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(54) Title: UNSYMMETRICAL LIGAND SOURCES, REDUCED SYMMETRY METAL-CONTAINING COMPOUNDS, AND SYSTEMS AND METHODS INCLUDING SAME

(57) Abstract: The present invention provides metal-containing compounds that include at least one β -diketiminatate ligand, and methods of making and using the same. In some embodiments, the metal-containing compounds are homoleptic complexes that include unsymmetrical β -diketiminatate ligands. In other embodiments, the metal-containing compounds are heteroleptic complexes including at least one β -diketiminatate ligand. 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 -diketiminatate ligands are also provided.



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