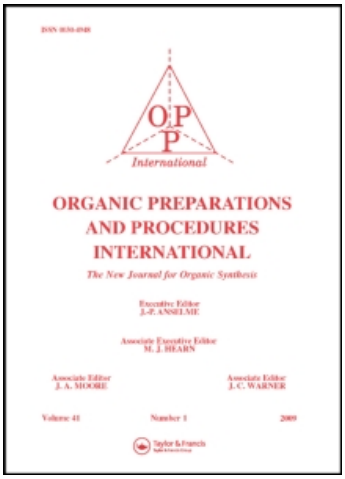

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A SYNTHESIS OF 1-METHYL-2-ALLYLPYRROLE

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A SYNTHESIS OF 1-METHYL-2-ALLYLPYRROLE

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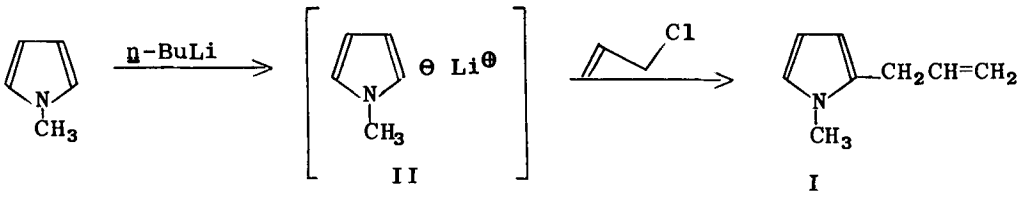
The previously unknown 1-methyl-2-allylpyrrole (I) has been obtained in 20% yield according to the scheme below.[1] Compound I is unstable at room temperature and darkens within several minutes after distillation, to resinous material even under N_2.[2]



EXPERIMENTAL[3]

A mixture of 3.4 g (0.042 mole) of N-methylpyrrole (DuPont), 28 ml (0.042 mole of commercial n- butyl lithium in hexane (Apache Chemical) and 30 ml of dry ether was heated to reflux with stirring under nitrogen atmosphere overnight.[1] After cooling to room temperature, 3.8 g (0.05 mole) of allyl chloride was added in one portion and the resulting mixture was heated under reflux with stirring for 24 hrs, and was then quenched with ice water and the aqueous layer was separated and extracted twice with ether. The combined ethereal extracts were dried ($MgSO_4$), the solvent removed, and

the residue was subjected to distillation to yield about 1 g (20%) of the compound I, boiling at 85-94°/32 mm of Hg; ir (film): 910 and 990 ($-CH=CH_2$) and 1640 (olefinic) cm^{-1}; pmr ($CDCl_3$): 3.4 (d, 2H, $-CH_2-$), 3.5 (s, 3H, $N-CH_3$), 4.9-5.3 (m, 2H, $-CH=C\underline{H}_2$), 5.8-6.3 (m, 3H, $-C\underline{H}=CH_2$, H-3 and H-4), and 6.6-6.7 (m, 1H, H-5) ppm; mass spectrum:m/e 121 (molecular ion), and 120 (M^+-1).[4]

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2. P. A. Cantor and C. A. Vanderwere, J. Am. Chem. Soc., 80, 970 (1958).

3. The PMR spectrum of I was obtained in $CDCl_3$ on a Varian A-60 spectrometer using TMS as internal standard. The mass spectrum was obtained on Varian M-66 mass spectrometer.

4. M. Marx and C. Djerassi, J. Am. Chem. Soc., 90, 679 (1968).