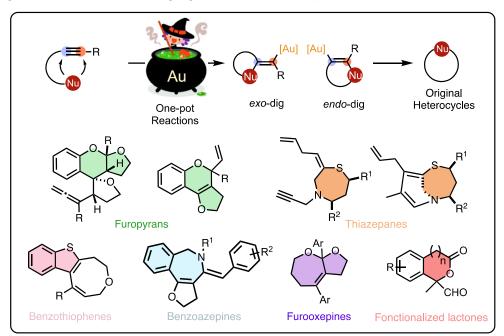


DEVELOPMENT OF GOLD-MEDIATED ONE-POT REACTIONS: AN ACCESS TO O, N, AND S-HETEROCYCLES

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Heterocycles represent structural architectures frequently found in biologically active natural and unnatural compounds, drugs, and agrochemicals. Significant advances toward the synthesis of heterocyclic compounds have been achieved in homogeneous gold catalysis. Besides, over the past decade, homogeneous gold catalysis as part of one-pot processes has been the subject of intense research because of its potential to rapidly build molecular complexity. Prompted by the above considerations, we have developed versatile methodologies leading to *O*, *N* and *S*-heterocycles such as furopyrans, benzothiophenes, benzoazepines, furooxepines, thiazepanes, and fonctionalized lactones in a highly efficient and straightforward manner through gold-mediated one-pot reactions.^[1-6]



References

- Gold(I)-Catalyzed Synthesis of Furopyrans: Insight into Hetero-Diels-Alder Reactions. R. Pertschi, P. Wagner, N. Ghosh, V. Gandon, G. Blond *Org. Lett.*, **2019**, *21*, 6084.
- ² Solvent Effect in Gold(I)-Catalyzed Domino Reaction : Access to Furopyrans. P. Wagner, N. Ghosh, V. Gandon, G. Blond *Org. Lett.*, **2020**, *22*, 7333
- ³ Gold(I)-Catalyzed Domino Reaction for Furopyrans Synthesis. M. Ruch, N. Brach, R. Galéa, P. Wagner, G. Blond *Molecules*, **2020**, *25*, 4976
- ⁴ Gold(I)-Catalyzed Carbothiolation via Rearrangement of S-Propargyl Group: An Access to 3-Allenyl or 3-Indenyl Benzo[b]thiophenes. C. Van Wesemael, N. Brach, M. Gulea, G. Blond *Adv. Synth. Catal.*, **2022**, *364*, 4141
- ⁵ Gold(I)-Catalyzed Domino Reaction : An Access to furooxepines. Galéa, G. Blond, *Adv. Synth. Catal.*, **2022**, *364*, 1532
- ⁶ Access to 1,4-Thiazepanes via Gold-Catalyzed 7-exo-dig Thioallylation and their Cycloisomerization to Bicyclic [4.3.1] Bridgehead-Olefinic Systems. Choury, P. Wagner, C. Rognan, G. Blond, M. Gulea *Adv. Synth. Catal.*, **2022**, *364*. 3238