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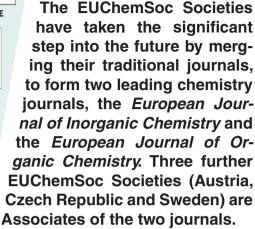




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The cover picture shows the reaction between the phosphavinylidene complexes $[(\eta^5-C_5H_5)(CO)_2M=$ P=C(SiMe₃)₂] and the inversely polarized phosphaalkene $tBuP = C(NMe_2)_2$, which affords η^3 -1,2diphosphaallyl complexes by smooth transfer of the phosphinidene unit onto the electrophilic ligand of the precursors. The molecular structure underlines the unsymmetrical η^3 -ligation of the heteroallyl ligand to the metal with the tert-butyl substituent syn to the central phosphorus atom. Treatment of the phosphavinylidene complexes with P-aroylphosphaalkenes leads to decomposition. In contrast, phosphavinylidene complexes and Asaroylarsaalkenes yield complexes featuring cyclic phosphenium ligands with an As=C bond. It is believed that the first step of this process is a formal [2+1] cycloaddition between the P=C bond and the aroylarsinidine to give a threemembered ring, which subsequently incorporates the CO unit to afford the final product. In all cases, tetrakis(dimethylamino)ethene is formed as a byproduct. Details are presented in the Microreview by L. Weber on p. 4095ff.

