

SULFOXIDATION CATALYSTS AND METHODS AND SYSTEMS OF USING SAME

ABSTRACT

Catalysts amenable to oxidizing sulfur compounds and systems and methods of using these catalysts to effect the removal of sulfur from crude oil and crude oil distillates are disclosed. The catalyst is disposed with a titanyl moiety which serves to selectively coordinate sulfur compounds and affect their oxidation. The titanyl may be bound within a polymer or on the surface of a polymer or on the surface or in the pores of an inorganic support. The resulting oxidized sulfur compounds are readily separated from the initial crude oil or crude oil distillate streams by traditional separation techniques arrayed as described in the systems and methods disclosed.

Fig. 11