Palladium-Ligands Chemistry
Exploiting Efficiently Chloroarenes and C–H Activation in C–C and C–X (X=O, S, N, F) bonds Formation

kterou přednese
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Polyphosphine ligands based on ferrocene platform have driven progress in applied, and fundamental homogeneous catalysis. Catalyst longevity and ultra-low catalyst loadings can be profitable to reach high turnover numbers in C–C couplings (high TONs). Such performances are based on original polyphosphine cooperative effects, and are now used to efficient methods for Pd-catalyzed C–N, C–O and C–S bond formation. Mechanisms in oxidative addition and reductive elimination to Pd (electroanalysis, kinetics, DFT modeling) have revealed net differences with traditional monophosphine ligands. C–H activation from palladium N-directing ligand chemistry has been also successfully used for direct C–F fluorination of demanding N-heterocyclic substrates.