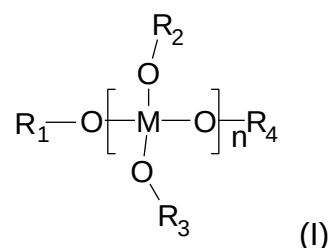
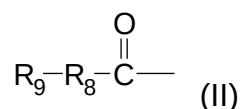


We claim:

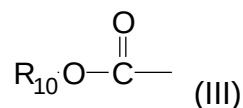
1. A soluble, multi-ligand-substituted metal compound of structure_(I):



wherein M is a metal and n is 1 to 20, and wherein at least one of R₁, R₂, R₃, and R₄ is i) and at least one of R₁, R₂, R₃, and R₄ is ii), where i) is a silicon bearing organic moiety having at least 2 carbons, and ii) is an organic moiety (II),



wherein R₈ is selected from a group consisting of C₂-C₁₀ alkylene, C₃-C₁₂ branched alkylene, C₅-C₁₂ cycloalkylene, C₂-C₁₀ alkylene containing a C=C double bond, C₃-C₁₂ branched alkylene containing a C=C double bond, and a C₅-C₁₂ cycloalkylene containing a C=C double bond, and R₉ is the alkyloxycarbonyl moiety (III), where R₁₀ is a C₁-C₈₉ alkyl group,



provided that the silicon bearing moiety bearing an organic moiety having at least 2 carbons i) ranges from about 10 mole % to about 80 mole%, and ii) ranges from about 20 mole % to about 90 mole % of the total groups R₁, R₂, R₃, and R₄.

2. The compound of claim 1, wherein the silicon bearing moiety bearing an organic moiety having at least 2 carbons i) ranges from 30 mole % to 60 mole%, and that the organic moiety ii) ranges from 30 mole % to 60 mole % of the total of groups R₁, R₂, R₃, and R₄.

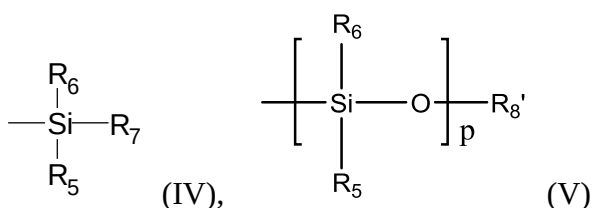
3. The compound of claim 1, wherein in structure_(I) at least one of R₁, R₂, R₃, and R₄ further comprises C₁-C₈ alkyl moiety ranging up to 50 mole % of the total of groups R₁, R₂, R₃, and R₄.

4. The compound of claim 1, wherein in structure_(I) at least one of R₁, R₂, R₃, and R₄ further comprises ~~C₁-C₈~~ C₁ to C₅ alkyl moiety ranging up to ~~35~~ 50 mole % of the total of groups R₁, R₂, R₃, and R₄.

5. The compound of one of claims 1 to 3, wherein the metal is selected from a group consisting of titanium, zirconium, tantalum, lead, antimony, thallium, indium, ytterbium, gallium, hafnium, aluminum, magnesium, molybdenum, germanium, tin, iron, cobalt, nickel, copper, zinc, gold, silver, cadmium, tungsten, and platinum.

6. The compound of claim 1, wherein the metal is more than one metal when n is 2 to 20.

7. The compound of claim 1, wherein the silicon bearing organic moiety having at least 2 carbon i) is selected from a group consisting of a trisubstitutedsilyl moiety(IV) and a siloxane moiety(V)

