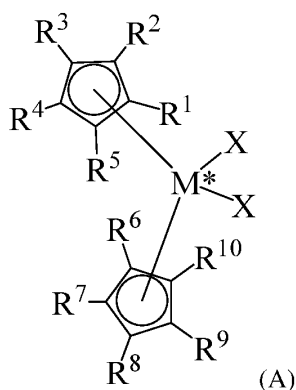


CLAIMS

What is claimed is:

1. A supported catalyst system comprising:
 - a first unbridged group 4 metallocene compound;
 - 5 a second unbridged metallocene compound;
 - a support material; and
 - an activator;
 wherein the first unbridged group 4 metallocene compound is represented by formula (A):



- 10 where:
 - M* is Hf;
 - each of R¹, R², R⁴, and R⁵ is independently hydrogen, alkoxide, or C₁ to C₄₀ substituted or unsubstituted hydrocarbyl;
 - R³ is independently hydrogen, alkoxide, C₁ to C₄₀ substituted or unsubstituted hydrocarbyl, or
 - 15 $-\text{R}^{11}-\text{SiR}'_3$ or $-\text{R}^{11}-\text{CR}'_3$ where R¹¹ is a C₁ to C₄ hydrocarbyl, and each R' is independently C₁ to C₂₀ substituted or unsubstituted hydrocarbyl;
 - each R⁶, R⁷, R⁸, and R¹⁰ is independently hydrogen, halide, alkoxide, or C₁ to C₄₀ substituted or unsubstituted hydrocarbyl;
 - R⁹ is $-\text{R}^{11}-\text{SiR}'_3$ or $-\text{R}^{11}-\text{CR}'_3$ where R¹¹ and R' are defined above;
 - 20 each X is independently a univalent anionic ligand, or two Xs are joined to form a metallocyclic ring, or two Xs are joined to form a chelating ligand, a diene ligand, or an alkylidene ligand;
 - and the second unbridged metallocene compound represented by formula (B):



- wherein each Cp is independently substituted or unsubstituted cyclopentadienyl, indenyl or
- 25 fluorenyl, M is zirconium, X' is halide, hydride, alkyl, alkenyl or arylalkyl, and m = 2 or 3, q =

0, 1, 2, or 3, and the sum of m+q is equal to the oxidation state of the transition metal, and each Cp and X' is bound to M.

2. A supported catalyst system according to claim 1, wherein M* of formula (A) is Hf or
 5 Zr, each R¹, R², R³, R⁴ and R⁵ is C₁ to C₂₀ alkyl, R⁹ is -R¹¹-SiR'₃ or -R¹¹-CR'₃ where R¹¹ is CH₂, and R' is C₁ to C₂₀ alkyl or aryl.

3. A supported catalyst system according to claims 1 or 2, wherein M of formula (B) is
 Zr, Cp_m is substituted or unsubstituted indenyl and R⁹ is -R¹¹-SiR'₃ or -R¹¹-CR'₃ where R¹¹ is
 10 CH₂, and R' is C₁ to C₂₀ alkyl or aryl.

4. The supported catalyst system according of claim 1, wherein the first unbridged metallocene compound is one or more of:

(Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (MeCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (EtCp)(3-CH₂-SiMe₃-
 15 Cp)HfMe₂; (PrCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (BuCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (BzCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (3-CH₂-SiMe₃-Cp)₂HfMe₂; (Me₃Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₅Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (1-Me, 3-Bu-Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (1-Me, 3-Ph-Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp-Pr)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₃)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Me, 3-CH₂-SiMe₃-Ind)₂HfMe₂;
 20 (2-Et, 3-CH₂-SiMe₃-Ind)₂HfMe₂; (2-Pr, 3-CH₂-SiMe₃-Ind)₂HfMe₂; (2-Bu, 3-CH₂-SiMe₃-Ind)₂HfMe₂; (2-Ph, 3-CH₂-SiMe₃-Ind)₂HfMe₂; (3-CH₂-SiMe₃-Ind)₂HfMe₂; (3-CH₂-SiMe₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (3-Me-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (3-Et-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (3-Pr-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (3-Bu-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (Cp)(3-CH₂-SiMe₃-Ind)HfMe₂; (MeCp)(3-CH₂-SiMe₃-Ind)HfMe₂; (EtCp)(3-CH₂-SiMe₃-Ind)HfMe₂; (PrCp)(3-CH₂-SiMe₃-Ind)HfMe₂; (BuCp)(3-CH₂-SiMe₃-Ind)HfMe₂; (Me₃Cp)(3-CH₂-SiMe₃-Ind)HfMe₂;
 25 (Me₄Cp)(3-CH₂-SiMe₃-Ind)HfMe₂; (Me₅Cp)(3-CH₂-SiMe₃-Ind)HfMe₂; (1-Me, 3-Bu-Cp)(3-CH₂-SiMe₃-Ind)HfMe₂; (1-Me, 3-Ph-Cp)(3-CH₂-SiMe₃-Ind)HfMe₂; (Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (MeCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (EtCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (PrCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (BuCp)(3-CH₂-SiMe₃-Cp)HfMe₂;
 30 (BzCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (3-CH₂-SiMe₃-Cp)₂HfMe₂; (Me₂Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₃Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₅Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Et₂Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Et₃Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Et₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Et₅Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Pr₂Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Pr₃Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Pr₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂;

- (Pr₃Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Bu₂Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Bu₃Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Bu₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Bu₅Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Bz₂Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Bz₃Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Bz₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Bz₅Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (EtMe₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (PrMe₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (BuMe₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (PnMe₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (HxMe₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (BzMe₄Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₃)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₂Ph)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₂Ph)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMePh₂)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiPh₃)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₂Cy)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMeCy₂)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiCy₃)(3-CH₂-SiMe₃-Cp)HfMe₂; (EtMe₃Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (PrMe₃Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (BuMe₃Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (BzMe₃Cp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₃)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₂Ph)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMePh₂)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiPh₃)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₂Cy)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMeCy₂)(3-CH₂-SiMe₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiCy₃)(3-CH₂-SiMe₃-Cp)HfMe₂; (MeEtCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (MePrCp)(3-CH₂-SiMe₃-Cp)HfMe₂; MeBuCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (BzMeCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (EtPrCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (EtBuCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (BzEtCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (PrBuCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (BzPrCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (BuBzCp)(3-CH₂-SiMe₃-Cp)HfMe₂; (Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (MeCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (EtCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (PrCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (BuCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (BzCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (3-CH₂-SiMe₂Ph-Cp)₂HfMe₂; (Me₂Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₃Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₄Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₅Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Et₂Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Et₃Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Et₄Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Et₅Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Pr₂Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Pr₃Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Pr₄Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Pr₅Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Bu₂Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Bu₃Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Bu₄Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Bu₅Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Bz₂Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Bz₃Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Bz₄Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Bz₅Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (EtMe₄Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (PrMe₄Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (BuMe₄Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (BzMe₄Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₃)(3-CH₂-SiMe₂Ph-Cp)HfMe₂;

- (Me₄Cp-CH₂-SiMe₂Ph)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₄Cp-CH₂-SiMePh₂)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₄Cp-CH₂-SiPh₃)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₂Cy)(3-CH₂-SiMe₂Ph-Cp)HfCl₂; (Me₄Cp-CH₂-SiMeCy₂)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₄Cp-CH₂-SiCy₃)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (EtMe₃Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂;
- 5 (PrMe₃Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (BuMe₃Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (BzMe₃Cp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₃)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₃Cp-CH₂-SiMePh)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₃Cp-CH₂-SiMePh₂)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₃Cp-CH₂-SiPh₃)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₂Cy)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Me₃Cp-CH₂-SiMeCy₂)(3-CH₂-SiMe₂Ph-Cp)HfMe₂;
- 10 (Me₃Cp-CH₂-SiCy₃)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (MeEtCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (MePrCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (MeBuCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (BzMeCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (EtPrCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (EtBuCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (BzEtCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (PrBuCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (BzPrCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (BuBzCp)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (MeCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (EtCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (PrCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (BuCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; ((BzCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (3-CH₂-SiMePh₂-Cp)₂HfMe₂; (Me₂Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₃Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₄Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₅Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Et₂Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂;
- 20 (Et₃Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Et₄Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Et₅Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Pr₂Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Pr₃Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Pr₄Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Pr₅Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Bu₂Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Bu₃Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Bu₄Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Bu₅Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Bz₂Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Bz₃Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Bz₄Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Bz₅Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (EtMe₄Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (PrMe₄Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (BuMe₄Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (PnMe₄Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (HxMe₄Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (BzMe₄Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₃)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiMePh)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiMePh₂)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiPh₃)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₂Cy)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiMeCy₂)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiCy₃)(3-CH₂-SiMePh₂-Cp)HfMe₂; (EtMe₃Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (PrMe₃Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (BuMe₃Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (BzMe₃Cp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₃Cp-

