Regioselectivity in Diels-Alder Reactions of Thiazolo[3,2-*d*][1,4,2]diazaphospholes and Related Compounds

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Thiazolo[3,2-*d*][1,4,2]diazaphospholes as well as their 5,6-dihydro and benzo derivatives undergo Diels-Alder reactions at the >C=P– functionalities with 2,3-dimethylbutadiene and with isoprene. 1,3-Azaphospholo[5,1-*b*]benzothiazole, however, exhibits reduced reactivity and reacts with 1,3-dienes only in the presence of an oxidising agent (O_2, S_8 or Se_n). Reactions with isoprene occur regioselectively.

Key words: Regioselectivity, Diels-Alder Reaction, Thiazolo[3,2-*d*][1,4,2]diazaphospholes, 1,4,2-Diazaphospholo[5,4-*b*]benzothiazoles, 1,3-Azaphospholo[5,1-*b*]benzothiazole