

## UPDATE FROM THE CUTTING EDGE

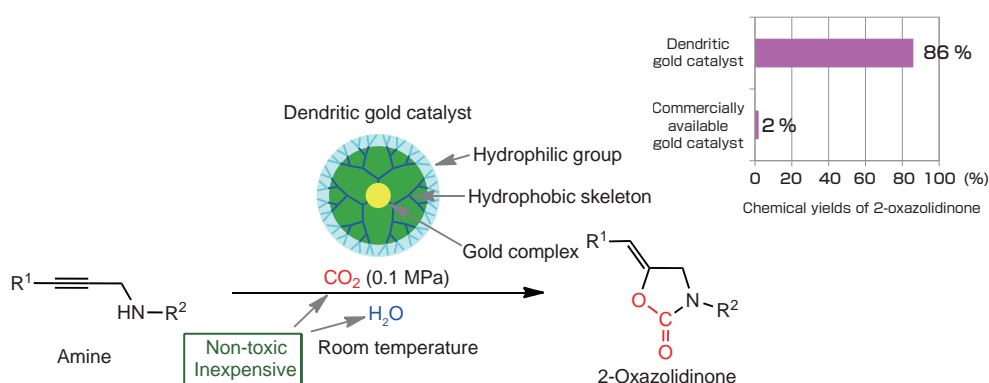
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The abstracts of the recent research information appearing in Vol.13 No.10-12 of "AIST TODAY" are introduced here, classified by research areas. For inquiry about the full article, please contact the author via e-mail.

Environment and Energy

### Efficient synthesis of pharmaceutical intermediates by using carbon dioxide Expectation for eco-friendly manufacturing methods of chemicals

2-Oxazolidinone was synthesized by using carbon dioxide (CO<sub>2</sub>), a propargylamine and a catalytic amount of an *N*-heterocyclic carbene (NHC)-Au(I) core dendrimer in water. An NHC-Au(I) core dendrimer was prepared from a dendritic imidazolium bromide having poly(ethylene glycol) unit at the periphery by the successive addition of silver(I) oxide and Au(I) compound in fair chemical yield. An amphiphilic dendritic NHC-Au(I) complex catalyzed the aqueous media carboxylative cyclization of a propargylamine with 0.1 MPa of CO<sub>2</sub> at room temperature to afford the corresponding 2-oxazolidinone in good chemical yield.



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Aqueous media synthesis of 2-oxazolidinone by using dendritic gold catalyst