- CH₂-SiMe₃)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₂Ph)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₃Cp-CH₂-SiMePh₂)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₃Cp-CH₂-SiPh₃)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₂Cy)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₃Cp-CH₂-SiMeCy₂)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Me₃Cp-CH₂-SiCy₃)(3-CH₂-SiMePh₂-Cp)HfMe₂;
- 5 (MeEtCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (MePrCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (MeBuCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (BzMeCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (EtPrCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (EtBuCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (BzEtCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (PrBuCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (BzPrCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (BuBzCp)(3-CH₂-SiMePh₂-Cp)HfMe₂; (Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (MeCp)(3-CH₂-SiPh₃-Cp)HfMe₂;
- 10 (EtCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (PrCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (BuCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (BzCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (3-CH₂-SiPh₃-Cp)₂HfMe₂; (Me₂Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₃Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₄Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₅Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Et₂Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Et₃Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Et₄Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Et₅Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Pr₂Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Pr₃Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Pr₄Cp)(3-CH₂-SiPh₃-Cp)HfMe₂;
- 15 (Pr₅Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Bu₂Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Bu₃Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Bu₄Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Bu₅Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Bz₂Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Bz₃Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Bz₄Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Bz₅Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (EtMe₄Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (PrMe₄Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (BuMe₄Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (BzMe₄Cp)(3-CH₂-SiPh₃-Cp)HfMe₂;
- 20 (Me₄Cp-CH₂-SiMe₃)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₂Ph)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMePh₂)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiPh₃)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₂Cy)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMeCy₂)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiCy₃)(3-CH₂-SiPh₃-Cp)HfMe₂;
- 25 (EtMe₃Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (PrMe₃Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (BuMe₃Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (BzMe₃Cp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₃)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₂Ph)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMePh₂)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiPh₃)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₂Cy)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMeCy₂)(3-CH₂-SiPh₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiCy₃)(3-CH₂-SiPh₃-Cp)HfMe₂; (MeEtCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (MePrCp)(3-CH₂-SiPh₃-Cp)HfMe₂;
- 30 (MeBuCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (BzMeCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (EtPrCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (EtBuCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (BzEtCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (PrBuCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (BzPrCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (BuBzCp)(3-CH₂-SiPh₃-Cp)HfMe₂; (Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (MeCp)(3-CH₂-

- SiCyMe₂-Cp)HfMe₂; (EtCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (PrCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (BuCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (BzCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (3-CH₂-SiCyMe₂-Cp)₂HfMe₂; (Me₂Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₃Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₄Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₅Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂;
- 5 (Et₂Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Et₃Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Et₄Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Et₅Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Pr₂Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Pr₃Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Pr₄Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Pr₅Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Bu₂Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Bu₃Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Bu₄Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Bu₅Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂;
- 10 Cp)HfMe₂; (Bz₂Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Bz₃Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Bz₄Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Bz₅Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (EtMe₄Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (PrMe₄Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (BuMe₄Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (BzMe₄Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₃)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiCyMe₂Ph)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiMePh₂)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiPh₃)(3-CH₂-SiCyMe₂-Cp)HfMe₂;
- 15 (Me₄Cp-CH₂-SiMe₂Cy)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiMeCy₂)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₄Cp-CH₂-SiCy₃)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (EtMe₃Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (PrMe₃Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (BuMe₃Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (BzMe₃Cp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₃)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₃Cp-CH₂-SiMePh)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₃Cp-CH₂-SiPh₃)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₂Cy)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Me₃Cp-CH₂-SiMeCy₂)(3-CH₂-SiCyMe₂-Cp)HfMe₂;
- 20 (Me₃Cp-CH₂-SiCy₃)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (MeEtCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (MePrCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (MeBuCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂;
- 25 (BzMeCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (EtPrCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (EtBuCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (BzEtCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (PrBuCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (BzPrCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (BuBzCp)(3-CH₂-SiCyMe₂-Cp)HfMe₂; (Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (MeCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (EtCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (PrCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (BuCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂;
- 30 Cp)HfMe₂; (BzCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (3-CH₂-SiCy₂Me-Cp)₂HfMe₂; (Me₂Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₃Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₄Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₅Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Et₂Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Et₃Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Et₄Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Et₅Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Pr₂Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Pr₃Cp)(3-CH₂-SiCy₂Me-

