wherein each of R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11} R^{12}, R^{13} and R^{14} is independently selected from the group consisting of hydride, halide, and optionally substituted alkyl, heteroalkyl, aryl, heteroaryl, alkoxyl, and aryloxyl; or

wherein the bridging group E is selected from the group consisting of optionally substituted divalent hydrocarbyl and divalent heteroatom containing hydrocarbyl; or

wherein the bridging group E is selected from the group consisting of optionally substituted divalent alkyl, alkenyl, alkynyl, heteroalkyl, heteroalkenyl, heteroalkynyl, carbocycle, heterocarbocycle, aryl, heteroaryl and silyl; or

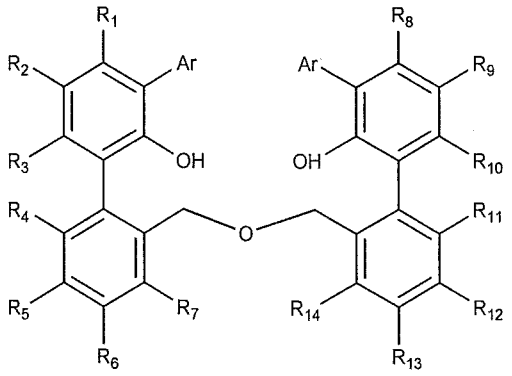
wherein the bridging group E is represented by the general formula—$(QR^{15}_{2-z''})_{z'}$— wherein each Q is either carbon or silicon and each R^{15} may be the same or different from the others such that each R^{15} is selected from the group consisting of hydride and optionally substituted hydrocarbyl and heteroatom containing hydrocarbyl, and optionally two or more R^{15} groups may be joined into a ring structure having from 3 to 50 atoms in the ring structure not counting hydrogen atoms; z′ is an integer from 1 to 10; and z″ is 0, 1 or 2.

3. A ligand according to any one of claims 1 to 2, wherein Ar is, independently, an optionally substituted phenyl, naphthyl, biphenyl, anthracenyl or phenanthrenyl; or

wherein Ar is, independently, an optionally substituted thiophene, pyridine, isoxazole, pyrazole, pyrrole, furan, or benzo-fused analogues of these rings; or

wherein each occurrence of Ar is the same.

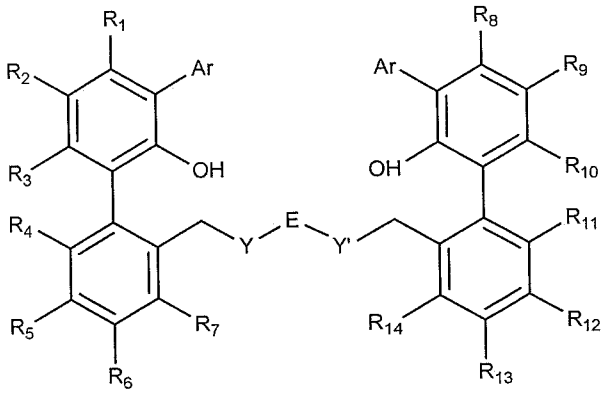
4. A ligand according to any one of claims 1 to 3 wherein the ligand of formula (I) is of formula (II):



(II)

wherein each of R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, and Ar is as defined in claim 1; or

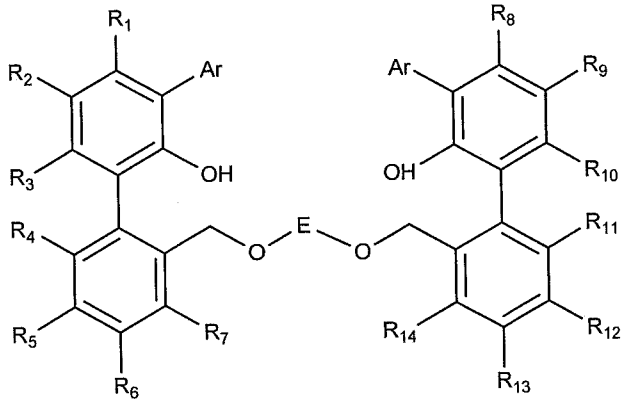
wherein the ligand of formula (I) may be of formula (III):



(III)

wherein each of R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, Ar, Y, Y' and E is as defined in claim 1; or

wherein the ligand of formula (I) may be of formula (IV):



(IV)

