

Formation of metallacyclic complexes by activation of an aryl C - H bond in a platinum-safrole analogue of Zeise's salt

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Abstract: Potassium trichloro(safrole)platinate(II), $K[Pt-(Saf)Cl_3]$ (1), reacts with piperidine to give $cis-[Pt(Saf1H)(Piperidine)Cl]$ (2). The interaction of 1 with $AgNO_3$, $SnCl_2$, KOH , and ethanol-water solutions leads to formation of the dinuclear chelate ring complex $[Pt_2(Saf-1H)_2Cl_2]$ (3). 1H and ^{13}C NMR spectra and single-crystal X-ray diffraction show that in complexes 2 and 3 deprotonated safrole is bound up with platinum(II) both at a benzene carbon and at the ethylenic double bond of the side chain. © 2008 American Chemical Society.

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