

**Passivation** is a method of protecting metal catalysts by means of a small controlled oxidation of the surface in an oxygen medium. The resulting oxide layer on the surface of metal particles prevents further oxidation of the metal.

**Particulate matter (PM)**, also known as **particle pollution**, is a complex mixture of extremely small particles and liquid droplets that get into the air. Once inhaled, these particles can affect the heart and lungs and cause serious health effects.

**Petroleum (crude oil)** is a naturally occurring mixture of gaseous, liquid, and solid hydrocarbon compounds usually found trapped deep underground beneath impermeable cap rock and above a lower dome of sedimentary rock such as shale; most petroleum reservoirs occur in sedimentary rocks of marine, deltaic, or estuarine origin.

**Petroleum coke** is a black solid by-product, obtained mainly by cracking and carbonising petroleum-derived feedstock, vacuum bottoms, tar and pitches in processes such as delayed coking or fluid coking. It consists mainly of carbon (90% to 95%) and has a low ash content. It is used as a feedstock in coke ovens for the steel industry, for heating purposes, for electrode manufacture and for production of chemicals.

**Petroleum natural gases** are gases consisting of a mixture of gaseous hydrocarbons of the paraffin series ( $C_nH_{2n+2}$ ): methane  $CH_4$  (sometimes up to 99%), ethane  $C_2H_6$ , propane  $C_3H_8$ , butane  $C_4H_{10}$ , with an admixture of nitrogen, carbon dioxide, hydrogen sulfide and gasoline vapors. Distinguish dry gas (with a predominance of methane) and fatty gas (with a high content of heavy hydrocarbons).

**Pitch** is the nonvolatile, brown to black, semi-solid to solid viscous product from the destructive distillation of many bituminous or other organic materials, especially coal; has also been incorrectly applied to residua from petroleum processes where thermal decomposition may not have occurred.

**The plasticizer** is a substance that is introduced into the material to give it plastic properties.

**Plastics** are materials based on natural or synthetic polymers, which, under the influence of heating and pressure, can be molded into products of complex configuration and then stably retain the given shape. The production of synthetic plastics is based on polymerization, polycondensation or polyaddition reactions of low molecular weight raw materials derived from coal, oil or natural gas, such as benzene, ethylene, phenol, acetylene and other monomers. In this case, high-molecular bonds are formed with a large number of initial molecules. Plastics are inexpensive, lightweight and durable materials, which can readily be moulded into a variety of products that find use in a wide range of applications. As a consequence, the production of plastics has increased markedly over the last 60 years.

**Platforming** is a reforming process using a platinum-containing catalyst on an alumina base.

**Point pollution** is the ratio of the average concentration of pollution to the average MAC.

**Poisoning** is a decrease in the activity of the catalyst, which is caused by the interaction of the active sites of the catalyst with the catalytic poison present in the reaction mixture. There are reversible poisoning and irreversible poisoning. In reversible poisoning, the catalytic activity is restored to its original level after removal of the poison from the reaction mixture. In case of irreversible poisoning, for example due to strong adsorption of the poison on the active centers of the catalyst, the catalytic activity remains low even after removal of the poison from the reaction mixture. In this case, the catalytic activity can be recovered by regenerating the catalyst, or by complete chemical processing of the poisoned catalyst.

**Pollution** is the introduction into the land water and air systems of a chemical or chemicals that are not indigenous to these systems or the introduction into the land water and air systems of indigenous chemicals in greater-than-natural amounts.

**Pollution (environment or surrounding medium)** is the occurrence, introduction into the environment of usually not characteristic physical, chemical, biological agents or their excess during the considered time of the natural background, often leading to negative consequences.