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(54) Title: BETA-DIKETIMINATE LIGAND SOURCES AND METAL-CONTAINING COMPOUNDS THEREOF, AND SYSTEMS AND METHODS INCLUDING SAME

(57) Abstract: The present invention provides metal-containing compounds that include at least one β -diketiminatinate ligand, and methods of making and using the same. In certain embodiments, the metal-containing compounds include at least one β -diketiminatinate ligand with at least one fluorine-containing organic group as a substituent. In other certain embodiments, the metal-containing compounds include at least one β -diketiminatinate ligand with at least one aliphatic group as a substituent selected to have greater degrees of freedom than the corresponding substituent in the β -diketiminatinate ligands of certain metal-containing compounds known in the art. The compounds can be used to deposit metal-containing layers using vapor deposition methods. Vapor deposition systems including the compounds are also provided. Sources for β -diketiminatinate ligands are also provided.

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