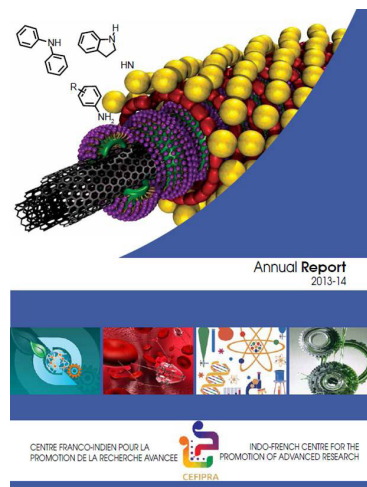
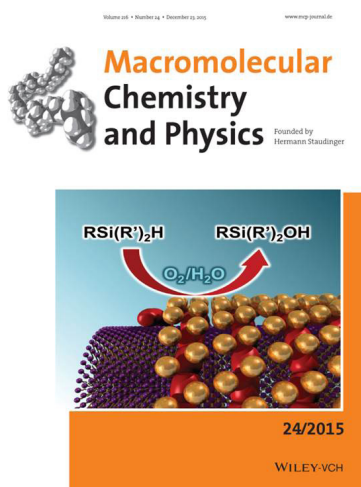
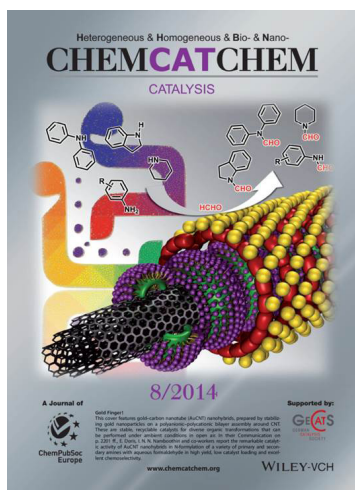


Carbon nanotube-noble metal nanohybrid catalysed organic transformations



- Metal nanoparticles of gold (Au), ruthenium (Ru), rhodium (Rh) and palladium (Pd) supported by a carbon nanotube (CNT): supramolecular assembly are highly efficient heterogeneous catalysts for various organic reactions
- Oxidation of alcohols, phenols, silanes, hydroxylamines and olefins, reductive amination and N-formylation of aldehydes, reduction of N-oxides and nitroaromatics as well as coupling reactions have been successfully carried out with the above M-CNT catalyst
- The above reactions work in most cases with low catalyst loading (< 1 mol%) in open air at room temperature
- The catalyst is easily recoverable and recyclable upto five times
- The M-CNT nanohybrids could be efficient catalysts in chemical/ pharmaceutical industry and catalytic converters in automobile industry
- More than 20 publications have resulted from this work which was highlighted on the cover page of CEFIPRA Annual Report