- Cp)HfMe₂; (Pr₄Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Pr₅Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Bu₂Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Bu₃Cp)(3-CH₂-SiCy₂Me-Cp)HfCl₂; (Bu₄Cp)(3-CH₂-SiCy₂Me-Cp)HfCl₂; (Bu₅Cp)(3-CH₂-SiCy₂Me-Cp)HfCl₂; (Bz₂Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Bz₃Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Bz₄Cp)(3-CH₂-SiCy₂Me-Cp)HfCl₂; (Bz₅Cp)(3-CH₂-SiCy₂Me-Cp)HfCl₂; (EtMe₄Cp)(3-CH₂-SiCy₂Me-Cp)HfCl₂; (PrMe₄Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (BuMe₄Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (BzMe₄Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₃)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₂Ph)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₄Cp-CH₂-SiMePh₂)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₄Cp-CH₂-SiPh₃)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₂Cy)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₄Cp-CH₂-SiMeCy₂)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₄Cp-CH₂-SiCy₃)(3-CH₂-Cy₂Me-Cp)HfMe₂; (EtMe₃Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (PrMe₃Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (BuMe₃Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (BzMe₃Cp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₃)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₂Ph)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₃Cp-CH₂-SiMePh₂)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₃Cp-CH₂-SiPh₃)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₂Cy)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₃Cp-CH₂-SiMeCy₂)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Me₃Cp-CH₂-SiCy₃)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (MeEtCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (MePrCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (MeBuCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (BzMeCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (EtPrCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (EtBuCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (BzEtCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (PrBuCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (BzPrCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (BuBzCp)(3-CH₂-SiCy₂Me-Cp)HfMe₂; (Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (MeCp)(3-CH₂-SiCy₃-Cp)HfMe₂; (EtCp)(3-CH₂-SiCy₃-Cp)HfMe₂; (PrCp)(3-CH₂-SiCy₃-Cp)HfMe₂; (BuCp)(3-CH₂-SiCy₃-Cp)HfMe₂; (BzCp)(3-CH₂-SiCy₃-Cp)HfMe₂; (3-CH₂-SiCy₃-Cp)₂HfMe₂; (Me₂Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₃Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₄Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₅Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Et₂Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Et₃Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Et₄Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Et₅Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Pr₂Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Pr₃Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Pr₄Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Pr₅Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Bu₂Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Bu₃Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Bu₄Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Bu₅Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Bz₂Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Bz₃Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Bz₄Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Bz₅Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (EtMe₄Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (PrMe₄Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (BuMe₄Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (BzMe₄Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₃)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMe₂Ph)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₄Cp-

