QUADRUPLY BONDED M_2 COMPLEXES INCORPORATING THIENYLETHYNYL AND THIENYLVINYL CARBOXYLATES

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Quadruply bonded metal complexes, where M = Mo, W, that incorporate thienylethynyl and thienylvinyl carboxylates are being synthesized. Varying the bond order of the C_2 unit between the thienyl group and the carboxylate tether provides a series of complexes in which a comparative study on the electronic delocalization in the ground and excited states can be conducted. The properties of these complexes will be predicted by DFT calculations and probed by steady-state absorbance, emission, electrochemistry, and ns- and fs-transient absorption.