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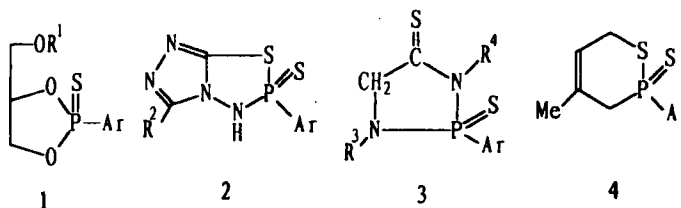
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Application of Lawesson's Reagent in Syntheses of Biologically Active Phosphorus Heterocycles

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The reactions of Lawesson's reagent--2,4-Bis(4-methoxyphenyl)-1,3,2,4-dithiadiphosphetane-2,4-disulfide, with long-chain 1-glycerin monoethers, 3-mercapto-4-amino-1,2,4-triazoles, 1,3-disubstituted glycinamides, and 2-methyl-1,3-butadiene have been investigated and found to form cyclic analogues **1**, fused heterocycles **2**, 5-membered phosphorus rings **3**, and 6-membered heterocycle **4**, respectively, in moderate yield. The preliminary biological screening tests for these rings showed that they possess significant selective herbicidal activity against rape.



Ar = *p*-CH₃OC₆H₄; R¹ = C₁₁₋₁₃ alkyl group; R², R³, R⁴ = H, alkyl, aryl