- CH₂-SiMePh₂)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiPh₃)(3-CH₂-SiCy₃-Cp)HfMe₂;
 (Me₄Cp-CH₂-SiMe₂Cy)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₄Cp-CH₂-SiMeCy₂)(3-CH₂-SiCy₃-
 Cp)HfMe₂; (Me₄Cp-CH₂-SiCy₃)(3-CH₂-SiCy₃-Cp)HfMe₂; (EtMe₃Cp)(3-CH₂-SiCy₃-
 Cp)HfMe₂; (PrMe₃Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (BuMe₃Cp)(3-CH₂-SiCy₃-Cp)HfMe₂;
 5 (BzMe₃Cp)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₃)(3-CH₂-SiCy₃-Cp)HfMe₂;
 (Me₃Cp-CH₂-SiMe₂Ph)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMePh₂)(3-CH₂-SiCy₃-
 Cp)HfMe₂; (Me₃Cp-CH₂-SiPh₃)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMe₂Cy)(3-CH₂-
 SiCy₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiMeCy₂)(3-CH₂-SiCy₃-Cp)HfMe₂; (Me₃Cp-CH₂-SiCy₃)(3-
 CH₂-SiCy₃-Cp)HfMe₂; (MeEtCp)(3-CH₂-SiCy₃-Cp)HfMe₂; (MePrCp)(3-CH₂-SiCy₃-
 10 Cp)HfMe₂; (MeBuCp)(3-CH₂-SiCy₃-Cp)HfMe₂; (BzMeCp)(3-CH₂-SiCy₃-Cp)HfMe₂;
 (EtPrCp)(3-CH₂-SiPCy-Cp)HfMe₂; (EtBuCp)(3-CH₂-SiCy₃-Cp)HfMe₂; (BzEtCp)(3-CH₂-
 SiCy₃-Cp)HfMe₂; (PrBuCp)(3-CH₂-SiCy₃-Cp)HfMe₂; (BzPrCp)(3-CH₂-SiCy₃-Cp)HfMe₂;
 (BuBzCp)(3-CH₂-SiCy₃-Cp)HfMe₂; (2-Me,3-CH₂-SiMe₃-Ind)₂HfMe₂; (2-Et,3-CH₂-SiMe₃-
 Ind)₂HfMe₂; (2-Pr,3-CH₂-SiMe₃-Ind)₂HfMe₂; (2-Bu,3-CH₂-SiMe₃-Ind)₂HfMe₂; (2-Ph,3-CH₂-
 15 SiMe₃-Ind)₂HfMe₂; (2-Bz,3-CH₂-SiMe₃-Ind)₂HfMe₂; (2-Me,3-CH₂-SiMe₂Ph-Ind)₂HfMe₂; (2-
 Et,3-CH₂-SiMe₂Ph-Ind)₂HfMe₂; (2-Pr,3-CH₂-SiMe₂Ph-Ind)₂HfMe₂; (2-Bu,3-CH₂-SiMe₂Ph-
 Ind)₂HfMe₂; (2-Ph,3-CH₂-SiMe₂Ph-Ind)₂HfMe₂; (2-Bz,3-CH₂-SiMe₂Ph-Ind)₂HfMe₂; (2-
 Me,3-CH₂-SiMePh₂-Ind)₂HfMe₂; (2-Et,3-CH₂-SiMePh₂-Ind)₂HfMe₂; (2-Pr,3-CH₂-SiMePh₂-
 Ind)₂HfMe₂; (2-Bu,3-CH₂-SiMePh₂-Ind)₂HfMe₂; (2-Ph,3-CH₂-SiMePh₂-Ind)₂HfMe₂; (2-Bz,3-
 20 CH₂-SiMePh₂-Ind)₂HfMe₂; (2-Me,3-CH₂-SiPh₃-Ind)₂HfMe₂; (2-Et,3-CH₂-SiPh₃-Ind)₂HfMe₂;
 (2-Pr,3-CH₂-SiPh₃-Ind)₂HfMe₂; (2-Bu,3-CH₂-SiPh₃-Ind)₂HfMe₂; (2-Ph,3-CH₂-SiPh₃-
 Ind)₂HfMe₂; (2-Bz,3-CH₂-SiPh₃-Ind)₂HfMe₂; (2-Me,3-CH₂-SiCyMe₂-Ind)₂HfMe₂; (2-Et,3-
 CH₂-SiCyMe₂-Ind)₂HfMe₂; (2-Pr,3-CH₂-SiCyMe₂-Ind)₂HfMe₂; (2-Bu,3-CH₂-SiCyMe₂-
 Ind)₂HfMe₂; (2-Ph,3-CH₂-SiCyMe₂-Ind)₂HfMe₂; (2-Bz,3-CH₂-SiCyMe₂-Ind)₂HfMe₂; (2-
 25 Me,3-CH₂-SiCy₂Me-Ind)₂HfMe₂; (2-Et,3-CH₂-SiCy₂Me-Ind)₂HfMe₂; (2-Pr,3-CH₂-SiCy₂Me-
 Ind)₂HfMe₂; (2-Bu,3-CH₂-SiCy₂Me-Ind)₂HfMe₂; (2-Ph,3-CH₂-SiCy₂Me-Ind)₂HfMe₂; (2-
 Bz,3-CH₂-SiCy₂Me-Ind)₂HfMe₂; (2-Me,3-CH₂-SiCy₃-Ind)₂HfMe₂; (2-Et,3-CH₂-SiCy₃-
 Ind)₂HfMe₂; (2-Pr,3-CH₂-SiCy₃-Ind)₂HfMe₂; (2-Bu,3-CH₂-SiCy₃-Ind)₂HfMe₂; (2-Ph,3-CH₂-
 SiCy₃-Ind)₂HfMe₂; (2-Bz,3-CH₂-SiCy₃-Ind)₂HfMe₂; (2-Me,3-CH₂-SiMe₃-Ind)(3-CH₂-SiMe₃-
 30 Cp)HfMe₂; (2-Et,3-CH₂-SiMe₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Pr,3-CH₂-SiMe₃-Ind)(3-
 CH₂-SiMe₃-Cp)HfMe₂; (2-Bu,3-CH₂-SiMe₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Pn,3-CH₂-
 SiMe₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Hx,3-CH₂-SiMe₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-
 Ph,3-CH₂-SiMe₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Me,3-CH₂-SiMe₂Ph-Ind)(3-CH₂-SiMe₃-
 Cp)HfMe₂; (2-Et,3-CH₂-SiMe₂Ph-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Pr,3-CH₂-SiMe₂Ph-

Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Bu,3-CH₂-SiMe₂Ph-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Pn,3-CH₂-SiMe₂Ph-Ind)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (2-Hx,3-CH₂-SiMe₂Ph-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Ph,3-CH₂-SiMe₂Ph-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Me,3-CH₂-SiMePh₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Et,3-CH₂-SiMePh₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Pr,3-CH₂-SiMePh₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Bu,3-CH₂-SiMePh₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Pn,3-CH₂-SiMePh₂-Ind)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (2-Hx,3-CH₂-SiMePh₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Ph,3-CH₂-Si MePh₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Me,3-CH₂-SiPh₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Et,3-CH₂-SiPh₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Pr,3-CH₂-SiPh₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Bu,3-CH₂-SiPh₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Pn,3-CH₂-SiPh₃-Ind)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (2-Hx,3-CH₂-SiPh₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Ph,3-CH₂-Si Ph₃-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Me,3-CH₂-SiCyMe₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Et,3-CH₂-SiCyMe₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Pr,3-CH₂-SiCyMe₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Bu,3-CH₂-SiCyMe₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Pn,3-CH₂-SiCyMe₂-Ind)(3-CH₂-SiMe₂Ph-Cp)HfMe₂; (2-Hx,3-CH₂-SiCyMe₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂; (2-Ph,3-CH₂-SiCyMe₂-Ind)(3-CH₂-SiMe₃-Cp)HfMe₂, and the alkyl or halide versions thereof where the Me₂ is replaced with Bz₂, Et₂, Ph₂, Cl₂, Br₂, or I₂.

5. A supported catalyst system according to any of claims 1 to 4, wherein the second unbridged metallocene compound is represented by the formula Cp^ACp^BZrX'ⁿ, wherein Cp^A and Cp^B may each be independently selected from the group consisting of cyclopentadienyl ligands and ligands isolobal to cyclopentadienyl, either or both Cp^A and Cp^B may contain heteroatoms, and either or both Cp^A and Cp^B may be substituted; X' may be any leaving group; and wherein n is 0, 1, or 2.

