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**Synthesis of (+)-7-Ethyl-5-methyl-6,8-dioxabicyclo [3.2.1] oct-3-ene,
An Optically Active Form of the House Mouse Pheromone.**

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(+)-(1S, 5R, 7S)-7-Ethyl-5-methyl-6,8-dioxabicyclo[3.2.1.]oct-3-ene, an optically active form of the androgen-dependent pheromone of the adult male house mouse *Mus musculus*, was synthesized from (+)-(R,R)-diethyl tartrate *via* highly site-selective olefination of the 6,8-dioxabicyclo[3.2.1]-octane intermediate.

[Chem. Lett., 1988, 131]

**New Chiral Shift Reagents, Optically Active 2,2'-Dihydroxy-1,1'-binaphthyl
and 1,6-Di (o-chlorophenyl)-1,6-diphenylhexa-2,4-diyne-1,6-diol.**

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The title compounds were found to be useful as a chiral shift reagent in ^1H NMR spectroscopy to determine enantiomeric purity of amines, alcohols, sulfoxides, phosphine oxides, phosphinates, and arsenoxides. It is also reported that the induced chemical shift difference increases when the title compound is used together with the typical chiral shift reagent, $\text{Eu}(\text{hfc})_3$.

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Preparation of β -Alanine-3,3- d_2 and -2,2,3,3- d_4 .

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β -Alanine-3,3- d_2 and -2,2,3,3- d_4 were prepared *via* a five-step procedure from ethyl cyanoacetate. The procedure involves reduction of the starting material with lithium aluminum deuteride, followed by benzoylation of the amino alcohol obtained, oxidation of the benzoylated compound, hydrolysis of benzoyl- β -alanine-3,3- d_2 with hydrochloric or deuteriochloric acid, and then anion exchange of the hydrochloride or the deuteriochloride. The isotopic purities of the d_2 and d_4 compounds were more than 98 and 97%, respectively.