Co.G.I.C.O. 2014
XI Congresso del Gruppo Interdivisionale di Chimica Organometallica
Milano, 24-27 giugno 2014

# ABSTRACT INFORMATION FORM

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Abstract Title

C-3 functionalization of indoles with methyl 2-acetamidoacrylate under Gold(I), Silver or Brønsted acids catalysis

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# C-3 functionalization of indoles with methyl 2-acetamidoacrylate under Gold(I), Silver or Brønsted acids catalysis

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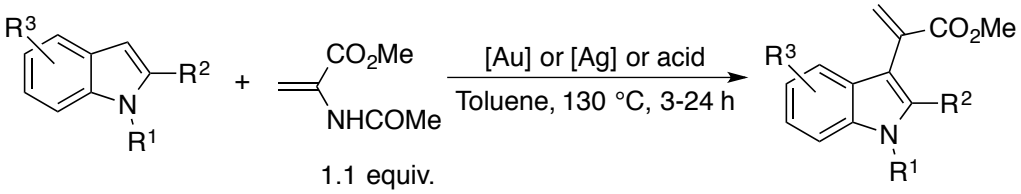
The chemical modification of indoles through direct functionalization of their C–H bonds constitute a widespread research area of continuous interest for organic synthesis since this scaffold is present in a huge variety of natural product families, medicines or drug candidates, among others.[1] In particular, the formation of a new C–C bond by means of innovative catalytic systems represents an alternative to traditional Friedel-Crafts reactions and allows the use of less toxic reagents and to operate in milder conditions. Among metals, gold catalysts have been employed to this scope in the last years.[2] In our research group, in particular, we get interested in investigating the reactivity of indoles towards α-amidoacrylates, as specific class of enones, in the presence of gold or silver catalysts. Thus, under the optimized reactions conditions we were able to synthetize a series of α-indolylacrilates in high yields.[4] Furthermore an acid-catalyzed version of this reaction was also explored achieving similar results.

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2. M. Dell'Acqua, D. Facoetti, V. Pirovano, G. Abbiati, E. Rossi, *Targets in Heterocyclic Systems* **2011**, *15*, 86-139.
3. For an example on the use of α-amidoacrylates in the presence of Lewis acids see: E. Angelini, C. Balsamini, F. Bartoccini, S. Lucarini, G. Piersanti, *J. Org. Chem.* **2008**, *73*, 5654-5657.
4. V. Pirovano, D. Facoetti, M. Dell'Acqua, E. Della Fontana, G. Abbiati, E. Rossi, *Org. Lett.* **2013**, *15*, 3812-3815.