Polyphenyl derivatives

Q 0700 25- 105 Phosphorus—Nitrogen—Phosphorus Ligands: Cooperative Effects Between Nitrogen and Phosphorus Substituents on Catalytic Activity. — Novel phosphorus—nitrogen—phosphorus ligands (I) bearing different diarylphosphine groups are prepared and used as ligands in the Pd-catalyzed Suzuki-reaction. — (PARISEL, S. L.; MOORCROFT, N. D.; JUTAND, A.; ALDOUS, D. J.; HII*, K. K.; Org. Biomol. Chem. 2 (2004) 3, 301-306; Dep. Chem., King's Coll., London WC2R 2LS, UK; Eng.) — M. Paetzel

$$(Ar^{1})_{2}P \xrightarrow{N} P(Ar^{1})_{2} \qquad a R^{1}: - O-Me; Ar^{1}: -Tol \\ b R^{1}: - O-Me; Ar^{1}: - NMe_{2} \\ c R^{1}: - tBu; Ar^{1}: - NMe_{2} \\ (HO)_{2}B \xrightarrow{O-Me} \xrightarrow{Tol-Br} (III), CsF, DME, 85°C \\ A) or B) or C) \qquad IV$$

$$A): Pd_{2}(dba)_{3}CHCl_{3}/Ia (cat.) \qquad A): 88% \\ B): Pd_{2}(dba)_{3}CHCl_{3}/Ia (cat.) \qquad B): 91% \\ C): Pd_{2}(dba)_{3}CHCl_{3}/Ia (cat.) \qquad C): 96% \\ (HO)_{2}B \xrightarrow{Q} \xrightarrow{Ar^{2}-Br} (VI), CsF, DME, 85°C \\ C) \qquad VII$$

$$a R^{2}: -F; Ar^{2}: - O-Me 95% \\ b R^{2}: -F; Ar^{2}: - O-Me 79% \\ c R^{2}: -H; Ar^{2}: - A8% \\ Me-O$$