

**Crystal Structure and Synthesis of Cis - Bis -  
{(Endo - 3 - diphenylphosphino - (1R) (+) Camphor)}  
Dichloro Iridium(I)**

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**Abstract:** In this research endo-3-diphenylphosphino -(1R)-(+)-camphor as a ligand was synthesised. 1.3 mmol of  $\text{IrCl}_2(\text{NCPH})_2$  was added to the solution of 2.7 mmol ligand in 15 ml dichloromethane, and after one hour it was evaporated at reduced pressure. By addition of methanol microcrystals of yellow complex of Iridium(I) with 78% yield was obtained. Crystal structure of the above complex are orthorhombic, space group  $P2_12_12_1$  with  $a = 380.3(2)$ ,  $b = 1785.1(3)$ ,  $c = 19.228(4)\text{\AA}$  and  $z = 4$ ,  $R = 0.0453$  for 4438 observed reflections. The structure shows that PPh<sub>2</sub> groups are endo and phosphines in cis position.