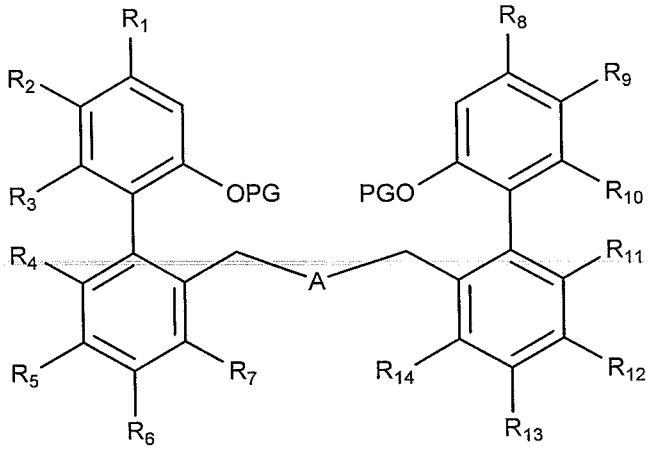
wherein each of R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13}, R^{14}, Ar, and E is as defined in claim 1.

5. A method of preparing a bridged bi-aromatic phenol ligand according to any one of claims 1 to 4 comprising at least one step of directly ortho-lithiating the aromatic ring of a

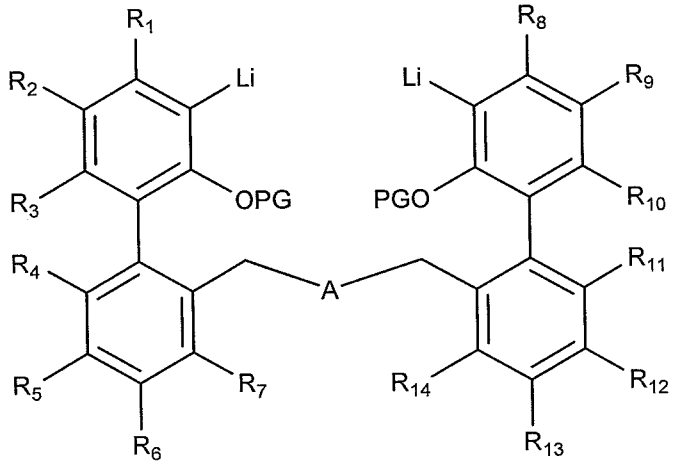
protected phenol; wherein each of R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13} and R^{14} is independently selected from the group consisting of hydride, halide, optionally substituted hydrocarbyl, heteroatom-containing optionally substituted hydrocarbyl, alkoxy, aryloxy, silyl, boryl, dialkyl amino, alkylthio, arylthio and seleno; optionally two or more R groups can combine together into ring structures with such ring structures having from 3 to 100 non-hydrogen atoms in the ring; A is O, S, NR^a and PR^a wherein R^a is optionally substituted hydrocarbyl, or A is -Y-E-Y'- wherein E is a bridging group having from one to 50 non-hydrogen atoms; Y and Y' are independently selected from O, S, NR^a and PR^a wherein R^a is optionally substituted hydrocarbyl; Ar is optionally substituted aryl or heteroaryl.

6. A method according to claim 5 comprising the steps of:

a) treating a protected bi-aromatic phenol of formula (V) with a lithiating agent to yield a dilithio protected bi-aromatic phenol of formula (VI);

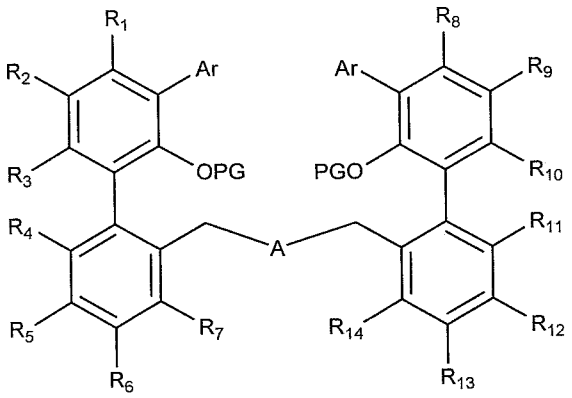


(V)



(VI)

b) treating the dilithio protected bi-aromatic phenol of formula (VI) with a zinc compound and a compound of formula ArX in the presence of a catalyst, to yield a protected bi-aromatic phenol of formula (VIII); and



