Answer on Question #77347, Chemistry / Inorganic Chemistry

Name any two industrial processes and the transition metals/ compound which are used as catalysts in them?

Answer

V_2O_5

The use of vanadium(V) oxide in the manufacture of sulfuric acid. Vanadium(V) oxide serves as the catalyst in the mildly exothermic oxidation of sulfur dioxide to sulfur trioxide by air in the contact process:

$$2 SO_2 + O_2 => 2 SO_3$$

Pt/Rh

The Ostwald process is a chemical process for making nitric acid (HNO_3) starting with ammonia. It is oxidized by heating with oxygen in the presence of a catalyst such as platinum with 10% rhodium, to form nitric oxide and water/steam.

$$4NH_3 + 5O_2 => 4NO + 6H_2O$$