Tetrahedron Letters No. 34, pp. 3209 - 3210, 1971. Pergamon Press. Printed in Great Britain.

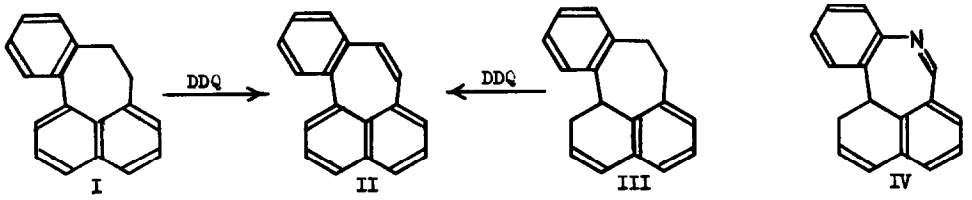
AN ALTERNATIVE SYNTHESIS OF BENZO[4,5]CYCLOHEPTA[1,2,3-de]NAPHTHALENE

J.T. Craig, K.W. Tan, and A.D. Woolhouse

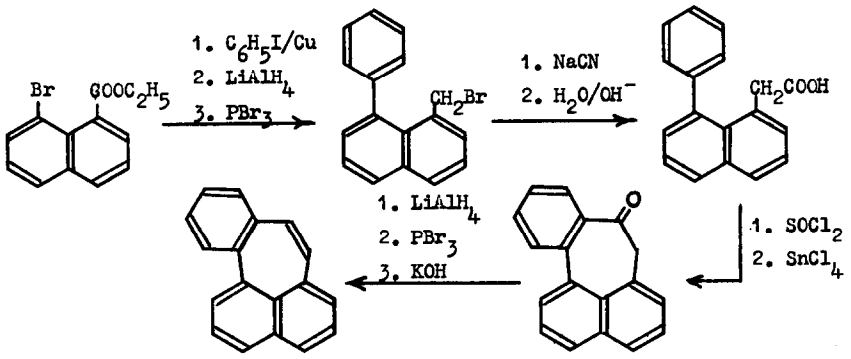
Victoria University of Wellington, Wellington, New Zealand

(Received in UK 13 July 1971; accepted for publication 20 July 1971)

The publication by Muller *et al.*[1] of a synthesis of benzo[4,5]cyclohepta[1,2,3-de]naphthalene (II) by dehydrogenation of the hydrogenated derivatives (I) and (III) prompts us to make a preliminary report of an alternative synthesis of this hydrocarbon.



Our synthesis is shown in the following scheme:-

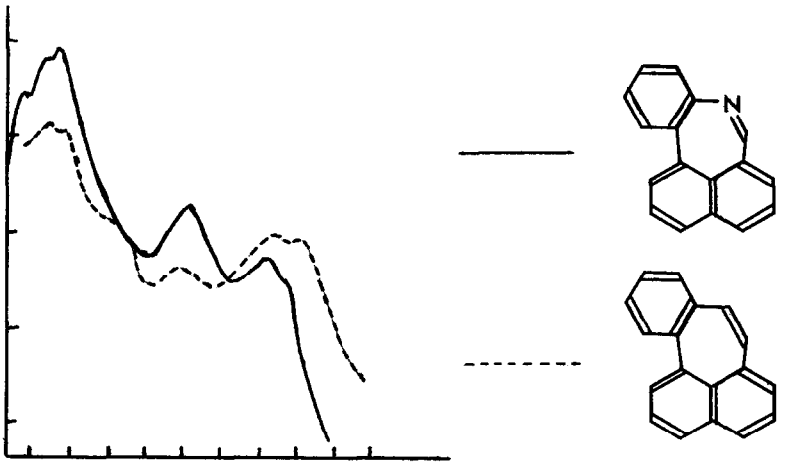


As reported previously[2] and confirmed by Muller *et al.* the hydrocarbon (I) can not be dehydrogenated in the presence of heterogeneous catalysts such as palladium on charcoal. A method for the synthesis of (II) by a sequence which did not involve dehydrogenation as

the final step was therefore developed.

The physical properties (melting point, u.v. and n.m.r. spectra) of the hydrocarbon obtained by this synthesis are identical with those reported by Muller et al.

It is of interest to note that the ultra violet spectrum of the hydrocarbon is very similar to that of the aza-analogue (IV)[3].



Satisfactory analyses were obtained for all the compounds shown, and full experimental details and discussion will be reported later.

REFERENCES

(1) J.F. Muller, D. Cagniant, and P. Cagniant, Tetrahedron Letters (1971) 45.

(2) J.T. Craig, Austral. J. Chem., (1966) 19, 1927.

(3) J.T. Craig, A.D.Woolhouse / Austral. J. Chem., (1971) 24, 835.