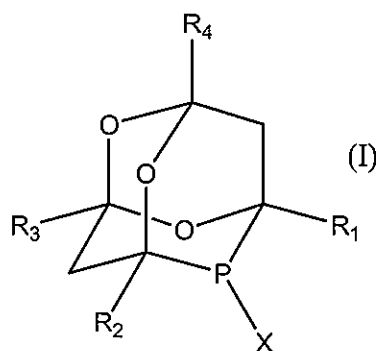


PROCESS FOR THE PRODUCTION OF NITRILE COMPOUNDS FROM ETHYLENICALLY UNSATURATED COMPOUNDS

The present invention relates to a process for the hydrocyanation of ethylenically unsaturated organic compounds so as to give compounds comprising at least one nitrile function.

The present invention provides a process for the hydrocyanation of a hydrocarbon-based compound comprising at least one ethylenic unsaturation, by reaction in a liquid medium with hydrogen cyanide in the presence of a catalyst comprising a metal element chosen from transition metals and an organophosphorus ligand comprising, in one embodiment of the invention, an organophosphorus compound having the following formula:



in which:

- R₁, R₂, R₃ and R₄, which may be identical or different, represent a hydrogen atom, a linear or branched alkyl radical containing from 1 to 12 carbon atoms that may contain heteroatoms, a radical comprising a substituted or unsubstituted aromatic or cycloaliphatic radical that may comprise heteroatoms, a carbonyl, alkoxycarbonyl or alkoxy radical, a halogen atom, a nitrile group or a haloalkyl group containing from 1 to 12 carbon atoms,
- X represents a halogen atom selected from the group consisting of fluorine and bromine.

The present invention is in particular of use for the synthesis of adiponitrile from butadiene.