

# Past and Present Research Systems of Green Chemistry

September 14-16, 2015 Orlando, USA

## Atom economic synthesis of amides

**Diego Gamba-Sanchez**  
Universidad de los Andes, Colombia

Amides are incontestably one of the most important functional groups in organic chemistry; they are present in a huge number of natural occurring structures and synthetic molecules with diverse usages. Besides amide synthesis by classical methods is one of the most used synthetic procedures in pharmaceutical industry, on the other hand ACS has recognized atom economy in amide synthesis as one of the most important challenges to overcome in synthetic organic chemistry. The research described in this presentation will underline fundamental problems in amide synthesis and will also show different approaches using catalyst for transamidation of carboxamides, transamidation of thioamides and direct amidation of carboxylic acids. These three methodologies can be placed in a green context and will be discussed as alternative atom economic procedures for classical methods in amide synthesis.

### Biography

Diego Gamba-Sanchez obtained his BSc from UNAL – Bogotá in 2004, then his master degree working on a new tandem reaction ring closing/fluorination of allyl amines in superacid medium, supervised by Sebastien Thibaudeau in 2006. Later he moved to the Ecole Polytechnique-Palaiseau and joined the group of Joëlle Prunet where he finished his PhD working on diastereo selective synthesis of 1,3-diols and Pummerer reaction oriented to the synthesis of nucleoside analogues. After one year of Postdoc with Thorsten Bach, he moved back to Colombia in 2011 and joined the Chemistry Department of the Universidad de los Andes in Bogotá, where he started his independent. His research interests are total synthesis of natural products and the development of new organic transformations using biological and organic catalyst.

[da.gamba1361@uniandes.edu.co](mailto:da.gamba1361@uniandes.edu.co)

Notes: