**Multiple Oxidation Pathways for Photo-generated**

**Manganese(V)-Oxo Corroles**

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ABSTRACT

Metallocorroles have attracted considerable interest in view of their rich oxidation properties in catalysis. In this work, a new photochemical method to produce and study high-valent manganese(V)-oxo corroles will be presented. Visible light irradiation of the highly photo-labile bromate or nitrite MnIV precursors efficiently generate manganese(V)-oxo corroles in two different corrole systems, 5,10,15-tris(pentafluorophemyl)corrole (TPFC) and 5,10,15-triphenylcorrole (TPC). The kinetic and spectral studies of oxygen transfer atom reactions between organic reductants and photo-generated manganese(V)-oxo corroles suggest multiple oxidation pathways, where manganese(V)-oxo corroles may serve as a direct two-electron oxidant or undergo a disproportionation reaction to form a manganese(VI)-oxo corroles as the true oxidant. The choice of pathways is strongly dependent on the nature of the solvent and the corrole ligands.