

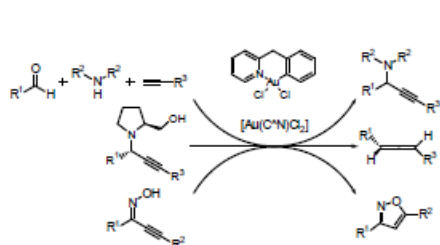
Gold Catalysis for Organic Synthesis and Bioconjugation

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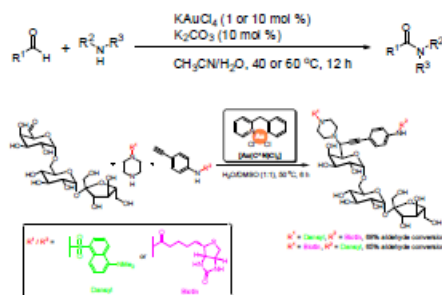
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Gold catalysis has received considerable attention in transition metal catalysis. Owing to their excellent selectivity, high reactivity, and exceptional tolerance to air/moisture reaction conditions, gold catalysts are capable of catalyzing a variety of novel organic transformations under mild reaction conditions. Bioconjugation allows covalent attachment of biophysical probes to oligosaccharides, peptides, and proteins aiming to study complex biological systems.

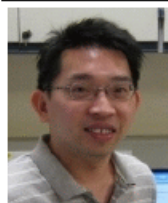


However, biomolecule modification is a challenging task due to a number of stringent requirements including unprotected functional groups, aqueous medium, narrow pH (6–8) and temperature (4–37 °C) range, and low biomolecule concentration (below 100 μ M). In view of the unique advantages of gold catalysis, our long-term goal is to develop gold catalysis for efficient organic synthesis and conduct application studies on bioconjugation.



References

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Man-Kin Wong (黃文健), b. 1971, The University of Hong Kong (B.Sc.(Hons.) 1993) (Ph.D. 1997), 1999 Research Assistant Professor of The University of Hong Kong, 2008 Assistant Professor of The Hong Kong Polytechnic University. Research Interests: (1) Gold Catalysis and Organocatalysis, (2) Bioconjugation, and (3) Molecular Imaging.