essentially quantitative, with an 88 per cent yield after recrystallisation.

Other work on nitrile hydration, not involving the platinum group metals, has been undertaken, but is not discussed here.

Conclusion

The hydration of nitriles, while being one of the classic reactions of organic chemistry, is, at present, used comparatively little in the fine chemicals industry. The discovery of extremely active platinum-containing homogeneous catalysts, in particular one derived from dimethylphosphine oxide, which can hydrate several nitriles in aqueous media and in particular, can hydrate acetonitrile with a turnover number of over 50,000, suggests that the fine chemical and pharmaceutical industries will in future be able to make use of this reaction much more widely.

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