

paraffins in a petroleum product which are miscible with aniline only at higher temperatures; a high aniline point indicates low aromatics.

**Anode** is an electrode in electrochemical devices (galvanic cells, batteries, electrolyzers), on which the oxidation process takes place.

**Anode coating** is a method of protecting iron and other metals from corrosion by electrolytic deposition of a thin film of another metal (Cr, Ni, Cd, Zn, Al, Sn) on the surface. The product to be protected during coating is the cathode, and the deposited metal is the anode. During electrolysis, metal is transferred from the anode to the cathode.

**Anodizing** is the electrochemical oxidation of the surface of products made of aluminum, chromium and other metals. The product is placed in the electrolyzer as an anode, and the electrolyte is sulfuric, chromic or oxalic acid. The metal is oxidized by the oxygen released on it. Anodizing of metals is used to decorate products, protect against corrosion, increase the coefficient of reflection of light, impart electrical insulation properties, etc.

**Antiknock** is resistance to detonation or pinging in spark-ignition engines.

**Antiknock agent** is a chemical compound such as tetraethyl lead which, when added in a small amount to the fuel charge of an internal-combustion engine, tends to reduce knocking.

**Antistripping agent** is an additive used in an asphaltic binder to overcome the natural affinity of an aggregate for water instead of asphalt.

**Anthropogenic landscape** is the natural landscape transformed by human activity.

**Anthropogenous pollution** is pollution resulting from people's activities, including their direct or indirect impact on the intensity of natural pollution.

**Anthropogenic factor** is an environmental factor associated with human exposure to the environment: pollution, depletion of resources, reduction of animal and plant species.

**API Gravity** is an arbitrary scale expressing the density of petroleum products.

**Apparent density** is the density of a solid porous substance, which is calculated as the ratio of the mass of the particle to its volume. Since part of this volume falls on the pores inside the particle, the apparent density of the porous substance is less than its true density.

**Aromatic hydrocarbons** are organic compounds containing a cycle with conjugated double bonds in their structure. In the petrochemical industry, this name usually involves benzene, toluene and xylenes (ortho-, meta- and para-).

**Aromatics** are organic compounds with one or more benzene rings.

**Aromatization** is the conversion of nonaromatic hydrocarbons into aromatic hydrocarbons by:

- (1) rearrangement of aliphatic (noncyclic) hydrocarbons into aromatic ring structures;
- (2) dehydrogenation of alicyclic hydrocarbons (naphthenes).

**ART process** is a process for increasing the production of liquid fuels without hydrocracking.

**Asphalt** is a nonvolatile product obtained by distillation and treatment of an asphaltic crude oil with liquid propane or liquid butane; usually consists of asphaltenes, resins, and gas oil; a manufactured product.

**Asphaltene** is a fraction of petroleum, heavy oil, or bitumen that is precipitated when a large excess (40 volumes) of a low-boiling liquid hydrocarbon (e.g., pentane or heptane) is added to (1 volume) of the feedstock; usually a dark brown to black amorphous solid that does not melt prior to decomposition and is soluble in benzene or aromatic naphtha or other chlorinated hydrocarbon solvents.

**Asphaltenes** are the asphalt compounds soluble in carbon disulfide but insoluble in paraffin naphthas. They are the most high-molecular components of oil.

**Associated petroleum gas, APG** is an oil product. In reservoir conditions, it is dissolved in oil and released when the fossil is extracted to the surface. The composition of associated gas varies greatly, but its main component is methane, as well as a certain amount of ethane, pentane and butanes, etc.