

# Synthesis and Solid-state Structures of 1,3- and 1,4-Bis(diethylgallyl)benzene

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The compounds 1,3-bis(diethylgallyl)benzene (**3**) and 1,4-bis(diethylgallyl)benzene (**6**) were prepared by reaction of the corresponding chloromercuriobenzenes with an excess of triethylgallium by applying pressure and higher temperatures. These compounds very easily undergo redistribution reactions in solution and in the solid state. Extremely air-sensitive crystals suitable for an X-ray crystal structure analysis were obtained from triethylgallium as solvent. The structural studies revealed the presence of tetra-coordinated carbon and gallium atoms in symmetric aryl-diethylgallyl bridging units. The coordination behavior of **3** and **6** in the solid state is quite different from that of the corresponding methyl-substituted compounds.

*Key words:* Bis(diethylgallyl)benzenes, Diethylgallyl Bridging Units, Dialkyl(aryl)gallium Compounds, Organogallium(III) Compounds