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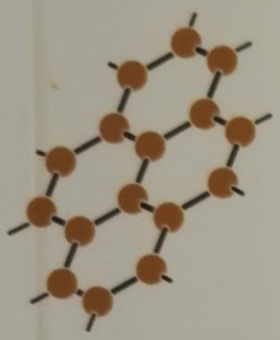
MATERIALS SCIENCE AND APPLIED CHEMISTRY



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Sulfonylpurine synthesis using sulfonyl group dance

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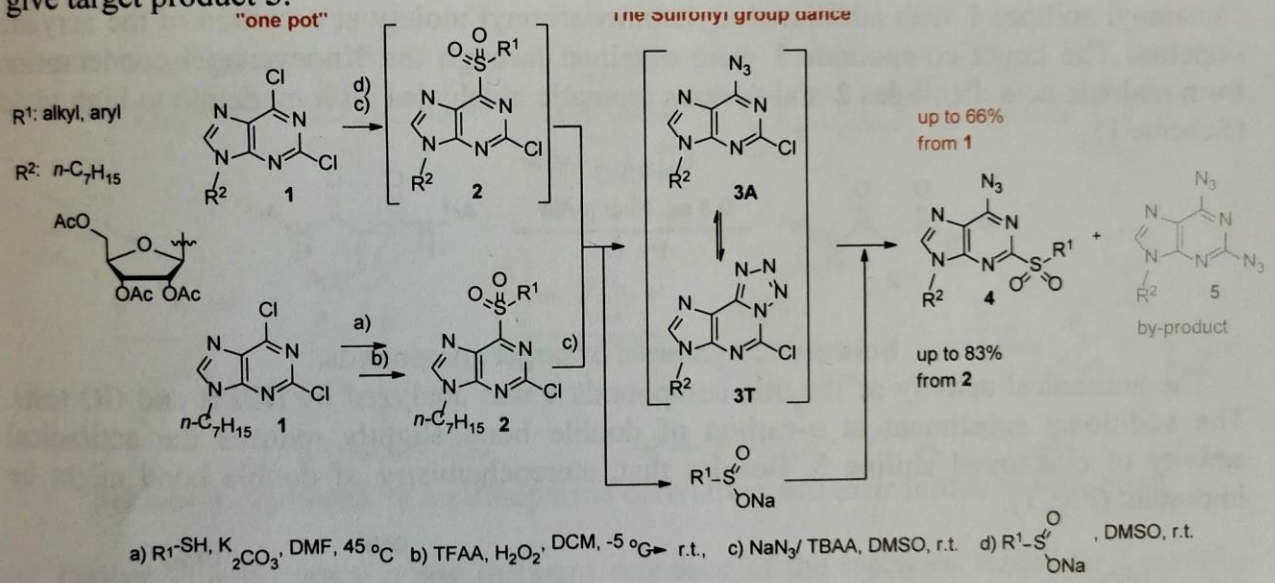
Purine derivatives continue to be widely researched due to their application in medicinal chemistry. For example, to treat tuberculosis, cancer and other malignancies.[1]

Here we report a new synthetic route for synthesis of 6-azido-2-sulfonyl purine derivatives. The transformation from **2** to **4** can be explained by azido-tetrazolo tautomerism. The latter activates purine cycle towards S_NAr reaction at otherwise less reactive C2. Optimal reaction conditions were found: NaN_3, DMSO, room temperature and reaction scope was investigated using different sulfonyl purine derivatives **2**. A straightforward synthetic approach was developed using "one pot" reaction. First, sodium sulfinate salts were used to generated **2** intermediate *in situ*. After that, azide was added to give target product **5**.



Scheme 1. Synthesis of 6-azido-2-sulfonyl purine derivatives.

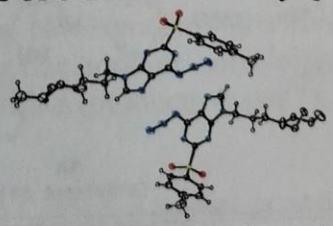


Figure 1. 6-Azido-2-tosyl-9-heptyl-9*H*-purine

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References

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