

hexanoate³ with ethylene glycol in 50% yield (b.p. 105–107°/7–8 mm.). Reaction of (II) with methylsulphonyl carbanion⁴ afforded β -ketosulphoxide (III) as a thick oil (b.p. 145–155°/0.5–1 mm. ν_{\max} , 1705, 1040 cm^{-1}). Alkylation⁵ of (III) with isoprene bromide in DMF and NaH followed by reductive cleavage⁶ of sulphoxide group with Al (amalgam) in 10% aq. THF furnished ketal-ketone (IV) in 40% yield (b.p. 166–168°/10–13 mm. ν_{\max} , 1715, 1060, 1040 cm^{-1}). Grignard reaction on (V) with methylmagnesium iodide secured the corresponding ketal alcohol (VI) in 63% yield (b.p. 150–152°/5–6 mm. ν_{\max} , 3425, 1110, 1060–1040 cm^{-1}). Deketalisation⁷ of ketal alcohol with aqueous acetone and PTS furnished keto alcohol (VII) (ν_{\max} , 3425, 1705, 1100 cm^{-1}). Finally, compound (VII) was submitted to the excess of vinyl magnesium bromide in THF to give the diol (1) which showed comparable I.R. spectrum with that reported for capparapidiol.¹

Wherever necessary the intermediates were chromatographed, fractionated under vacuum and then characterised by analytical and infrared spectral data. A full account of the paper will be published elsewhere when more compounds along these lines would be synthesised.

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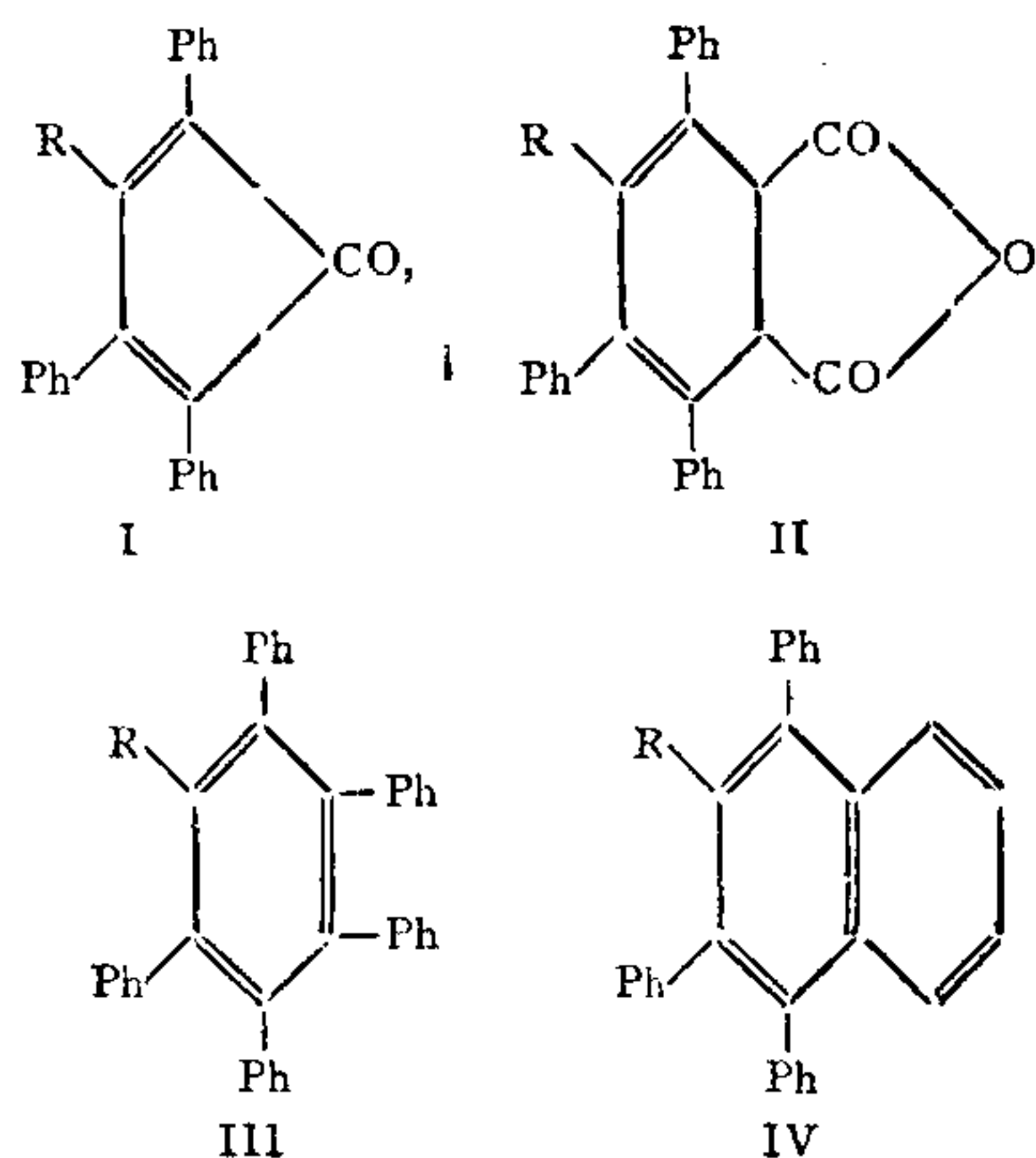
1. Castillo, J. B., Brooks, C. J. W. and Campbell, M. M., *Tetrahedron Letters*, 1966, p. 3731.
2. Salmi, *Fer.*, 1938, **71 B**, 1803.
3. Chong, R. and Clezy, P. S., *Austr. J. Chem.*, 1967, **20**, 123.
4. Corey, E. J. and Chaykovsky, M., *J. Am. Chem. Soc.*, 1965, **87**, 1345.
5. Gassman, P. G. and Richmond, G. D., *J. Org. Chem.*, 1966, **31**, 2355.
6. Corey, E. J. and Chaykovsky, M., *J. Am. Chem. Soc.*, 1964, **86**, 1641; 1966, **88**, 5498.
7. Johnson, W. S., Bass, J. D. and Williamson, K. L., *Tetrahedron*, 1963, **19**, 862.

