# Synthesis and coordination chemistry of P(Te)-X ligands

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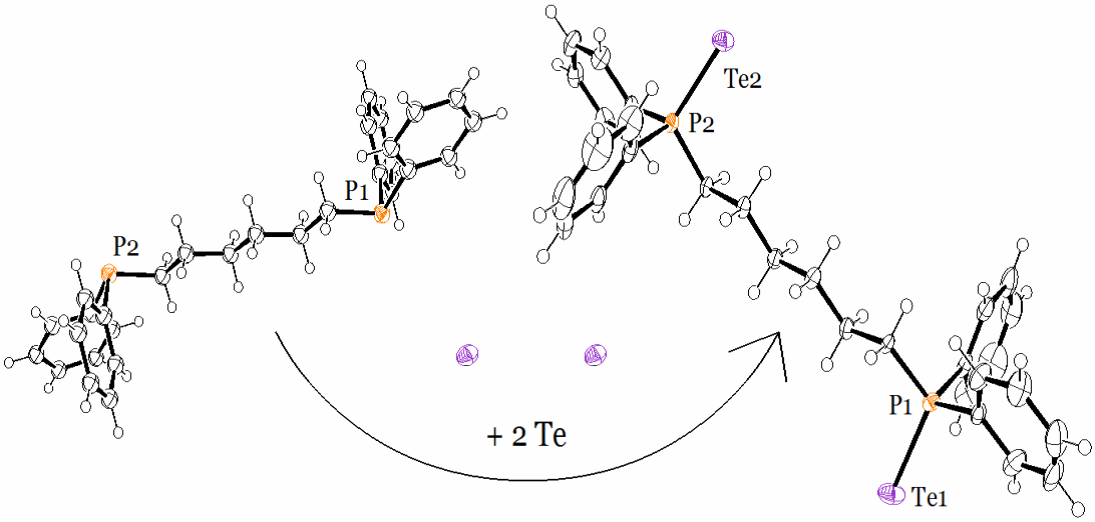
One of the possible pathways to prepare metal tellurides is decomposition of single source precursors, which are often coordination compounds of selected main group and transition metals containing $[R_2P(Te)NP(Te)R_2]^-$ ligands.[1] The oxidation of $R_2PXPR_2$ compounds (X = $(CH_2)_n$, NH, etc; R = alkyl, aryl) by elemental chalcogen leading to dichalcogeno $R_2P(E)XP(E)R_2$ species (E = O, S and Se) has been well known for a long time,[2,3] while analogous reactions with elemental tellurium have been described first by our research group in this year.[4]




The successful syntheses of $Ph_2P(Te)(CH_2)_nP(Te)Ph_2$ (n = 2-6) as well as $EtPh_2PTe$ and $Et_2PhPTe$ ligands by direct oxidation of starting phosphorous compounds ($Ph_2P(CH_2)_nPPh_2$, $EtPh_2P$ and $Et_2PhP$, respectively) by elemental tellurium are reported. The reaction conditions, X-ray structures of the compounds, NMR spectra ($^{31}P$ and $^{125}Te$) and comparison with lighter chalcogen derivatives will be discussed in detail.

REFERENCES

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