

Supplementary Materials

Synthesis of 1-substituted *cis*-bicyclo[3.3.0]octane-3,7-dione derivatives as potential precursors of polyquinanes

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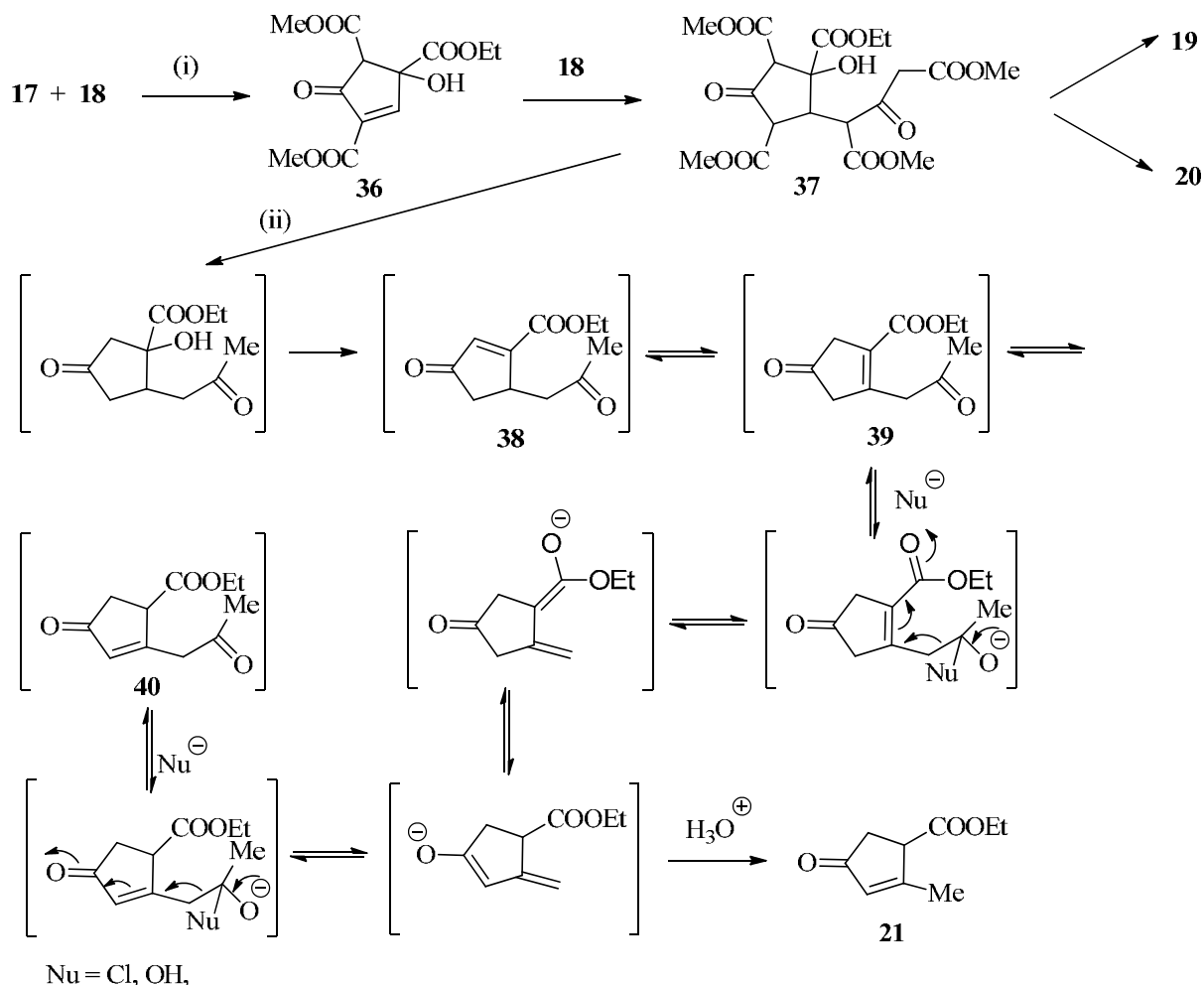
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A possible explanation for the formation of enone **21** from side products of the reaction of **17** and **18** is shown in Scheme 1. Compounds **36** and **37** have been proposed¹ as intermediates in the formation of compounds **19** and **20** from **17** and **18**. When compound **37** is submitted to the Krapcho conditions it might be transformed into enones **38–40** by hydrolysis and decarboxylation, dehydration and C=C isomerization. Enones **39** and **40** might experience a kind of vinylogous retro-Claisen reaction leading to ketoester **21**.



Scheme S1. Possible pathways from **17** and **18** to the side product **21**. (i) NaHCO₃, H₂O, r.t., 4 d. (ii) NaCl, H₂O, DMSO, 180 °C, 4 h.

References

1. Van Ornum, S. G.; Li, J.; Kubiak, G. G.; Cook, J. M. *J. Chem. Soc. Perkin Trans I*, **1997**, 3471.