

Metathesis of functionalised acetylenes
(D system in refluxing octane, 16h or 4.5h^a)

Acetylene	% (1) transformed	% $\frac{(2) + (3)}{(1) \text{ transformed}} = Y$
1a	14	31
1b	56 ^a	98
1c	37	91
1d	4	0
1e	58	98
1f	20	81

In the same conditions (2) and (3b) gave the same mixture as (1b). Clearly the equilibrium was obtained with (1b), (1c) and (1e). The metathesis of esters (1b) and (1e) was clean, only some traces of transesterification with the phenol were observed. Whereas the carboxylic acid (1d) did not undergo any metathesis surprisingly the alcohol (1a) reacted in a low yield (Y). 2% of acid (1d) did not inhibit the metathesis of the acetate (1b). These results contrast with those obtained from the olefin metathesis where alcohol and acid are poisons for the catalyst. The low conversion and the low selectivity of the nitrile (1f) was due to a strong complexation of the cyano group on the molybdenum catalyst and isomerisation of (3f) occurred.

The application of functionalised acetylene metathesis in synthesis will be further explored on our laboratory.

REFERENCES AND NOTES

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4. Acetylenes (1) were synthesised according to classical methods from alcohol (1a)^{5a} and bromide (1c)^{5b}
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