ABSTRACT

METHODS FOR FORMING ALUMINUM CONTAINING FILMS UTILIZING AMINO ALUMINUM PRECURSORS

A method of forming an aluminum containing film on a substrate includes providing a precursor having the chemical structure: $Al(NR_1R_2)(NR_3R_4)(NR_5R_6)$; where each of R_1, R_2, R_3, R_4, R_5 and R_6 is independently selected from the group consisting of hydrogen and an alkyl group including at least two carbon atoms. The precursor is utilized to form a film on the substrate including at least one of aluminum oxide, aluminum nitride and aluminum oxy-nitride. Each of the R1 – R6 groups can be the same or different and can by straight or branched chain alkyls. An exemplary precursor that has is useful in forming aluminum containing films is this diethylamino aluminum.

[Fig 1]