Claims

1. Process comprising the following process steps:

a) introducing an ethylenically unsaturated compound;

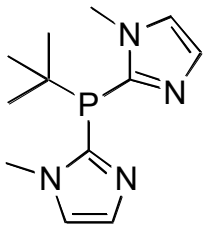
b) adding a monophosphine ligand and a compound which comprises Pd, or adding a complex comprising Pd and a monophosphine ligand;

c) adding an aliphatic alcohol;

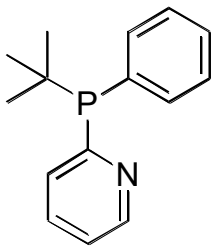
d) supplying CO;

e) heating the reaction mixture, the ethylenically unsaturated compound being reacted to form an ester;

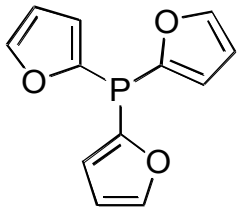
wherein the monophosphine ligand is selected from compounds of one of the formulae (**1**), (**2**), (**7**) to (**9**) and (**11**) to (**14**):



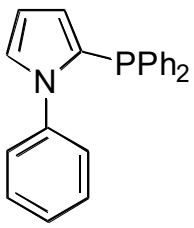
(**1**),



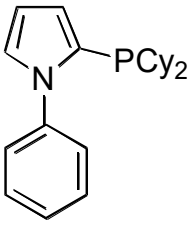
(**2**),



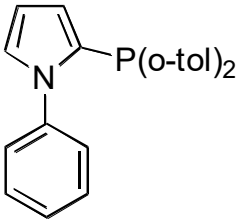
(**7**),



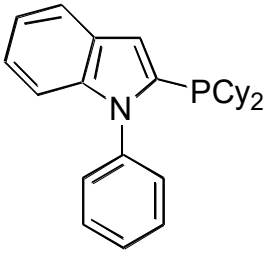
(**8**),



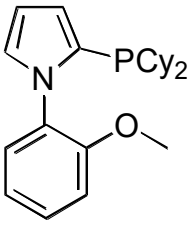
(**9**),



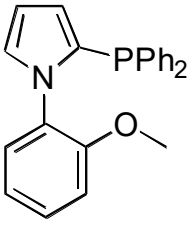
(**11**),



(**12**),



(**13**),



(**14**).

2. Process according to Claim 1,
wherein the ethylenically unsaturated compound is selected from ethene, propene, 1-butene, *cis*- and/or *trans*-2-butene, isobutene, 1,3-butadiene, 1-pentene, *cis*- and/or *trans*-2-pentene, 2-methyl-1-butene, 3-methyl-1-butene, 2-methyl-2-butene, hexene, tetramethylethylene, heptene, 1-octene, 2-octene, di-n-butene, and mixtures thereof.

3. Process according to Claim 1,
wherein the ethylenically unsaturated compound comprises 8 to 12 carbon atoms.

4. Process according to any of Claims 1 to 3,
wherein the compound comprising Pd in process step b) is selected from palladium dichloride, palladium(II) acetylacetonate, palladium(II) acetate, dichloro(1,5-cyclo-octadiene)palladium(II), bis(dibenzylideneacetone)palladium, bis(acetonitrile)dichloro-palladium(II), palladium(cinnamyl) dichloride.

5. Process according to any of Claims 1 to 4,
wherein the alcohol in process step c) is selected from methanol, ethanol, 1-propanol, 1-butanol, 1-pentanol, 1-hexanol, 2-propanol, *tert*-butanol, 3-pentanol, cyclohexanol, and mixtures thereof.

6. Process according to any of Claims 1 to 5,
wherein the alcohol in process step c) is selected from methanol and ethanol.