

poison*in catalysis*

An inhibitory substance characterized by its propensity to attach very strongly, by a true chemical bond (e.g. covalent) to the surface atoms or ions constituting the catalytically active sites. Poisons act in minute quantities. Typical poisons are S, As, etc. In most cases, activity and/or selectivity cannot be recovered without a drastic change in operating conditions (most often a regeneration). Recovery, if at all, takes place very slowly and/or only partially.

Source:

PAC, 1991, 63, 1227 (*Manual on catalyst characterization (Recommendations 1991)*) on page 1244