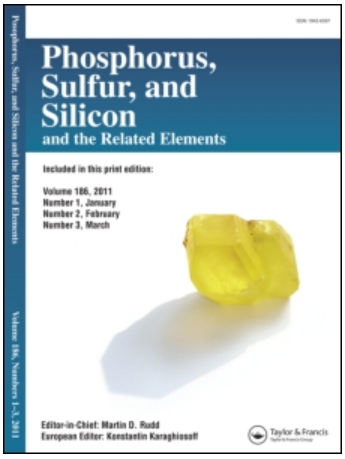


Phosphorus, Sulfur, and Silicon and the Related Elements
Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713618290

Phosphorus Containing Ions with Unconventional Structure: El-Fragmentation of $Et_3P(S)$

H. Keck[a]; W. Kuchen[a]; W. Kückelhaus[a]; S. Kühlborn[a]
[a] Inst. f. Anorg. Chem. u. Strukturchem. I, Univ. Dusseldorf, Düsseldorf

To cite this Article Keck, H. , Kuchen, W. , Kückelhaus, W. and Kühlborn, S.(1987) 'Phosphorus Containing Ions with Unconventional Structure: El-Fragmentation of $Et_3P(S)$', Phosphorus, Sulfur, and Silicon and the Related Elements, 30: 3, 691
To link to this Article: DOI: 10.1080/03086648708079185
URL: http://dx.doi.org/10.1080/03086648708079185

Phosphorus Containing Ions with Unconventional Structure: EI-Fragmentation of $Et_3P(S)$

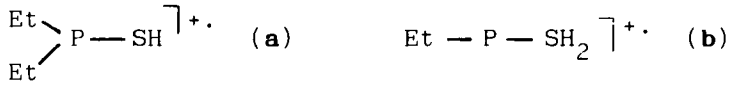
H. Keck•, W. Kuchen, W. Kückelhaus and S. Kühlborn

Inst. f. Anorg. Chem. u. Strukturchem. I, Univ. Düsseldorf

Universitätsstr. 1

D-4000 Düsseldorf 1

Gas phase ion structures often do not correlate with those of their corresponding neutrals and many ions with unconventional structures have been found to be stable in the gas phase in contrast to their neutral counterparts. Thus, radical ions (**a**) and (**b**)



(**a**) (**b**)

are formed under EI-conditions by consecutive elimination of C_2H_4 from ionized triethylphosphanesulfide $Et_3P(S)$. (**a**) contains tricoordinated phosphorus while the structure of (**b**) corresponds to an ionized adduct of H_2S and the "phosphinidene" Et — P. The structures have been determined on the basis of collisional activation and metastable ion spectra as well as H/D-exchange reactions. Results of semiempirical MO-calculations (MNDO) are reported.