

Homolytic displacements at two reactive centres: Organobridged dicobaloximes and organodisulphonyl chloride

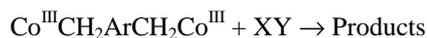
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Recent work has shown that organocobaloximes, $\text{RCo}(\text{dmgH})_2\text{Py}$, undergo very facile radical chain reactions ($S_{\text{H}2}$ and $S_{\text{H}2'}$) and provide an excellent handle in the form of the reactive Co–C bond for the functionalisation of the organic group by a variety of C, S and N centred radicals¹.

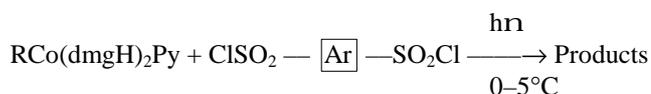


R = allyl, allenyl, benzyl, butenyl, hexenyl; R' = rearranged organic group
XY = BrCCl_3 , CCl_3CN , ArSO_2Cl , PhSSPh , PhSeSePh .

The reactions are free radical in nature and the yield of the products depend upon various factors like the nature of the organocobalt substrate, nature of the free radical and reaction conditions. It is envisaged that the utility of these reactions if extended to two reactive centres, either in the organometallic substrate or in the free radical substrate, will open-up ways for the synthesis of many new organic products. In this paper we report (a) the reactions of organobridged dicobaloximes (having two reactive Co–C bonds) with sulphur-centred radicals (TsCl , PhSSPh , PhSeSePh), (b) the reactions of diorganosulphonyl dichloride (having two reactive S–Cl bonds) with organocobaloximes.



XY = TsCl , PhSSPh , PhSeSePh , Co = $\text{Co}(\text{dmgH})_2\text{Py}$



References

1. Gupta B D, Veena Singh, Qanungo K, Vijai Kanth V and Sengar R S 1999 *J. Organometal. Chem.* **582** 279