



The first article of 2009 in Chemical Reviews is dedicated to the aza-Baylis-Hillman reaction.

Starting from cheap materials, this efficient reaction provides access to aza-synthons that can be transformed in original molecules, including heterocycles. Following their work in this area a team from the Department of Aminoacids, Peptides and Proteins at the Institut des Biomolécules Max Mousseron (IBMM) has reviewed the details of the aza-Baylis-Hillman reaction, including mechanistic considerations, rearrangement transformations and the applications of these reactions in organic synthesis.

**Review :** *aza-Baylis-Hillman reaction.* Declerck, V.; Martinez, J.; Lamaty, F. *Chem. Rev.* **2009**, *109*, 1-48. (doi : 10.1021/cr068057c)

#### Further references from the IBMM related to the aza-Baylis-Hillman reaction :

1. *Selective [3+2] Huisgen Cycloaddition. Synthesis of Trans-Disubstituted Triazolodiazepines from Aza-Baylis-Hillman adducts.* Declerck, V.; Martinez, J.; Lamaty, F. *J. Org. Chem.* **2009**, *74*, 2004-2007.
2. *Microwave-assisted Multi-step Synthesis of Novel Pyrrolo-[3,2-c]quinoline Derivatives.* Benakki, H.; Colacino, E.; André, C.; Guenoun, F.; Martinez, J.; Lamaty, F. *Tetrahedron* **2008**, *64*, 5949-5955.
3. *Synthesis of a novel Pyrrolo-[3,2-c]quinoline N-oxide from an aza-Baylis-Hillman adduct of o-nitrobenzaldehyde* Colacino, E.; André, C.; Martinez, J.; Lamaty, F. *Tetrahedron Lett.* **2008**, *49*, 4953-4955.
4. *2-Trimethylsilylethanesulfonyl (SES) versus Tosyl (Ts) Protecting Group in the aza-Baylis-Hillman Reaction. A Novel route for the Preparation of Substituted Pyrrolines and Pyrrolidines.* Declerck, V.; Allouchi, H. ; Martinez, J.; Lamaty, F. *J. Org. Chem.* **2007**, *72*, 1518-1521.
5. *Microwave-assisted Heck Reaction in Poly(ethylene glycol) (PEG) for the Synthesis of Benzazepines.* Declerck, V.; Ribière, P.; Nédellec, Y.; Allouchi, H.; Martinez, J.; Lamaty, F. *Eur. J. Org. Chem.* **2007**, 201-208.
6. *Synthesis of Novel Poly(ethylene glycol) Supported Benzazepines : the Crucial Role of PEG on the Selectivity of an Intramolecular Heck Reaction.* Ribière, P.; Declerck, V.; Nédellec, Y.; Yadav-Bhatnagar, N.; Martinez, J.; Lamaty, F. *Tetrahedron* **2006**, *62*, 10456-10466.
7. *Microwave-activated aza-Baylis-Hillman reaction. Preparation of Poly(ethylene Glycol) Supported  $\alpha$ -methylene- $\beta$ -Aminoesters.* Ribière, P. ; Yadav-Bhatnagar, N. ; Martinez, J. ; Lamaty, F. *QSAR Comb. Sci.* **2004**, *23*, 911-914.
8. *Sequential aza-Baylis-Hillman/Ring Closing Metathesis/Aromatization as a Novel Route for the Synthesis of Substituted Pyrroles.* Declerck, V.; Ribière, P.; Martinez, J.; Lamaty, F. *J. Org. Chem.* **2004**, *69*, 8372-8381.
9. *Preparation of a novel Poly(ethylene glycol) sulfonamide : synthesis of N-supported  $\beta$ -aminoesters via the aza Baylis Hillman Reaction.* Ribière, P.; Enjalbal, C.; Aubagnac, J.-L.; Yadav-Bhatnagar, N.; Martinez, J.; Lamaty, F. *J. Comb. Chem.* **2004**, *6*, 464-467.

**Contact :** Dr Frédéric Lamaty (frederic.lamaty@univ-montp2.fr)