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Synthesis and Isolation of 1-Cyclohex-1,2-dien-1-ylbenzene from 1-(2-Iodocyclohex-1-en-1-yl)benzene and 1-(2-Iodocyclohex-2-en-1-yl)benzene

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**Abstract:** The key compounds, 1-(2-iodocyclohex-1-en-1-yl) benzene (12) and 1-(2-iodocyclohex-2-en-1-yl) benzene (13), for the generation of 1-cyclohex-1,2-dien-1-ylbenzene (20) were synthesized starting with cyclohexanone. Separate reactions of 12 and 13 with K<sup>+</sup>tBu<sup>-</sup> in benzene in a sealed tube at 180 °C gave 6 products: 1-cyclohex-1-en-1-ylbenzene (8), 2-phenylcyclohexanone (10), 1,8-diphenyl-2,3,4,4a,4b,5,6,7-octahydrobiphenylene (21), 8a-phenyl-1,2,3,4,6,7,8,8a-octahydro-rottriphenylene (22), 1,2-diphenylcyclohexene (23), and 1-(2-tert-butoxycyclohex-1-enyl) benzene (24). In addition, reactions of 12 and 13 under the same conditions in the presence of diphenylisobenzofuran and furan as trapping reagents afforded the [4 + 2] cyclo-adducts 30, 31, and 32 in good yields, respectively.

**Key Words:** Cyclic strained allenes, dehydroiodination, dimerisation, cycloaddition

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