

Title (en)  
METHOD FOR PRODUCING OLEFINS

Title (de)  
VERFAHREN ZUR HERSTELLUNG VON OLEFINEN

Title (fr)  
PROCEDE DE PRODUCTION D'OLEFINES

Publication  
**EP 1115679 A1 20010718 (DE)**

Application  
**EP 99969404 A 19990907**

Priority  
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• EP 9906589 W 19990907

Abstract (en)  
[origin: DE19843012A1] In the preparation of (hetero)aryl-substituted olefins (I) by palladium-catalyzed reaction of a (hetero)aromatic halide, sulfonate or diazonium halide (II) with an olefin (III), the catalyst is a specific divalent palladium compound (IV) used in presence of a nitrogen-containing additive (V), and reaction is in the absence of phosphonium salts and phosphanes. Preparation of (hetero)aryl-substituted olefins of formula  $\text{Ar-C(R1)=CR2R3}$  (I) involves palladium-catalyzed reaction of a (hetero)aromatic compound of formula  $\text{ArZ}$  (II) with an olefin of formula  $\text{HC(R1)=CR2R3}$  (III). The catalyst is a divalent palladium compound of formula  $\text{PdXY}$  (IV) (or its acetonitrile or benzonitrile complex) used in presence of a nitrogen-containing additive (V). Reaction is carried out at 60-180 deg C, in the presence of a solvent and a base, but in the absence of phosphonium salts and phosphanes. Ar = aryl or heteroaryl (both optionally substituted); R1-R3 = H, 1-8C alkyl, Ph, 1- or 2-naphthyl, 1-8C alkoxy, OPh, CN, COOH, (1-8C) alkoxycarbonyl, COOPh, CONH2, N-(1-5C alkyl)-amido, N,N-di-(1-5C alkyl)-amido, F, Cl, PO(Ph)2, PO(1-5C alkyl)2, Ph-CO, 1-5C alkyl-CO, 1-4C alkylamino, PO3H (sic), 1-4C alkylsulfonate or 1-4C alkylsulfonyl; or  $\text{R1 + R2}$  or  $\text{R2 + R3} = (\text{CH2})_n$ ;  $n = 2-12$ ; Z = Cl, Br, OSO2Me, OS2-tolyl, OSO2CF3, OS2C4F9 or  $\text{N2}<+>.\text{Cl}<->$ ; X, Y = Cl, Br, I, NO3, RCOO or R'SO3; R = 1-22C group, CF3, CCl3, CH2OMe or Ph; R' = 1-22C group, CF3, C4F9, CCl3, Ph or p-tolyl.

IPC 1-7  
**C07B 37/04**

IPC 8 full level  
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