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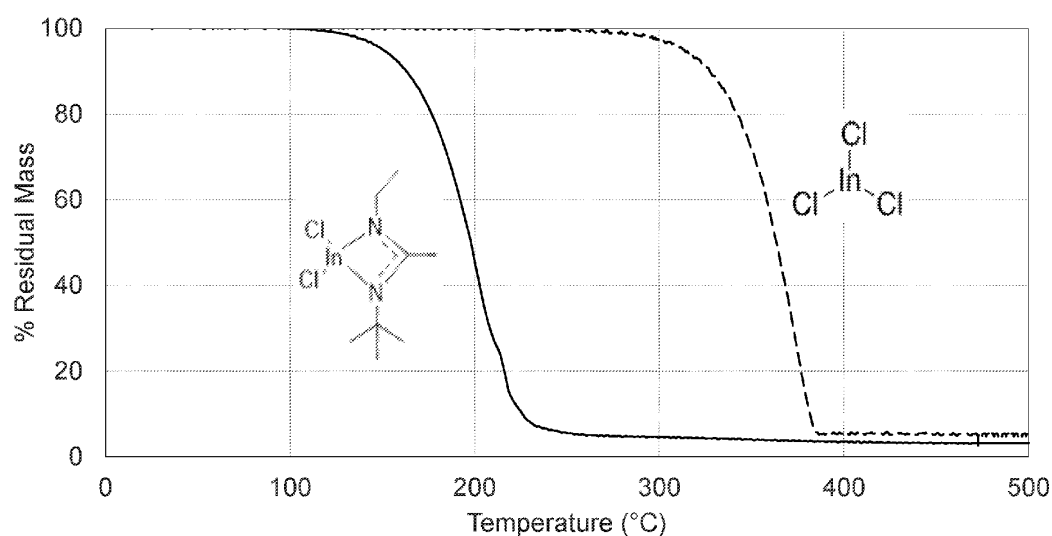
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(57) Abstract: Disclosed are indium (In)-containing film forming compositions comprising In(III)-containing precursors that contain halogens, methods of synthesizing them and methods of using them to deposit the indium-containing films and/or indium-containing alloy film. The disclosed in(III)-containing precursors contain chlorine with nitrogen based ligands. In particular, the disclosed In(III)-containing precursors contains 1 or 2 amidinate ligands, 1 or 2 iminopyrrolidinate ligands, 1 or 2 amido amino alkane ligands, 1 or 2 μ -diketiminate ligands or a silyl amine ligand. The disclosed in(III)-containing precursors are suitable for vapor phase depositions (e.g., ALD, CVD) of the indium-containing films and/or indium-containing alloy films.

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