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6. A supported catalyst system according to any of claims 1 to 5, wherein the second unbridged metallocene compound is selected from the group consisting of:

bis(cyclopentadienyl)zirconium dichloride, bis(cyclopentadienyl)zirconium dimethyl, bis(n-butylcyclopentadienyl)zirconium dichloride, bis(n-butylcyclopentadienyl)zirconium dimethyl,
 30 bis(pentamethylcyclopentadienyl)zirconium dichloride,
 bis(pentamethylcyclopentadienyl)zirconium dimethyl,
 bis(pentamethylcyclopentadienyl)hafnium dichloride,
 bis(pentamethylcyclopentadienyl)zirconium dimethyl, bis(1-methyl-3-n-butylcyclopentadienyl)zirconium dichloride, bis(1-methyl-3-n-

- butylcyclopentadienyl)zirconium dimethyl, bis(1-methyl-3-phenylcyclopentadienyl)zirconium dichloride, bis(1-methyl-3-phenylcyclopentadienyl)zirconium dimethyl, bis(1-methyl-3-n-butylcyclopentadienyl)hafnium dichloride, bis(1-methyl-3-n-butylcyclopentadienyl)zirconium dimethyl, bis(indenyl)zirconium dichloride, bis(indenyl)zirconium dimethyl, bis(tetrahydro-1-indenyl)zirconium dichloride, bis(tetrahydro-1-indenyl)zirconium dimethyl, (n-propylcyclopentadienyl)(pentamethylcyclopentadienyl)zirconium dichloride, (n-propylcyclopentadienyl)(pentamethylcyclopentadienyl)zirconium dimethyl, rac/meso-bis(1-ethylindenyl)zirconium dichloride, rac/meso-bis(1-ethylindenyl)zirconium dimethyl, rac/meso-bis(1-methylindenyl)zirconium dichloride, rac/meso-bis(1-methylindenyl)zirconium dimethyl, rac/meso-bis(1-propylindenyl)zirconium dichloride, rac/meso-bis(1-propylindenyl)zirconium dimethyl, rac/meso-bis(1-butylindenyl)zirconium dichloride, rac/meso-bis(1-butylindenyl)zirconium dimethyl, meso-bis(1-ethylindenyl)zirconium dichloride, meso-bis(1-ethylindenyl)zirconium dimethyl, (1-methylindenyl)(pentamethylcyclopentadienyl)zirconium dichloride, and (1-methylindenyl)(pentamethylcyclopentadienyl)zirconium dimethyl, and the alkyl or halide versions thereof where the dimethyl is replaced with Bz₂, Et₂, Ph₂, Br₂, or I₂.

7. A supported catalyst system according to any of claims 1 to 6, wherein the support material has a surface area from 10 m²/g to 700 m²/g and an average particle diameter from 10 μm to 500 μm.

8. A supported catalyst system according to any of claims 1 to 7, wherein the support material is selected from the group consisting of silica, alumina, silica-alumina, and combinations thereof.

9. A supported catalyst system according to any of claims 1 to 8, wherein the support material is fluorided or sulfated.

10. A supported catalyst system of claim 9, wherein the support material has a fluorine concentration in the range of 0.6 wt% to 3.5 wt%, based upon the weight of the support material.

11. A supported catalyst system according to any of claims 1 to 10, wherein the activator comprises alumoxane or a noncoordinating anion.
12. A supported catalyst system according to any of claims 1 to 11, wherein the activator is methylalumoxane.
13. A supported catalyst system according to any of claims 1 to 12, wherein the support is a silica aluminate and is treated with an electron withdrawing anion such as fluoride or sulphate.
14. A supported catalyst system according to any of claims 1 to 13, wherein the electron withdrawing anion treated supported is treated with an alkyl aluminum.
15. A supported catalyst system according to any of claims 1 to 14, wherein the electron withdrawing anion treated supported is treated with an alkyl aluminum and is substantially free of methyl alumoxane or a noncoordinating anion.
16. A supported catalyst system according to any of claims 1 to 15, wherein the unbridged metallocene compound represented by formula (B) is present in the catalyst system as at least two isomers.
17. A supported catalyst system according to any of claims 1 to 16, wherein the activator comprises one or more of: N,N-dimethylanilinium tetrakis(perfluoronaphthyl)borate, N,N-dimethylanilinium tetrakis(perfluorobiphenyl)borate, N,N-dimethylanilinium tetrakis(perfluorophenyl)borate, N,N-dimethylanilinium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate, triphenylcarbenium tetrakis(perfluoronaphthyl)borate, triphenylcarbenium tetrakis(perfluorobiphenyl)borate, triphenylcarbenium tetrakis(3,5-bis(trifluoromethyl)phenyl)borate, triphenylcarbenium tetrakis(perfluorophenyl)borate, [Me₃NH⁺][B(C₆F₅)⁴⁻], 1-(4-(tris(pentafluorophenyl)borate)-2,3,5,6-tetrafluorophenyl)pyrrolidinium; [Me₃NH⁺][B(C₆F₅)⁴⁻], 1-(4-(tris(pentafluorophenyl)borate)-2,3,5,6-tetrafluorophenyl)pyrrolidinium, sodium tetrakis(pentafluorophenyl)borate, potassium tetrakis(pentafluorophenyl)borate, 4-(tris(pentafluorophenyl)borate)-2,3,5,6-tetrafluoropyridinium, solidium tetrakis(perfluorophenyl)aluminate, potassium tetrakis(pentafluorophenyl), and N,N-dimethylanilinium tetrakis(perfluorophenyl)aluminate.

