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(54) Title: A SHELL METAL CATALYST AND A PRECURSOR THEREOF, A PROCESS FOR THEIR PREPARATION AND THE USE OF THE CATALYST

(57) Abstract: A process for preparing a shell metal catalyst or a precursor of a shell metal catalyst which process comprises the steps of (1) applying a slurry comprising a diluent, a catalytically active metal or a precursor compound thereof, and optionally a refractory oxide, designated hereinafter as "first refractory oxide", of an element having an atomic number of at least 20 or a precursor of the first refractory oxide, onto the surface of particles of a core carrier, forming a wet coating, and (2) removing at least a part of the diluent from the wet coating, wherein the slurry comprises at least 5 %w of the catalytically active metal or the precursor compound thereof, calculated on the weight of the metal relative to the weight of calcination residue which can be formed from the slurry by drying the slurry and calcining; a shell metal catalyst or a precursor of a shell metal catalyst which is obtainable by the said process; the use of the said shell metal catalyst as claimed in a chemical conversion process; and a process for producing hydrocarbons, which process comprises contacting a mixture of carbon monoxide and hydrogen with a said shell metal catalyst wherein the catalytically active metal is a Group VIII metal which is present at least partly in metallic form.