

ABSTRACT

ARENE MOLYBDENUM (0) PRECURSORS FOR DEPOSITION OF MOLYBDENUM FILMS

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Molybdenum(0) coordination complexes comprising an arene ligand and one or more neutral ligands which coordinate to the metal center by carbon, nitrogen or phosphorous are described. Methods for depositing molybdenum-containing films on a substrate are described. The substrate is exposed to a molybdenum precursor and a reactant to form the molybdenum-containing film (e.g., elemental molybdenum, molybdenum oxide, molybdenum carbide, molybdenum silicide, molybdenum nitride). The exposures can be sequential or simultaneous.

(fig. 2A)

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