[Heterocycles, 38, 1733-1736 (1994)] [Lab. of Pharm. Chemistry]

New Transformation of Lactam Sulfides to Tetrahydro-3,6-epithiobenzazocines *via* Bicyclic Sulfonium Salts with a Sulfonio Bridgehead.

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1-Methyl-3,5-dihydro-4,1-benzothiazin-2(1*H*)-one (**1**) was chlorinated with *N*-chlorosuccinimide to give 5-chloro derivative (**2**). The α-chlorosulfide (**2**) was treated with dienes in the presence of silver perchlorate to afford cyclic sulfonium salts (**3**). Reactions of **3** with sodium borohydride or sodium hydride provided 4-vinyltetrahydro-3,6-epithiobenzazocine derivatives in good yields.

[Synlett, 1017-1019 (1994)] [Lab. of Pharm. Chemistry]

A New Synthesis of β-Keto and β-Formyl Sulfones by the Reactions of Imines and Sulfonyl Chlorides.

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Reactions of imines (**1**, 2 equiv), easily obtained from corresponding ketones or aldehydes, with phenylmethanesulfonyl chloride (1 equiv) followed by hydrolysis with 3*N*-HCl provided β-keto and β-formyl sulfones in moderate to good yields under mild conditions, respectively. This reaction proceeds *via* the addition of an enamine isomerized from an imine (**1**) to a sulfene intermediate.

[Synthesis, 203-206 (1994)] [Lab. of Pharm. Chemistry]

Synthesis of 6- or 8-Carbon-Substituted 2-Oxopurines.

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Reaction of 3,7-dimethyl-6-methylthio-2-oxopurine (**1**) with Grignard reagents or organolithiums afforded 8-adducts **2**, whereas the corresponding reaction of 3, 7-dimethyl-2-oxopurine (**3**) gave 6-adducts **4**. The adducts **2** and **4** were converted into 8-substituted theobromines **5** and 6-substituted 3,7-dimethyl-2-oxopurines **6**, respectively. 8-Chlorotheobromine (**7**) reacted with Grignard reagents in the presence of a catalytic amount of $NiBr_2(PPh_3)_2$ to give **5** in good yields.