TABLE I

Compound	M.p.,[a] °C.	Carbon, %[b]		Hydrogen, %[b]		Nitrogen, %[b]	
		Calcd.	Found	Calcd.	Found	Calcd.	Found
4-(Benzamidoacetyl)-biphenyl	182–183	79.98	79.61	5.44	5.41	..	..
4-(2-Furamidoacetyl)-biphenyl	145	74.75	74.84	4.92	4.99	..	..
2-(Myristamidoacetyl)-naphthalene	105–107	78.94	79.02	9.43	9.40	3.54	3.55
2-(Benzamidoacetyl)-naphthalene	143–144	78.87	78.76	5.23	5.13	4.84	4.77
2-Phenyl-5-(4-biphenylyl)-thiazole	191–192	80.48	80.06	4.82	4.96	..	..
2-(2-Furyl)-5-(4-biphenylyl)-thiazole	152	79.43	79.29	4.56	4.51	4.88	4.82
2-Phenyl-5-(4-biphenylyl)-oxazole	158	84.85	84.79	5.06	5.19	4.71	4.45
2-Tridecyl-5-(2-naphthylyl)-oxazole	56–57	82.71	82.29	9.34	9.50	..	..
2-Phenyl-5-(2-naphthyl)-oxazole	106	84.11	83.75	4.83	5.02	..	..

[a] All melting points taken on a Fisher–Johns melting point block. [b] Microanalyses performed by Micro-Tech Laboratories, Skokie, Illinois.

obtained by reaction with sulfuric acid[3] at room temperature or heating at 200–300° with phosphorus pentoxide. Thiazoles were obtained by heating with phosphorus pentasulfide[4] at 200–300°. The oxazoles and thiazoles described in the table are being investigated for their use as phosphors in scintillation counters.[5]

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Chlorination of 4-Dibenzothiophenol

A solution of 3.4 g. (0.025 mole) of sulfuryl chloride in 50 ml. of chloroform was added dropwise to a well-stirred suspension of 5 g. (0.025 mole) of 4-dibenzothiophenol[1] in 100 ml. of chloroform. The resulting dark brown solution was allowed to stand for 12 hours. The mixture was then refluxed until gases were no longer evolved. On cooling, 1.5 g. (22.4%) of a light brown solid (m.p. 182–185°) separated. Two recrystallizations from methanol yielded 0.65 g. of material melting at 195–196°.

Anal. Calcd. for $C_{12}H_7OClS$: Cl, 15.02. Found: Cl, 14.91.

This analysis checks for a monochlorinated 4-dibenzothiophenol. The position of the chlorine was not determined, but it may be 1-chloro-4-dibenzothiophenol. This structure is suggested on the basis that bromination of 4-acetaminodibenzothiophene or of the closely related 4-hydroxydibenzofuran, or 4-methoxydibenzofuran[2] or 4-acetaminodibenzofuran[2] yields an isomer-free product with the halogen atom in the position ortho to the biphenyl bridge and para to the other substituent.

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DEPARTMENT OF CHEMISTRY
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3-Hydroxy-2-naphthalenemethanol

A solution of 9 g. (0.24 mole) of lithium aluminum hydride in 280 ml. of dry ether was placed in a 1-l., 3-necked flask equipped with a dropping funnel, a mechanical stirrer, and a reflux condenser, and protected from moisture by calcium chloride tubes. A solution of 37 g. (0.197 mole) of 3-hydroxy-2-naphthoic acid in 675 ml. of dry ether was added at such a rate that the ether refluxed gently. Fifteen minutes after the last addition, water was added cautiously with cooling and stirring to decompose the excess lithium aluminum hydride. This was followed by the addition of 300 ml. of 10% sulfuric acid with cooling. The orange-red mixture was extracted with ether. The ether extracts were washed with water and 5% sodium bicarbonate solution and then dried over barium oxide. Evaporation of the ether gave 10 g. of material melting at 178–185°. After recrystallization from alcohol there was obtained 8 g. (23%) of 3-hydroxy-2-naphthalenemethanol, m.p. 190–191°.

Anal. Calcd. for $C_{11}H_{10}O_2$: C, 75.85; H, 5.79. Found: C, 75.64; H, 5.66.

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Bromo-2-chlorokojic Acid[1]

2-Chlorokojic acid (2-chloromethyl-5-hydroxy-4-pyrone) was found to participate in the Wohl-Ziegler reaction when 10 g. of the acid was refluxed with 12 g. of N-bromosuccinimide in 100 ml. of benzene for one hour.

At the end of the reaction period the whole mass was placed in a crystallizing dish and the benzene was removed by surface evaporation. The residual mixture was treated with 50 ml. of distilled water and filtered. The red crystalline product was recrystallized twice from absolute ethanol. The yield was 6.2 g.; the melting point of the white crystals obtained by sublimation was 163°. The compound was exceedingly sensitive to traces of iron salts, giving an intense red coloration.

Anal.[2] Calcd.: C, 30.07; H, 1.67. Found: C, 29.78; H, 1.75.

The compound is probably 2-chloromethyl-5-hydroxy-6-bromo-4-pyrone. When the same reaction as described above was tried with kojic acid only tars resulted.

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(2) Analyses by Dr. Carl Tiedcke.