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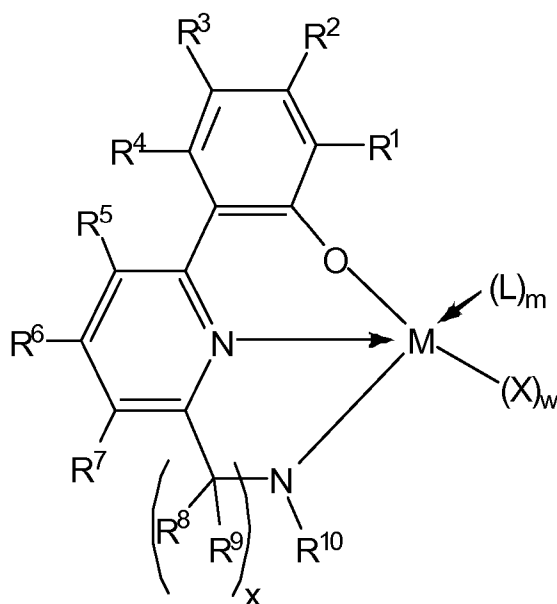
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- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

[Continued on next page]

(54) Title: CATALYST COMPOUNDS AND USE THEREOF



(57) Abstract: This invention relates to a transition metal catalyst compound represented by the structure: Formula(I) wherein: each X is, independently, a hydride, a halogen, a hydrocarbyl, a substituted hydrocarbyl, a halocarbyl, or a substituted halocarbyl; w is 2; each R¹, R², R³, and R⁴ is, independently, a hydrogen, a hydrocarbyl, a substituted hydrocarbyl, a halocarbyl, a substituted halocarbyl, a halogen, an alkoxide, a sulfide, an amide, a phosphide, a silyl or another anionic heteroatom-containing group, or independently, may join together to form a C₄ to C₆₂ cyclic or polycyclic ring structure; each R⁵, R⁶, and R⁷ is, independently, a hydrogen, a hydrocarbyl, a substituted hydrocarbyl, a halocarbyl, a substituted halocarbyl, a halogen, an alkoxide, a sulfide, an amide, a phosphide, a silyl or another anionic heteroatom-containing group, or independently, may join together to form a C₄ to C₆₂ cyclic or polycyclic ring structure; each R⁸ and R⁹ is, independently, a hydrogen, a hydrocarbyl, a substituted hydrocarbyl, a halocarbyl, or a substituted halocarbyl, a halogen, an alkoxide, a sulfide, an amide, a phosphide, a silyl or another anionic heteroatom-containing group; R¹⁰ is a hydrogen, a hydrocarbyl, a substituted hydrocarbyl, a halocarbyl, or a substituted halocarbyl, a halo-

gen, an alkoxide, a sulfide, an amide, a phosphide, a silyl or another anionic heteroatom-containing group; x is 1, 2, 3 or 4; L is a neutral ligand bonded to M; M is titanium, zirconium or hafnium; and m is 0, 1 or 2.

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