This feature focuses on a reagent chosen by a postgraduate, highlighting the uses and preparation of the reagent in current research.

**Introduction**

Lithium bis(trimethylsilyl)amide (LiHMDS) is a colorless solid, which is soluble in a variety of organic solvents suitable for reactive compounds, such as organometallic substances or substituted metal amides. The compound melts at 71–72 °C.\(^1\) It is unstable in air and catches fire when compressed, but it is stable in an atmosphere of nitrogen. Reactions with a variety of nonmetallic halides give lithium halides and hexamethyldisilazyl derivatives.

The preparation of lithium bis(trimethylsilyl)amide must be performed in an atmosphere of dry nitrogen. The pentane containing n-butyllithium is added slowly to a stirred solution of hexamethyldisilazane (Scheme 1). The reaction mixture is boiled for 30 minutes, and evaporate the solvents. LiHMDS is obtained as colorless crystals.

**Abstracts**

(A) B. Li et al.\(^2\) reported an efficient and catalyst-free procedure for the synthesis of 2-[4-(4-cyanophenoxy)phenyl]-1H-indole-6-carboximidamide hydrochloride salt from 2-[4-(4-cyanophenoxy)phenyl] indole-6-carbonitrile by treatment with LiHMDS using THF as solvent at room temperature.

(B) A new method for preparing 2-lithio-(4S)-isopropyl-2-oxazolide from (4S)-isopropylisoxazoline in THF using LiHMDS was developed. The product is isolated by deprotonation of (4S)-isopropylisoxazoline with LiHMDS followed by removal of the volatile materials.\(^3\)

(C) Petersen and co-workers\(^4\) reported that 1 was treated with LiHMDS in THF at room temperature to produce 2 in a yield of >90%. Under same conditions, only lower yield of 2 was obtained using pyridine, DBU, acetylide or KO-t-Bu.

(D) The preparation of the regioisomeric 3-amino-5-substituted-1,2,4-thiadiazoles can be attained by treatment of the 3-bromo-5-substituted-1,2,4-thiadiazoles with LiHMDS in THF.\(^5\)

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