


# Turkish Journal of Chemistry

Turkish Journal  
of  
Chemistry

## Synthesis of 1-Cyclohept-1,2-dien-1-yl Benzene from 1-(2-iodo-, chlorocyclohept-1-en-1-yl) benzene and 1-(2-iodo-, chlorocyclohept-2-en-1-yl)benzene: Its Trapping with Diphenylisobenzofuran

Mustafa CEYLAN, Yakup BUDAK, Murat ULUKAYA,  
M. Burcu GÜRDERE, Esra FINDIK  
Department of Chemistry, Gaziosmanpaşa University, 60250, Tokat-TURKEY  
e-mail:mceylan@gop.edu.tr

 [Keywords](#)  
[Authors](#)



[chem@tubitak.gov.tr](mailto:chem@tubitak.gov.tr)

[Scientific Journals Home Page](#)

**Abstract:** The key compounds vinyl iodides 12a and 13a, for the generation of 1-cyclohept-1,2-dien-1-ylbenzene (1), were synthesized from cycloheptanone (5). Bromobenzene was converted to the Grignard reagent, which was condensed with 5. Dehydration of alcohol 6 gave alkene 7. Hydroboration of 7 followed by oxidation with PCC afforded ketone 9, which was converted to hydrazone 10. Treatment of 10 with iodine resulted in the formation of 12a and 13a. The other precursors, 12b and 13b, were synthesized from the reaction of 9 with  $PCl_5$ . Reactions of 12a, b and 13a, b with  $KOtBu$  in a sealed tube at 185 °C gave the [2+4] and [2+2] dimer products 20 and 21, respectively. In addition, reactions of 12a, b and 13a, b with  $KOtBu$  under the same conditions in the presence of diphenylbenzofuran (DBI) as a trapping reagent afforded the [2+4] cycloadducts 24 and 25 in good yields.

**Key Words:** Substituted cyclic allene, dehydroiodination, dehydrochloration, dimerization, cycloaddition

---

Turk. J. Chem., **30**, (2006), 663-672.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Chem.,vol.30,iss.6.](#)