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[Continued on next page]

(54) **Title:** MOLYBDENUM SILYLCYCLOPENTADIENYL AND SILYLALLYL COMPLEXES AND USE THEREOF IN THIN FILM DEPOSITION

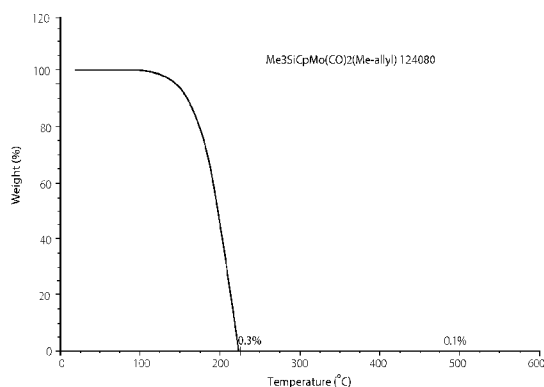
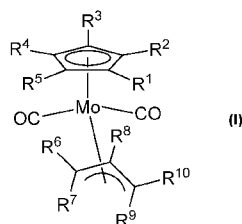


Figure 1



(57) **Abstract:** Molybdenum complexes and use thereof in thin film deposition, such as CVD and ALD are provided herein. The molybdenum complexes correspond in structure to Formula (I): wherein R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 , R^8 , R^9 , and R^{10} are independently selected from the group consisting of hydrogen, alkyl, and trialkylsilyl; and at least one of R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 , R^8 , R^9 , and R^{10} is trialkylsilyl.



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