

Synthesis and Transformation of *N*-Heterocyclic Carbene Functionalized Gold Nanoclusters

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Our group has previously reported the isolation of various gold nanoclusters with *N*-Heterocyclic carbenes (NHCs) as robust protecting ligands.¹⁻³ Here we will report our ongoing efforts in the synthesis, characterization and purification of novel carbene-functionalized gold nanoclusters, as well our studies on the interconversion of clusters with different core architectures.

1) Narouz, M.R. *et al. Nat. Chem.* **2019**, *11*, 419; 2) Narouz, M.R. *et al. J. Am. Chem. Soc.* **2019**, *141*, 14997; 3) Salorinne, K. *et al. Chem. Commun.* **2020**, *56*, 6102.