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COORDINATING PROPERTIES OF DIPOD AND TRIPOD PHOSPHORUS LIGANDS WITH SEPARATED DONOR AND ACCEPTOR SITES

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The coordinating properties of dipod and tripod phosphorus ligands $L_I = R_2M'(OCH_2PMe_2)_n(CH_2CH_2PMe_2)_{2-n}$ and $L_{III} = RM'(OCH_2PMe_2)_n(CH_2CH_2PMe_2)_{3-n}$ ($M' = Si, Ge$) with separated donor and acceptor centres have been investigated using electron rich metal complex fragments, e. g. $M(CO)_m$ ($M = Cr, Mo, W$), $\pi-C_5H_5Co$, $RhCl(CO)$ or $Ni(CO)$, as bonding partners.

The poster will present information about a) the preparation of the ligands L_I and L_{III} , b) the synthesis of complexes of these ligands, c) the effects of coordination on the spectroscopic data [$\nu(CO)$, $\Delta\delta$, ΔJ], allowing conclusions about metal/ligand interactions, and d) the molecular structures of selected examples, two of which are shown below:

(A) $MeSi(OCH_2PMe_2)_3Ni(CO)$; (B) $[RhCl(CO)(PMe_2CH_2CH_2)_2SiMe_2]_2$.

So far, interaction between the basic centres M and the acceptor sites M' could not be established. Mechanisms for reducing the enhanced electron density on M will be discussed.