'SYNTHESIS OF HYDRINDENE DERIVATIVES

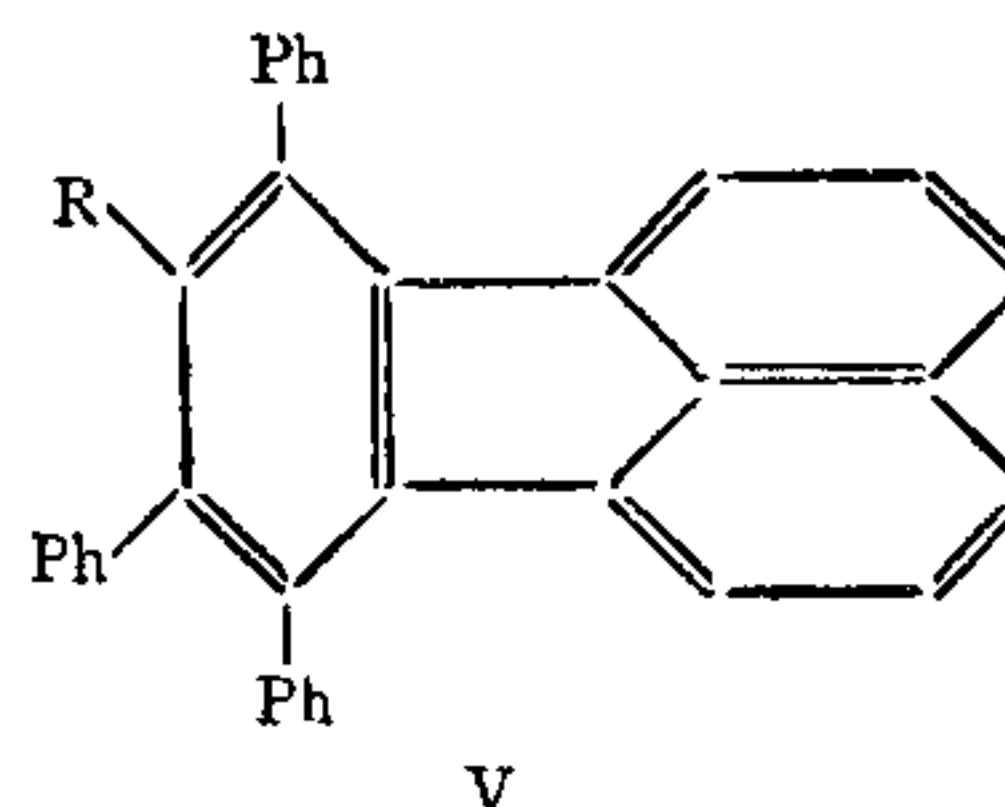
PHENYL acetyl chloride was condensed with Hydrindene in presence of anhydrous aluminium chloride in nitrobenzene to form 5-hydrindyl benzyl ketone, m.p. 111°, yield

47%. The ketone on oxidation with SeO_2 gave the corresponding α -diketone, m.p. 101°, yield 60%, which on treatment with alkaline H_2O_2 gave hydrindene-5-carboxylic acid.

The diketone smoothly condensed with dibenzyl ketone in alcoholic KOH to form the cyclopentadienone derivative (I), m.p. 231°, yield 94%. The compound (I) is a very reactive diene and undergoes normal Diels-Alder reaction with (a) maleic anhydride to form (II), m.p. 217°, yield 60%, (b) with diphenyl acetylene to form (III), m.p. 305°, yield 80%, (c) with benzyne to form (IV), m.p. 175°, yield 70%, and (d) with acenaphthylene at high temperature to form (V), m.p. 148°, yield 60%.



and



where R = 5-Hydrindyl.

Microanalyses were done in Alfred Bernhardt's laboratory, W. Germany. Melting points are not corrected.

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