

A B S T R A C T

CARBONYLATION PROCESS AND CATALYST COMPOSITION

A process for the carbonylation of an olefinically or acetylenically unsaturated compound with carbon monoxide in the presence of a nucleophilic compound having a removable hydrogen atom and a catalyst system comprising

- a) a source of palladium,
- b) a phosphine of general formula $PR^1R^2R^3$, wherein R^1 , R^2 and R^3 independently represent an optionally substituted alkyl, cycloalkyl, aryl or N-heterocyclic group, and
- c) a source of anions being the conjugated base of an acid having a $pK_a < 3$,

characterized in that the reaction medium at least initially is a multi-phase liquid reaction medium, and that the catalyst system comprises a component b) or c) having an amphiphatic structure, and catalyst compositions particularly suitable for said process.