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(54) Title: CATALYST FOR NON-OXIDATIVE CONVERSION OF HYDROCARBONS TO HYDROGEN

(57) Abstract: The present disclosure refers to systems, methods, and catalysts for conversion of a hydrocarbon to hydrogen. The catalyst typically comprises a matrix comprising fused silica, quartz, glass, a zeolite, Si_3N_4 , SiC, SiC_xO_y wherein $4x + 2y = 4$, SiO_aN_b wherein $2a + 3b = 4$, BN, TiO_2 , ZrO_2 , Al_2O_3 , CeO_2 , Nb_2O_5 , La_2O_3 , a perovskite, or any mixture thereof. A metal dopant is embedded in the matrix. The metal dopant comprises Fe, Ni, Co, Cu, Zn, Mn, or any mixture thereof.

WO 2023/167933 A1