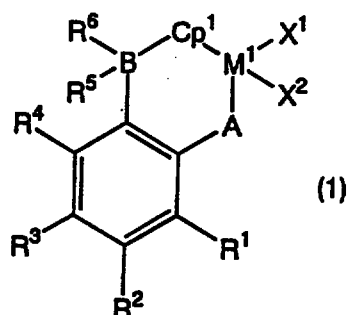


ABSTRACT

A transition metal complex represented by the formula (1)



wherein M^1 is a transition metal atom of the group 4 of
5 the periodic table of elements, A is an atom of the group
16 of the periodic table of elements, and B is an atom of
the group 14 of the periodic table of elements; Cp^1 is a
group having a cyclopentadiene type anionic skeleton; and
 X^1 , X^2 , R^1 , R^2 , R^3 , R^4 , R^5 and R^6 are each independently a
10 hydrogen atom, halogen atom, alkyl group with the number
of carbon atoms of 1-20 optionally substituted with at
least one halogen atom, aralkyl group with the number of
carbon atoms of 7-20 optionally substituted with at least
one halogen atom, aryl group with the number of carbon
15 atoms of 6-20 optionally substituted with at least one
halogen atom, substituted silyl group with the number of
carbon atoms of 1-20 optionally substituted with at least
one halogen atom, alkoxy group with the number of carbon
atoms of 1-20 optionally substituted with at least one
20 halogen atom, aralkyloxy group with the number of carbon

atoms of 7-20 optionally substituted with at least one halogen atom or aryloxy group with the number of carbon atoms of 6-20 optionally substituted with at least one halogen atom, or di-substituted amino group with the
5 number of carbon atoms of 2-20, provided that R^1 , R^2 , R^3 , R^4 , R^5 and R^6 may optionally combine with each other to form a ring; a process for producing the same; an olefin polymerization catalyst containing the transition metal complex; and a process for producing olefin polymers.