

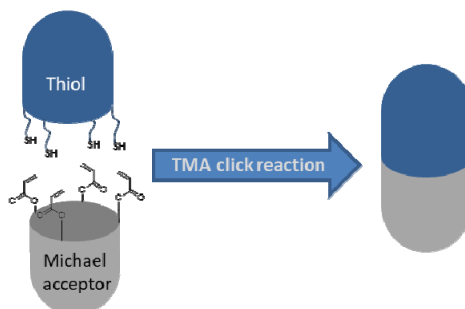
# BUILDING COVALENT MOLECULAR CAPSULES BY THIOL- MICHAEL ADDITION CLICK REACTION

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The design and synthesis of functional complex molecular systems is one of the main objectives of supramolecular chemistry. One of those systems are molecular capsules, which consist in a set of molecules that are assembled in a specific manner, leading to relatively large hollow molecules [1]. Such molecular capsules are able to accommodate other smaller molecules inside their structure, and therefore they have been widely used in catalysis and molecular recognition. According to the type of bonding by which molecular capsules are assembled, they can be classified as non-covalent, organometallic and covalent. The last ones display a lot of advantages due to their toughness and chemical stability. However, making covalent molecular capsules is far from easy. A sensible strategy for the synthesis of this kind of systems is the use of an efficient synthetic method such as click reactions. The thiol-Michael addition (TMA) click reaction [2], fulfils all of these requirements but surprisingly, it has been almost completely neglected in supramolecular chemistry. In this work, we have optimized the TMA click reaction in order to build up covalent capsules in an easy and efficient way. TMA can be also sequentially combined with the quintessential click CuAAC reaction in a click&click procedure [3].



Acknowledgements: We thank the Spanish MINECO, co-financed by the European Regional Development Fund, CTQ2015-73234-JIN for financial support. M. D. P. thanks the Agencia Canaria de Investigación, Innovación y Sociedad de la Información of the Consejería de Economía, Industria, Comercio y Conocimiento, co-financed by the European Social Fund with 85%, for a predoctoral grant.

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