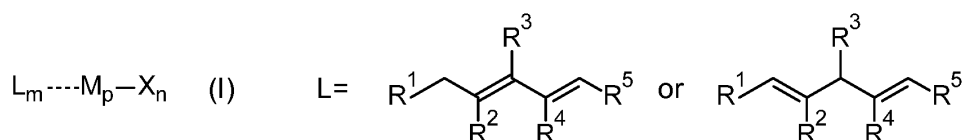


Claims

1. A process comprising bringing a compound of general formula (I) into the gaseous or aerosol state



and depositing the compound of general formula (I) from the gaseous or aerosol state onto a solid substrate, wherein

- 10 R^1 , R^2 , R^3 , R^4 , and R^5 are independent of each other hydrogen, an alkyl group, an alkenyl group, an aryl group or a silyl group,
 p is 1 or 2,
 M is Ni or Co,
 X is a σ -donating ligand which coordinates M ,
 15 m is 1 or 2 and
 n is 0 to 3.
2. The process according to claim 1, wherein M is in the oxidation state +1 or +2.
- 20 3. The process according to claim 2, wherein M is Co, m is 1, and all X are neutral σ -donating ligands.
4. The process according to claim 2, wherein M is Ni, m is 1, and one X is anionic and the remaining X , if any, are neutral.
- 25 5. The process according to claim 2, wherein M is Ni, m is 2, and n is 0.
6. The process according to any of the claims 1 to 4, wherein at least one X is CO or a ligand which coordinates M via a phosphor or nitrogen atom.
- 30 7. The process according to any of the claims 1 to 6, wherein R is independent of each other hydrogen, methyl, ethyl, iso-propyl.
8. The process according to any of the claims 1 to 7, wherein the deposited compound of general formula (I) is exposed to a reducing agent.
- 35 9. The process according any of the claims 1 to 8, wherein a sequence of depositing the compound of general formula (I) onto a solid substrate and decomposing the deposited compound of general formula (I) is performed at least twice.
- 40

10. A compound of general formula (I), wherein
R¹, R², R³, R⁴, and R⁵ is independent of each other hydrogen, an alkyl group, an alkenyl
group, an aryl group or a silyl group,
p is 1 or 2,
5 M is Ni or Co,
X is a σ -donating ligand which coordinates M, wherein at least one X coordinates M via a
phosphor atom and contains two or more phosphor atoms,
m is 1 or 2 and
n is 0 to 3.
- 10 11. The compound of general formula (I) according to claim 10, wherein M is Co, m is 1, and
all X are neutral σ -donating ligands.
- 15 12. The compound of general formula (I) according to claim 10, wherein M is Ni, m is 2, and n
is 0.
13. The compound of general formula (I) according to claim 10, wherein R², and R⁴ are inde-
pendent of each other methyl, ethyl, iso-propyl, or tert-butyl and R¹, R³, and R⁵ are hydro-
gen.
- 20 14. Use of a compound of general formula (I) according to any of the claims 10 to 13 for a film
formation process.