P-Chemistry – From P-Carbene to P4 to P-polymer to P-chirality

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P-reagents, P-cages, reactions with white phosphorus, and P-dynamics will be highlighted.

Low-valent phosphorus reagents akin to carbenes have become readily accessible, are even bottleable and enable the synthesis of strained polycyclic systems that can both be stable and dynamic. In the context of FLPs with their Lewis acid/base sites that enable the activation of small molecules, the functionalization of white phosphorus will be presented. Scorpion-like systems with a phosphorus apex open new avenues in coordination chemistry, such as the one dimensional polymers. Finally, the dynamics of pentacoordinate systems will be discussed as stereomutations play often a determining role in enantioselective syntheses.