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XiMoPac: Toolbox for organic chemists

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The main limitation considering molybdenum- and tungsten-based olefin metathesis is the air and moisture sensitivity of the catalysts. Its consequence is the need for a glovebox and therefore limited commercial interests.

Since these catalysts are highly active and some of them show remarkable Z or enantioselectivity, their widespread use by organic chemists has prevented only by the high price and inconvenience of glovebox.

Recently we reported [1], pre-weighed Mo metathesis catalysts formulated in paraffin tablets called XiMoPacs.

XiMoPacs possess high stability enabling Mo/W-catalysed cross or ring closing metatheses run on the bench with high conversion, yield and selectivity, while render unnecessary the use of a glovebox.

In this presentation more sophisticated examples as well as expansion of the methodology are demonstrated: enantioselective transformations were performed outside the glovebox, and the pellet approach is being applied for protection of other sensitive molecules providing other transformations and even purification of the starting material.

[1] From Box to Bench: Air-Stable Molybdenum Catalyst Tablets for Everyday Use in Olefin Metathesis. *Org. Process Res. Dev.*, 2016, 20, 1709.

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