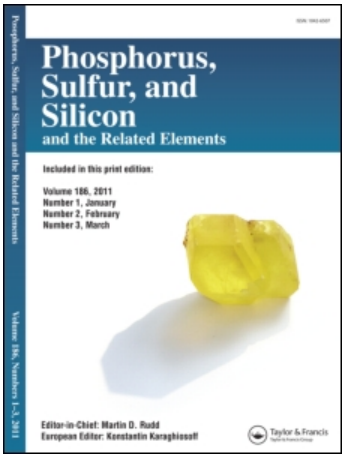

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Declan G. Gilheany[a]; Catherine M. Mitchell[a]; Rachel E. Monahan[a]; Brian J. Walker[b]
[a] St. Patrick's College, Maynooth, Ireland [b] Queen's University, Belfast, Northern Ireland

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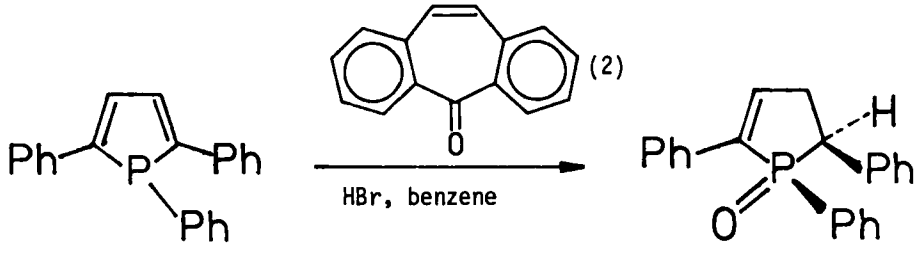
An Unusual Ketone Promoted Hydration Reaction in the Conversion of a Phosphole to a 2-Phospholene Oxide

Declan G. Gilheany*, Catherine M. Mitchell and Rachel E. Monahan
St. Patrick's College,
Maynooth, Co. Kildare, Ireland. and
Brian J. Walker,
Queen's University,
Belfast, Northern Ireland.

Treatment of 1,2,5-triphenylphosphole (1) with dry hydrogen bromide in refluxing benzene in the presence of 5H-dibenzo|a,d|cyclohepten-5-one (2) leads quantitatively to 1,2,5-triphenyl-2-phospholene oxide (3) after aqueous work-up. Only one diastereomer is produced.

Two intermediates have been isolated, one stable to the atmosphere at room temperature and the other moisture sensitive. The structures of these intermediates and possible mechanisms for this unusual reaction are discussed.



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