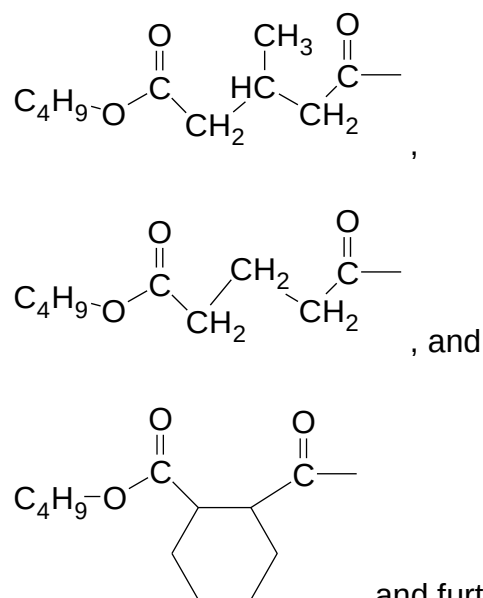


wherein R₅, and R₆, are independently selected from a group consisting of C₁-C₈ alkyl, C₃-C₁₂ branched alkyl, and aryl, R₇ is independently selected from a group consisting of C₁-C₈ alkyl, aryl and hydroxyl, and R₈ is selected from group consisting of hydrogen, a C₁-C₈ alkyl, a C₁-C₈ alkyl substituted with a hydroxyl group, a carboxylic acid group (CO₂H), and an aryl, and further where p represents the number of repeat units in the siloxane moiety (v).

8. The compound of claim 1, where the silicon bearing organic moiety having at least 2 carbon i) is a trisubstitutedsilyl moiety(IV).

9. The compound of claim 1, wherein the silicon bearing organic moiety having at least 2 carbon i) is a siloxane moiety(V).

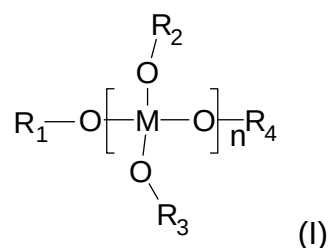
10. The compound of claim 1, where M is Ti, and the organic moiety i) is selected from the group consisting of



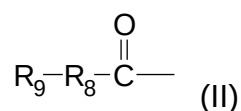
11. The compound of claim 1 where M is Ti and the silicon bearing organic moiety at least 2 carbon ii) is selected from the group consisting of

12. A composition comprising:

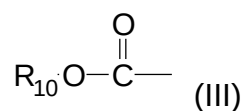
a. a soluble, multi-ligand-substituted metal compound of the following structure_(I)



wherein M is a metal and n is 1 to 20, and wherein at least one of R₁, R₂, R₃, and R₄ is i) and at least at least one of R₁, R₂, R₃, and R₄ is ii), where i) is a silicon bearing organic moiety having at least 2 carbons, and ii) is an organic moiety (II),



wherein R₈ is selected from a group consisting of C₂-C₁₀ alkylene, C₃-C₁₂ branched alkylene, C₅-C₁₂ cycloalkylene, C₂-C₁₀ alkylene containing a C=C double bond, C₃-C₁₂ branched alkylene containing a C=C double bond, and a C₅-C₁₂ cycloalkylene containing a C=C double bond, and R₉ is hydrogen or the alkyloxycarbonyl moiety (III), where R₁₀ is a C₁-C₈ alkyl group,



provided that the silicon bearing moiety bearing an organic moiety having at least 2 carbons i) ranges from about 10 mole % to about 80 mole%, and ii) ranges from about 20 mole % to about 90 mole % of the total groups R₁, R₂, R₃, and R₄. and

(b) a solvent.

13. The composition of claim 12 where the composition further comprises a surfactant.

14. The composition of claim 12, further comprising at least one selected from a group consisting of a thermal acid generator, a thermal base generator, and a thermally activated peroxide.

15. The composition of claim 12, wherein n is 2 to 20, preferably n is 1.

16. The composition of claim 12, wherein n is 1.

17. The composition of one of claims 8 to 12, further comprising a crosslinking additive.

18. A method of manufacturing an electronic device on a substrate comprised of a pattern photoresist comprising:

- a. applying a composition from claim 12 onto the substrate; ~~and,~~
- b. baking the film;
- c. removing the composition overlaying the top of the patterned photoresist; and,
- d. removing the resist with oxygen plasma, thereby forming a negative tone image of the original patterned resist.

19. The method of claim 18, further comprising removing the residual composition with a stripper composition.