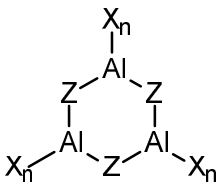
Claims

1. Process for preparing inorganic metal- or semimetal-containing films comprising
(a) depositing a metal- or semimetal-containing compound from the gaseous state onto a solid substrate and
(b) bringing the solid substrate with the deposited metal- or semimetal-containing compound in contact with a compound of general formula (II)



(II)

wherein Z is NR_2, PR_2, OR, SR, CR_2, SiR_2,
X is H, R' or NR'_2, wherein at least one X is H,
n is 1 or 2, and
R and R' is an alkyl group, an alkenyl group, an aryl group, or a silyl group, and
wherein the compound of general formula (II) has a molecular weight of not more than 600 g/mol.

2. The process according to claim 1, wherein R is methyl, ethyl, iso-propyl, sec-butyl, tert-butyl, trimethylsilyl.

3. The process according to claim 1 or 2, wherein at least one X for each Al atom is H.

4. The process according to any of the claims 1 to 3, wherein Z is NR_2, PR_2, OR, or SR.

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

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

7. The process according to any of the claims 1 to 6, wherein the sequence containing (a) and (b) is performed at least twice.

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

9. Use of a compound of general formula (II) as reducing agent in a vapor deposition process.