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Phosphorus, Sulfur, and Silicon and the Related Elements

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[2,3] Sigmatropic Rearrangement of Ethyl 2-(Diethoxyphosphoryloxy) Allyl Sulfoxides and Selenoxides. Synthetic Applications

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To cite this Article Skowrońska, Aleksandra, Koprowski, Marek, McPartlin, Mary and Choi, Nick(1999) '[2,3] Sigmatropic Rearrangement of Ethyl 2-(Diethoxyphosphoryloxy) Allyl Sulfoxides and Selenoxides. Synthetic Applications', *Phosphorus, Sulfur, and Silicon and the Related Elements*, 147: 1, 385

To link to this Article: DOI: 10.1080/10426509908053672

URL: <http://dx.doi.org/10.1080/10426509908053672>

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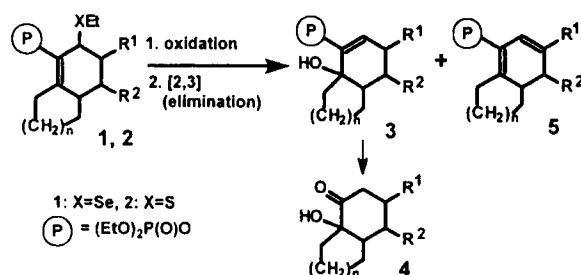
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[2,3] Sigmatropic Rearrangement of Ethyl 2-(Diethoxyphosphoryloxy) Allyl Sulfoxides and Selenoxides. Synthetic Applications

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We have previously described regio- and stereospecific synthesis of allyl selenides **1** and allyl sulfides **2** [1]. We now report on the application of **1** and **2** as attractive precursors of new, functionalized: allylic alcohols **3**, α -hydroxy ketones **4** and 1,3-dienes **5**. **1** and **2** are transformed by oxidation into corresponding allyl selenoxide and sulfoxide, which display stereospecific [2,3] sigmatropic rearrangement providing after hydrolysis the allylic alcohols **3**. Trans configuration of **3** was established by X-ray analysis. In some cases the rearrangement is accompanied by elimination giving the 1,3-dienes **5**. Compounds **3** and **5** can be easily separated by column chromatography. Dephosphorylation of **3** afforded the α -hydroxy ketones **4**.



We thank the Polish State Committee for Scientific Research for support (grant ST09A 053 11).

References

- [1] A. Skowrońska, P. Dybowski, M. Koprowski and E. Krawczyk, *Tetrahedron Lett.*, **36**, 8133 (1995).