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M(II) INDENYL DERIVATIVES AS CATALYSTS FOR THE ISOMERISATION OF ALFA–PINENE OXIDE

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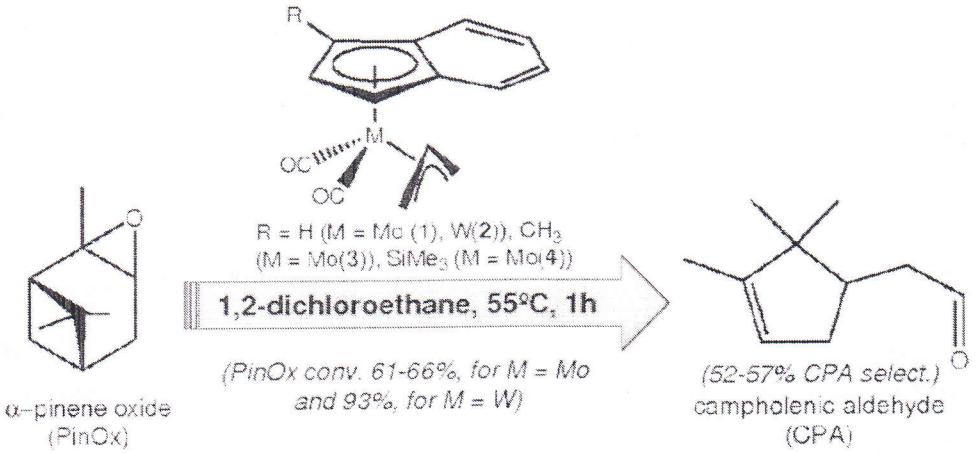
Alfa-Pinene oxide (PinOx) is an important intermediate for the fine chemicals industry, being readily available from the renewable olefin alfa-pinene [1]. The previously investigated homogenous catalysts used for the isomerisation of PinOx include $ZnCl_2$, $ZnBr_2$, $Cu(OTf)_2$, $Cu(ClO_4)_2$ and $H_3PW_{12}O_{40}$ [2-5]. The objective of the present work was to determine the potential utility of M^{II} indenyl complexes as catalysts for this specific reaction [6].



Indenyl derivatives of the type Ind′M(η^3-C_3H_5)$(CO)_2$ (Ind′ = Ind (M = Mo (**1**), W (**2**)), IndMe (M = Mo (**3**)) and $IndSiMe_3$ (M = Mo (**4**)) were obtained in quite high yield (80–90%). Isomerisation of PinOx in the presence of complexes **1-4** , showed that:

i) Solvent polarity and basicity appear to affect the reaction rate,

ii) Changing the type of metal appears to have a strong impact on the catalytic performance,

iii) Changing the type of substituent on the indenyl ligand does not appear to have a strong influence on PinOx conversion.

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