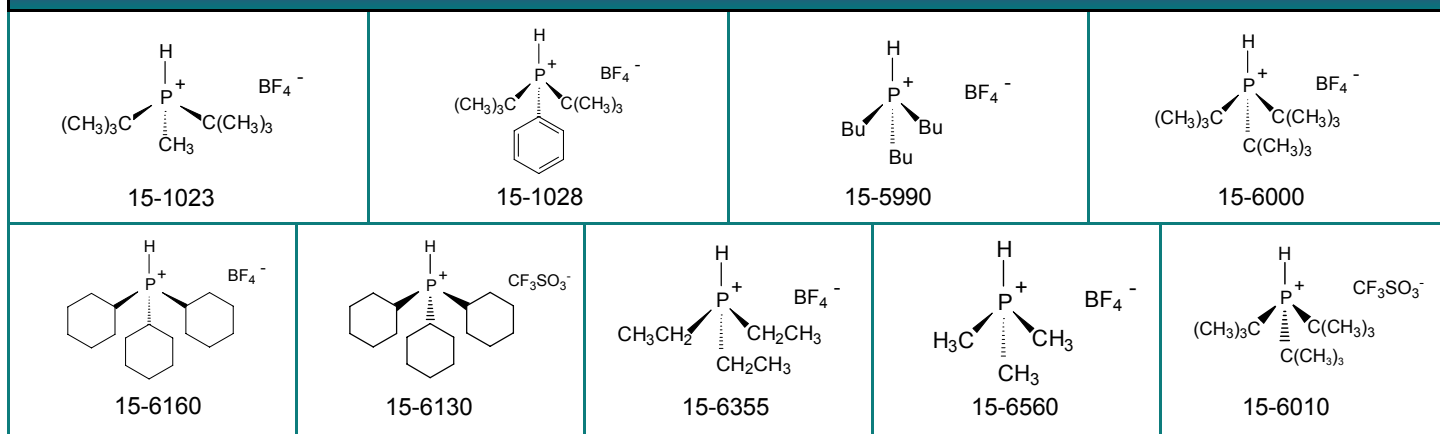


STREM Air-stable, Non-pyrophoric Phosphine Ligand Precursors

metals • inorganics • organometallics • catalysts • ligands • custom synthesis • cGMP facilities • nanomaterials

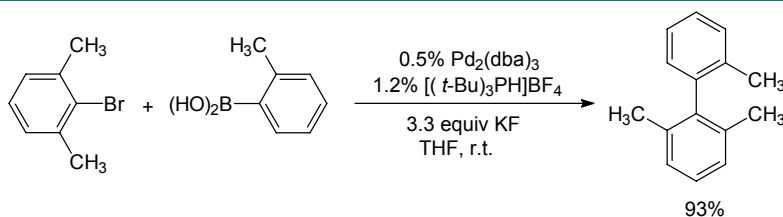


Tri-t-butyl and tri-n-butylphosphonium tetrafluoroborates, developed by Professor Gregory Fu's group, are remarkably air- and moisture-stable compounds compared to the malodorous and pyrophoric parent phosphines. Furthermore, Professor Fu has demonstrated that the phosphonium salts can be used as direct replacements for the neat phosphine in a variety of stoichiometric and catalytic processes. The free phosphine can be easily generated in situ by adding a Brønsted base. Based on this simple, yet powerful strategy, Strem is pleased to provide researchers with an assortment of trialkylphosphonium tetrafluoroborates.

15-1023	Di-t-butylmethylphosphonium tetrafluoroborate, 99% [870777-30-3] (C ₄ H ₉) ₂ (CH ₃)PH ⁺ BF ₄ ⁻ ; FW: 248.05; white powdr.	1g 5g
15-1028	Di-t-butylphenylphosphonium tetrafluoroborate, 97% [(CH ₃) ₃ C] ₂ (C ₆ H ₅)PH ⁺ BF ₄ ⁻ ; FW: 310.12	1g 5g
15-5990	Tri-n-butylphosphonium tetrafluoroborate, 99% [113978-91-9] [(C ₄ H ₉) ₃ PH] ⁺ BF ₄ ⁻ ; FW: 290.13; white powdr.; m.p. 51-52°	1g 5g
15-6000	Tri-t-butylphosphonium tetrafluoroborate, 99% [131274-22-1] [(C ₄ H ₉) ₃ PH] ⁺ BF ₄ ⁻ ; FW: 290.13; white powdr.; m.p. 261° (dec.)	1g 5g 25g
15-6010	Tri-t-butylphosphonium trifluoromethanesulfonate, 99% Stabiphos T [1106696-25-6] [(C ₄ H ₉) ₃ PH] ⁺ CF ₃ SO ₃ ⁻ ; FW: 352.40; white solid	1g 5g
15-6160	Tricyclohexylphosphonium tetrafluoroborate, 99% [58656-04-5] [(C ₆ H ₁₁) ₃ PH] ⁺ BF ₄ ⁻ ; FW: 368.24; white powdr.	1g 5g
15-6130	Tricyclohexylphosphonium trifluoromethanesulfonate, 99% Stabiphos [952649-12-6] [(C ₆ H ₁₁) ₃ PH] ⁺ CF ₃ SO ₃ ⁻ ; FW: 430.51; white solid	1g 5g
15-6355	Triethylphosphonium tetrafluoroborate, 99% [(C ₂ H ₅) ₃ PH] ⁺ BF ₄ ⁻ ; FW: 205.97; white powdr. <i>hygroscopic</i>	1g 5g
15-6560	Trimethylphosphonium tetrafluoroborate, 99% [154358-50-6] (CH ₃) ₃ PH ⁺ BF ₄ ⁻ ; FW: 163.89; white powdr. <i>hygroscopic</i>	1g 5g