18. A process for polymerization of olefin monomers comprising contacting one or more olefin monomers with a supported catalyst system of any of claims 1 to 17.
19. The process of claim 18, wherein polymerization of the olefin monomers forms linear
5 low density polyethylene.
20. A process for the production of an ethylene alpha-olefin copolymer comprising: polymerizing ethylene and at least one C₃-C₂₀ alpha-olefin by contacting the ethylene and the at least one C₃-C₂₀ alpha-olefin with a supported catalyst of any of claims 1-17 in at least one
10 gas phase reactor at a reactor pressure of from 0.7 to 70 bar and a reactor temperature of from 20°C to 150°C to form an ethylene alpha-olefin copolymer.
21. An ethylene alpha-olefin copolymer obtained by contacting ethylene, at least one C₃-C₂₀ alpha-olefin, and a supported catalyst of any of claims 1-17 in at least one gas-phase reactor,
15 the copolymer having a density of 0.890 g/cc or more, a melt index from 0.1 to 80 g/10 min, and an Mw/Mn value from 1 to 15.
22. The copolymer of claim 21, wherein the copolymer has a density from 0.900 to 0.940 g/cc.
20
23. The copolymer of claim 17, wherein the copolymer has an Mw/Mz between 2 and 3.
24. The copolymer of any of Claims 22 or 23, wherein the copolymer has an Mw value of 50,000 to 250,000 g/mol and an Mw/Mn value of 2.5 to 12.5.
25
25. A process for the production of an ethylene alpha-olefin copolymer comprising: polymerizing ethylene and at least one C₃-C₂₀ alpha-olefin by contacting the ethylene and the at least one C₃-C₂₀ alpha-olefin with a supported catalyst of any of claims 1-17 in at least one slurry phase reactor at a reactor pressure of from 0.7 to 70 bar and a reactor temperature of
30 from 60°C to 130°C to form an ethylene alpha-olefin copolymer.
26. An ethylene alpha-olefin copolymer obtained by contacting ethylene, at least one C₃-C₂₀ alpha-olefin, and a supported catalyst of any of claims 1-17 in at least one slurry phase

reactor, the copolymer having a density of 0.890 g/cc or more, a melt flow index from 0.1 g/10 min to 80 g/10 min, and a Mw/Mn from 2.5 to 12.5.

27. An ethylene alpha-olefin copolymer obtained by contacting ethylene, at least one C₃-C₂₀ alpha-olefin, and a supported catalyst of any of claims 1-17 in at least one gas phase reactor, the copolymer having a density of 0.890 g/cc or more, a melt flow index from 0.1 g/10 min to 80 g/10 min, and a Mw/Mn from 2.5 to 12.5, and a RCI_m between 100 and 200 and a CDR-2 m between 1.5 and 2.5.
28. An ethylene alpha-olefin copolymer obtained by contacting ethylene, at least one C₃-C₂₀ alpha-olefin, and a supported catalyst of any of claims 1-17 in at least one gas phase reactor, the copolymer having a density of 0.890 g/cc or more, a melt flow index from 0.1 g/10 min to 80 g/10 min, a Mw/Mn of from 2.0 to 5.0, a Mz/Mw between 2 and 3, a RCI_m between 30 and 100, and a CDR-2 m between 1 and 2.

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