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Synthesis of Labeled intermediates—a Tough Job?

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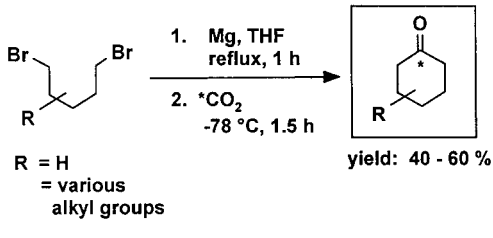
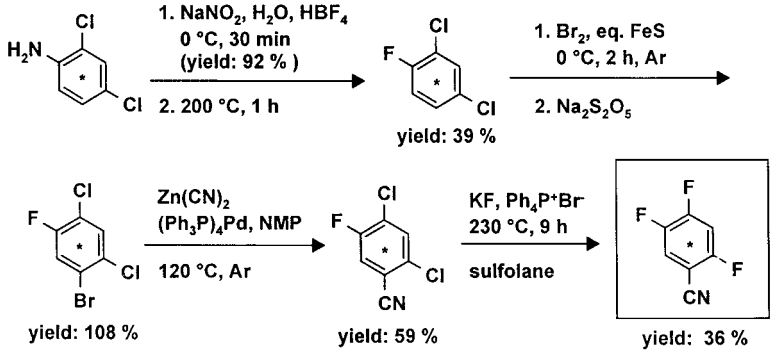
For the synthesis of actives in the agrochemical or pharmaceutical industry intermediates are used from a large variety of sources. However, for the preparation of the same actives in labeled form the labeling synthesis of these intermediates might prove to be tremendously difficult, e.g. due to the limited range of available labeled starting materials, reaction conditions, etc. This might lead to the use of unusual, long forgotten, or difficult chemistry.

The talk will demonstrate how difficulties were overcome in the labeling synthesis of various intermediates.

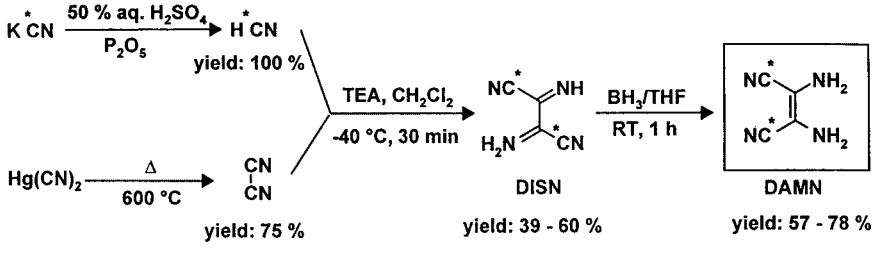
- Labeling Synthesis of [1-^{14}C]Cyclohexanone Derivatives:



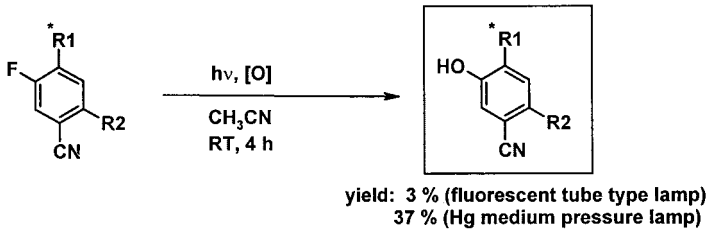
- Labeling Synthesis of 2,4,5-Trifluoro[ring-UL-^{14}C]benzonitrile:



- Labeling Synthesis of Diaminomaleo[^{14}C]Nitrile:



- Labeling Synthesis of Photometabolite:



yield: 3 % (fluorescent tube type lamp)
37 % (Hg medium pressure lamp)

* denotes ^{14}C

