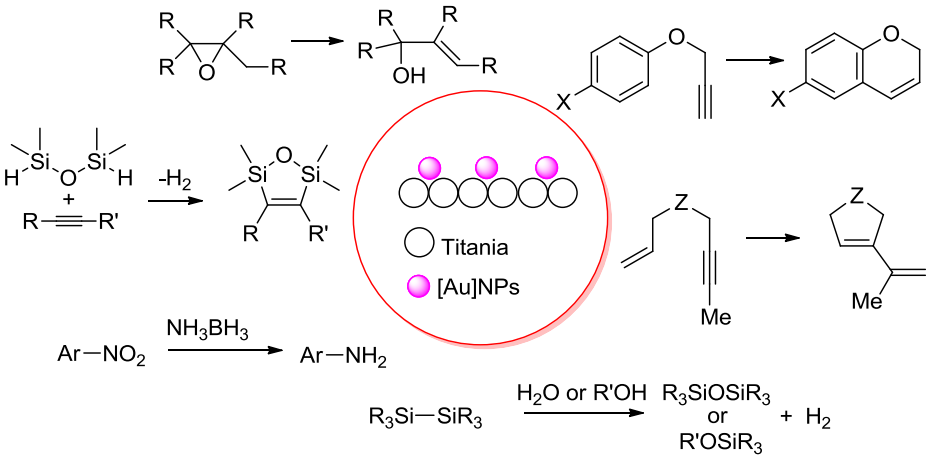

Figure 1: Recent examples of organic transformations catalysed by Au/TiO_2 from our group.

References

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