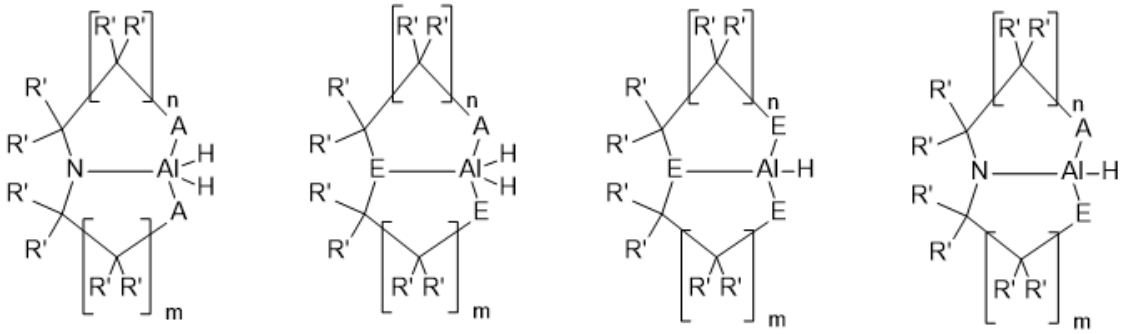
Claims

1. Process for preparing inorganic metal-containing films comprising bringing a solid substrate in contact with a compound of general formula (I), (II), (III), or (IV) in the gaseous state



(I) (II) (III) (IV)

wherein A is NR_2 or OR with R being an alkyl group, an alkenyl group, an aryl group, or a silyl group,
E is NR or O,
n is 0, 1 or 2, m is 0, 1 or 2, and
R' is hydrogen, an alkyl group, an alkenyl group, an aryl group, or a silyl group,
wherein a metal-containing compound is deposited from the gaseous state onto the solid substrate before bringing it in contact with the compound of general formula (I), (II), (III), or (IV).

2. The process according to claim 1, wherein R is methyl, ethyl, tert-butyl, trimethylsilyl or two R form together a five membered ring and R' is hydrogen.

3. The process according to claim 1 or 2, wherein if E is NR or A is OR, R in NR or OR bears no hydrogen atom in the 1-position.

4. The process according to any of the claims 1 to 3, wherein the metal-containing compound contains Ti, Ta, Mn, Mo, W, Al, Co, Ga, Ge, Sb, or Te.

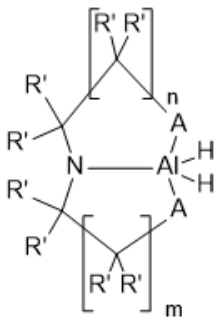
5. The process according to any of the claims 1 to 4, wherein the metal-containing compound is a metal halide.

6. The process according to any of the claims 1 to 5, wherein the sequence containing bringing a solid substrate in contact with a compound of general formula (I), (II), (III), or (IV) and depositing a metal-containing compound is performed at least twice.

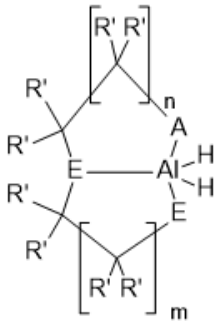
7. The process according to any of the claims 1 to 6, wherein the compound of general formula (I) has a molecular weight of not more than 600 g/mol.

8. The process according to any of the claims 1 to 7, wherein the compound of general formula (I) has a vapor pressure at least 1 mbar at a temperature of 200 °C.

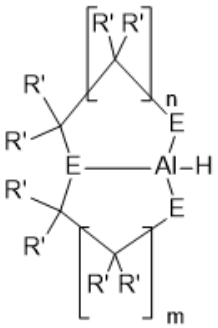
9. A compound of general formula (I), (II), (III), or (IV)



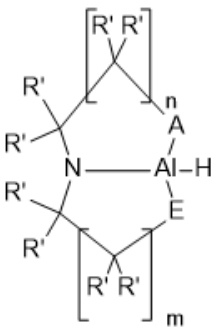
(I)



(II)



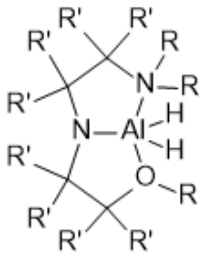
(III)



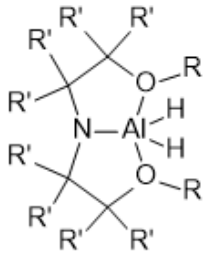
(IV)

wherein A is NR_2 or OR with R being an alkyl group, an alkenyl group, an aryl group, or a silyl group,
E is NR or O,
n is 0, 1 or 2, m is 0, 1 or 2, and
R' is hydrogen, an alkyl group, an alkenyl group, an aryl group, or a silyl group
wherein at least one E or A contains oxygen or n is 2 or m is 2.

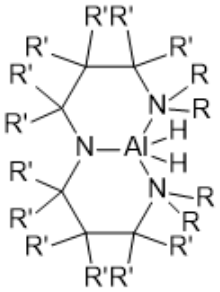
10. The compound according to claim 9, wherein the compound is a compound of general formula (Ib), (Ic), (Ih), (Ij)



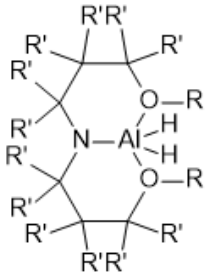
(Ib)



(Ic)



(Ih)



(Ij)

11. The compound according to claim 9 or 10, wherein R' is hydrogen and R is R is methyl, ethyl, tert-butyl or trimethylsilyl, or two R form together a five-membered ring.