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(54) Title: METHODS OF FORMING RUTHENIUM-CONTAINING FILMS BY ATOMIC LAYER DEPOSITION

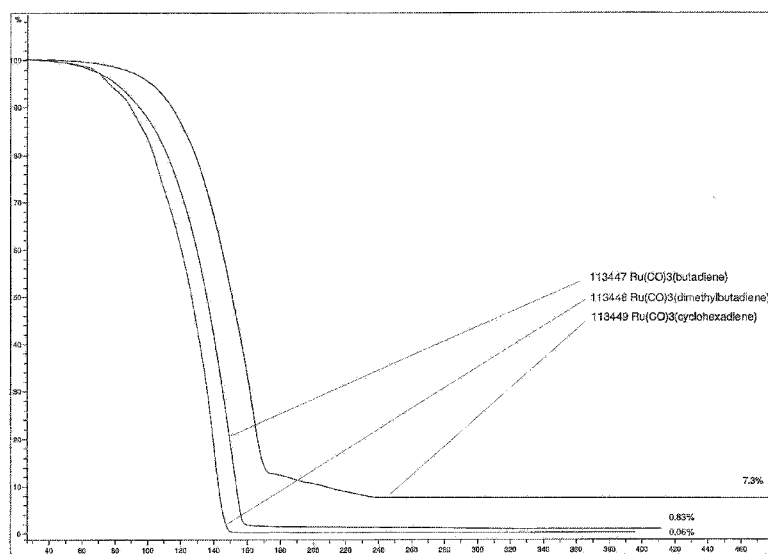


Fig. 1

(57) Abstract: A method of forming ruthenium-containing films by atomic layer deposition is provided. The method comprises delivering at least one precursor to a substrate, the at least one precursor corresponding in structure to Formula I: $(L)Ru(CO)_3$ wherein L is selected from the group consisting of a linear or branched C_2 - C_6 -alkenyl and a linear or branched C_1 - C_6 -alkyl; and wherein L is optionally substituted with one or more substituents independently selected from the group consisting of C_2 - C_6 -alkenyl, C_1 - C_6 -alkyl, alkoxy and NR^1R^2 ; wherein R^1 and R^2 are independently alkyl or hydrogen.