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Preparations of Dichloroplatinum(II) Complexes of Some Sterically Protected 3,4-Diphosphinidenecyclobutene Derivatives

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PREPARATIONS OF DICHLOROPLATINUM(II) COMPLEXES OF SOME STERICALLY PROTECTED 3,4-DIPHOSPHINIDENECYCLOBUTENE DERIVATIVES

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Sterically protected 3,4-diphosphinidenecyclobutenes are bidentate ligands of interest, because of their relatively rigid framework containing the sp² phosphorus atoms. We report here the preparation and properties of dichloroplatinum(II) complexes of diphosphinidenecyclobutene derivatives having ring-fused structures. When the ringfused diphosphinidenecyclobutene derivatives (E,E)-1 were allowed to react with PtCl₂(MeCN)₂ in refluxing THF, the corresponding dichloroplatinum(II) complexes 2 were obtained in 62-77% yields. Spin-spin coupling constants J_{PtP} for **2a-c** are 4471, 4491, and 4485 Hz, respectively (in $CDCl_3$).

Mes*
$$(E,E)-1a-c a, n=2; b, n = 3; c, n = 4$$
Mes*
$$(E,E)-1a-c a, n=2; b, n = 3; c, n = 4$$
Mes*

 $Mes* = 2,4,6-t-Bu_3C_6H_2$

SCHEME 1

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