

New Compounds

4,6-Dichlorobenzotriazole

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IN THE COURSE of work on chlorinated benzotriazoles (1, 2) we had occasion to prepare 4,6-dichlorobenzotriazole by the diazotization of the known 3,5-dichloro-*o*-phenylenediamine (3).

EXPERIMENTAL

A sample of 2-nitro-4,6-dichloroaniline (4) was reduced with excess stannous chloride in concentrated hydrochloric acid; the precipitated chlorostannate was filtered off, dissolved in water, and treated with H₂S to precipitate the tin sulfides. The acid aqueous filtrate was treated with excess sodium nitrite and crude 4,6-dichlorobenzotriazole crystallized out directly. (The yield over-all was about 50%.) After three crystallizations from nitromethane the compound gave m.p. 245.5–6.5°.

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Anal. Calcd. for C₆H₃Cl₂N₃: N, E., 188.0; N, 22.35. Found: N, E., 188.6; N, 22.58, 22.80.

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Synthesis and Ultraviolet Spectra of 1-Methyl- and 1-Phenyl-2-(1'-Naphthyl)-Naphthalene

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IN CONNECTION with work on the identification of compounds isolated from coal and from coal hydrogenation products, we wish to record the synthesis and ultraviolet absorption spectra of the hitherto unreported 1-methyl-2-(1'-naphthyl)-naphthalene and 1-phenyl-2-(1'-naphthyl)-naphthalene. These were synthesized by addition of the appropriate organolithium compound to 1-keto-2-(1', 2', 3', 4'-tetrahydro-1'-naphthyl)-1,2,3,4-tetrahydronaphthalene (2) followed by dehydration and dehydrogenation. The spectra showed the anticipated effects of increasing hindrance in the 1,2'-dinaphthyl series (1).

1-Methyl-2-(1'-naphthyl)-naphthalene, white crystals (ethanol-benzene), m.p. 119.5–119.9°. TNB complex, bright yellow plates (ethanol), m.p. 145.0–146.5°. TNF complex, red prisms (acetic acid), m.p. 143.0–144.2°. Ultraviolet absorption spectrum (95% ethanol): maxima at 2208 Å

($\epsilon = 115,260$; 2265 (98,800) (shoulder); 2525 (8,721); 2745 (15,080) (shoulder); 2833 (18,110); 2922 (13,850) (shoulder).

1-Phenyl-2-(1'-naphthyl)-naphthalene, colorless irregular plates (ethanol), m.p. 145.2–146.5°. Bis-TNB complex, unstable yellow crystals (ethanol), m.p. 128.8–129.6°. A TNF complex could not be isolated. Ultraviolet absorption spectrum (95% ethanol): maxima at 2235 Å ($\epsilon = 96,920$); 2739 (15,300) (shoulder); 2837 (19,490).

Satisfactory analyses were obtained for all of the new compounds.

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