Technical Notes:

Suzuki Cross-couplings



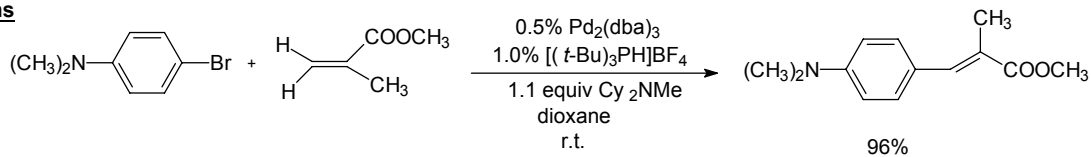
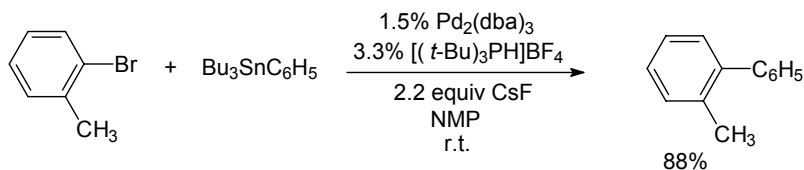
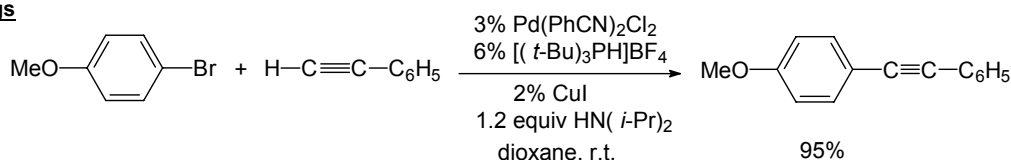
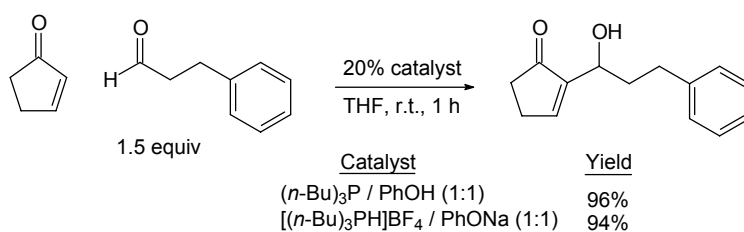
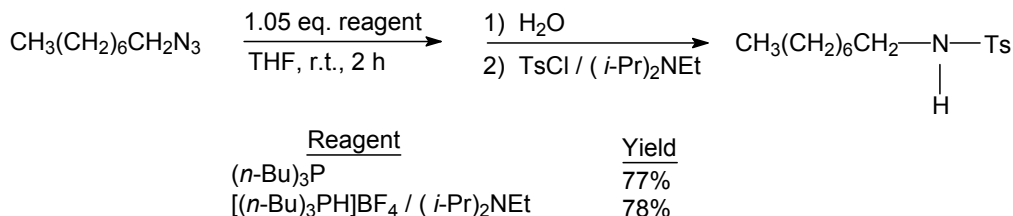
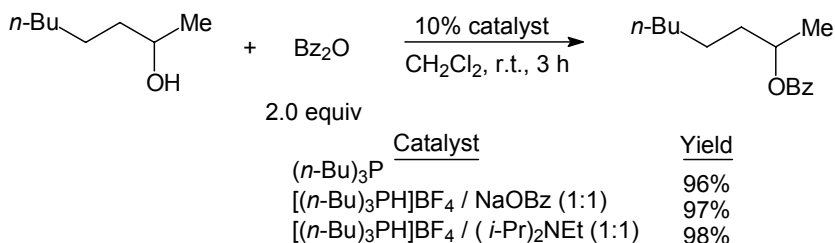
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Heck Reactions**Stille Cross-couplings****Sonogashira couplings****Baylis-Hillman Reactions****Azide Reductions****Acylation of alcohols by anhydrides**

Reference:

1. *Organic Letters*, **2001**, 3, 4295.

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