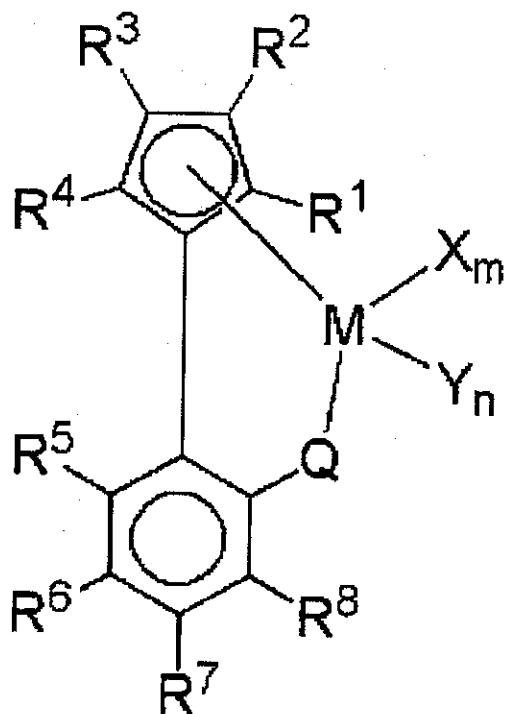


ABSTRACT

[Task] To provide a catalyst for olefin polymerization having an excellent olefin polymerization performance and capable of producing a polyolefin with excellent properties.

[Construction] A catalyst for olefin polymerization comprising (A) a transition metal compound represented by the following general formula (1); and (B) at least one compound selected from the group consisting of (B-1) organometallic compound, (B-2) organoaluminum oxy compound and (B-3) compounds capable of reacting with the transition metal compound (A) to form an ion pair:

[Chem. 1]



• • • (1)

(M is a transition metal atom selected from Groups 4 to 6 of the periodic table; the two of R¹ to R⁴, which are adjacent to

each other, are combined to form a ring with the carbon atoms to which the two are bonded; groups of not forming a ring, R^5 to R^8 , and X are each an atom or a group selected from a hydrogen atom, a halogen atom, a hydrocarbon group, a halogenated hydrocarbon group, an oxygen-containing group, and a nitrogen-containing group; Q is -O-, -S-, -NR^a-, or -PR^b- (R^a and R^b are each a hydrogen atom or a hydrocarbon group); Y is a neutral ligand having an electron-donating group; m is a number satisfying the valence of M; and n is an integer of 0 to 3.).