Abstract

The present invention relates to a process for preparing a coated catalyst which comprises a porous shaped catalyst support body with an outer coating in which at least one catalytically active species is present. In order to provide a coated catalyst preparation process by means of which coated catalysts can be prepared, said coated catalysts having, over a comparatively large region of their coating thickness, a substantially uniform concentration of catalytically active species and having a substantially uniform coating thickness, what is proposed is a process using an apparatus (10) which is designed to generate, by means of a process gas (40), a fluidized bed of shaped catalyst support bodies in which the shaped catalyst support bodies circulate elliptically or toroidally, preferably toroidally, comprising the steps of

a) charging the apparatus (10) with shaped catalyst support bodies and generating a shaped catalyst support body fluidized bed by means of a process gas (40), the shaped catalyst support bodies circulating elliptically or toroidally in the fluidized bed, preferably toroidally;

b) impregnating an outer coating of the shaped catalyst support body with a catalytically active species or precursor thereof by spraying the shaped catalyst support bodies circulating elliptically or toroidally in the fluidized bed with a solution comprising a catalytically active species or a precursor thereof;

c) drying the shaped catalyst support bodies sprayed with the solution.