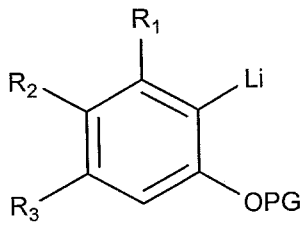
(VIII)

c) deprotecting the compound of formula (VIII) to yield the bi-aromatic phenol ligand of formula (I);

wherein each of R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13} and R^{14} is independently selected from the group consisting of hydride, halide, optionally substituted hydrocarbyl, heteroatom-containing optionally substituted hydrocarbyl, alkoxy, aryloxy, silyl, boryl, dialkyl amino, alkylthio, arylthio and seleno; optionally two or more R^1 to R^{14} groups can combine together into ring structures with such ring structures having from 3 to 100 non-hydrogen atoms in the ring; A is O, S, NR^a and PR^a wherein R^a is optionally substituted hydrocarbyl, or A is -Y-E-Y'- wherein E is a bridging group having from one to 50 non-hydrogen atoms; Y and Y' are independently selected from O, S, NR^a and PR^a wherein R^a is optionally substituted hydrocarbyl; Ar is optionally substituted aryl or heteroaryl; X is halide; PG is a protecting group; or

comprising the steps of:

a) treating a compound of formula (X) with a zinc halide and a compound of formula ArX in the presence of a catalyst to yield a compound of formula (XI);



d) deprotecting the compound of formula (VIII) to yield the bi-aromatic phenol ligand of formula (I)

wherein each of R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11}, R^{12}, R^{13} and R^{14} is independently selected from the group consisting of hydride, halide, optionally substituted hydrocarbyl, heteroatom-containing optionally substituted hydrocarbyl, alkoxy, aryloxy, silyl, boryl, dialkyl amino, alkylthio, arylthio and seleno; optionally two or more R groups can combine together into ring structures with such ring structures having from 3 to 100 non-hydrogen atoms in the ring; A is O, S, NR^a and PR^a wherein R^a is optionally substituted hydrocarbyl, or A is -Y-E-Y'- wherein E is a bridging group having from one to 50 non-hydrogen atoms; Y and Y' are independently selected from O, S, NR^a and PR^a wherein R^a is optionally substituted hydrocarbyl; Ar is optionally substituted aryl or heteroaryl; X is halide; PG is a protecting group.

7. A method according to any one of claims 5 to 6 wherein each of R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11} R^{12}, R^{13} and R^{14} is independently selected from the group consisting of hydride, halide, and optionally substituted alkyl, heteroalkyl, aryl, heteroaryl, alkoxyl, aryloxyl, silyl, dialkylamino, alkylthio, and arylthio; or

wherein each of R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8, R^9, R^{10}, R^{11} R^{12}, R^{13} and R^{14} is independently selected from the group consisting of hydride, halide, and optionally substituted alkyl, heteroalkyl, aryl, heteroaryl, alkoxyl, and aryloxyl.

8. A method according to any one of claims 5 to 7 wherein the bridging group E is selected from the group consisting of optionally substituted divalent hydrocarbyl and divalent heteroatom containing hydrocarbyl; or

wherein the bridging group E is selected from the group consisting of optionally substituted divalent alkyl, alkenyl, alkynyl, heteroalkyl, heteroalkenyl, heteroalkynyl, carbocycle, heterocarbocycle, aryl, heteroaryl and silyl; or

wherein the bridging group E is represented by the general formula—$(QR^{15}_{2-z''})_{z'}$— wherein each Q is either carbon or silicon and each R^{15} may be the same or different from the others such that each R^{15} is selected from the group consisting of hydride and optionally substituted hydrocarbyl and heteroatom containing hydrocarbyl, and optionally two or more R^{15} groups may be joined into a ring structure having from 3 to 50 atoms in the ring structure not counting hydrogen atoms; z' is an integer from 1 to 10; and z'' is 0, 1 or 2; or

wherein Ar is optionally substituted phenyl, naphthyl, biphenyl, anthracenyl, and phenanthrenyl.

9. A method according to any one of claims 6 to 8 wherein the catalyst comprises a palladium or nickel catalyst; or

wherein the catalyst is a palladium phosphine catalyst.

10. A transition metal compound comprising a ligand according to any one of claims 1 to 4.

11. A catalyst composition comprising one or more transition metal compounds according to claim 10 and one or more activators.

12. A supported catalyst composition comprising one or more transition metal compounds according to claim 10, one or more activators and one or more support materials.

13. A catalyst composition according to claim 11 or a supported catalyst composition according to claim 12 wherein the activator comprises methyalumoxane.

14. A supported catalyst composition according to claim 12 or claim 13 comprising one or more other transition metal compounds.

15. A process for polymerizing olefins, the process comprising:

contacting olefins with one or more catalyst compositions or supported catalyst compositions according to any one of claim 11 to 14 in a reactor under polymerization conditions to produce an olefin polymer or copolymer.