

双语教学

英汉化学工程与工艺词典

**English-Chinese Dictionary of
Chemical Engineering and
Technology for Bilingual Teaching**

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前 言

随着科学技术的迅猛发展，高等教育的不断发展，以及我国对外交流合作的日益增多，对高等学校人才培养的要求越来越高。他们不仅要具有坚实的专业基础，同时还要能够熟练地运用英语语言工具，以适应发展的要求。因此，目前高校在教学过程中，对各专业的核心课程越来越多地采用双语模式进行教学，并且已成为一种趋势。

在双语教学过程中，师生会遇到大量专业词汇，词汇问题常给教学双方都造成困惑，容易将双语课上成专业英语阅读课，或者课后学生需花大量时间查阅资料。如果有一部针对性强、释义明确的工具书，将有助于提高双语课程的教学效果。

基于上述原因，我们编写了这部词典，旨在为高校化学工程与化工工艺专业的教师、学生提供一部实用的工具书，对重要的概念、操作、设备等力求用简单明了的英文释义进行准确的表达，方便师生查阅。本词典共收入词条 5000 条左右，所涉及的内容：化工单元操作、化工传递过程、化工热力学、化学反应工程、化工过程设计、无机化工工艺、有机化工工艺、化工设备、化工新技术、其他学科少量与本专业直接相关的基础词汇希望本词典能够作为双语教学的辅助工具，同时也能对从事本专业工作的科研人员和工程师提供帮助。

受编者水平的局限，难免存在诸多不足，敬请读者不吝赐教，以便今后进一步改进。

编 者

2006 年 7 月

凡 例

一、收词范围及释义

1. 本词汇收录了在化学工程与工艺领域中经常见到的单词或词组，内容涉及化工单元操作、化工传递过程、化工热力学、化学反应工程、化工过程设计、无机化工工艺、有机化工工艺、化工设备、化工新技术，词条共约 5000 条。

2. 释义中不同义项中间用分号“;”分开，如 carbonyl chloride 碳酰氯；光气。

3. 每条词汇后标明了词汇的词性。

二、编排及检索

词目按英文字母顺序排列。词目中的阿拉伯数字、符号、空格均不参加排序。

三、符号

1. 圆括号 () 表示词义中可省略的词。如 decarburization (钢铁) 脱碳 (作用)。

2. 方括号 []

① 表示词汇的国际音标。如 radial [ˈreɪdiəl] *a.* 径向的，(沿) 半径的；辐射的

② 表示可替代的部分。如 macromolecule 大 [高] 分子

3. 箭头⇒ 表示可参考的词汇。如 liquid lubricant 液体润滑油⇒lubricant，表示 liquid lubricant 释义可参考 lubricant 释义。

四、为方便读者查阅，书后附有中文索引。

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前言

凡例

正文 1

中文索引 267

A

abatement [ə'beɪtmənt] *n.* 消除 The method used to reduce the degree of intensity of pollution, also the use of such a method.

abrasion [ə'breɪʃən] *n.* 磨损, 磨蚀, 剥蚀

absolute [ˈæbsəlu:t] *a.* 绝对的, 完全的

absolute alcohol 无水乙醇; 无水酒精

absolute error 绝对误差

absolute humidity 绝对湿度 The kilograms of water vapor carried by one kilogram of dry air.

absolute pressure 绝对压(强) The true total pressure, which equals to gauge pressure plus atmospheric pressure.

absolute temperature 绝对温度 ⇒ thermodynamic temperature scale

absolute temperature scale 绝对温标 ⇒ thermodynamic temperature scale

absolute zero of temperature 绝对零度 A thermodynamic temperature at which no body can give up heat.

absorbability [əb'sɔ:bə'bɪlɪti] *n.* 吸收本领 The capacity of the liquid solution to dissolve the solute.

absorbable [əb'sɔ:bəbl] *a.* 可吸收的

absorbance [əb'sɔ:bəns] *n.* 吸收度; 吸

光度

absorb [əb'sɔ:b] *v.* 吸收

absorbent [əb'sɔ:bənt] (1) *n.* 吸收剂

Liquid solution used in absorption to dissolve the solute in gas mixture. (2) *a.* 吸收的

absorber [əb'sɔ:bə] *n.* 吸收器 Devices in which absorption takes place.

absorb factor 吸收因子

absorbing [əb'sɔ:bɪŋ] *a.* 吸收的

absorbing column 吸收塔, 吸收柱

Columns in which absorption takes place.

absorbing equipment 吸收设备

absorbing oil 洗油 A fraction of coal tar, which is used for absorbing benzene produced during carbonization of coal. It is also used for preserving timber.

absorption [əb'sɔ: pʃən] *n.* 吸收(作用) A separation process in which one or more components in a mixture of gases are removed by contacting the gas mixture with a liquid. The process may be followed by stripping, in which the dissolved gases are regenerated in gaseous form for further use.

absorption coefficient 吸收系数 In gas absorption, it is the volume of a

given gas dissolved in unit volume of a given liquid at standard temperature and pressure.

absorption spectrophotometry 吸收分光光度法

absorption-type separation 吸收型分离 Separations conducted with a sorbent solid, which are based on the differences in solubility.

absorption with chemical reaction 化学吸收 The gas-absorption processes in which chemical reactions occurs in the liquid phase. Generally, chemical reactions can enhance the rate of absorption and increase the capacity of the liquid solution to dissolve the solute when compared with physical-absorption systems.

abstraction [æb'strækʃən] *n.* 提取; 除去; 抽象化

abundance [ə'bʌndəns] *n.* 丰度

accelerate [æk'seləreit] *v.* 加速; 促进

acceleration [ækselə'reiʃən] *n.* 加速度; 加速作用

accelerator [æk'seləreitə] *n.* 硫化促进剂⇒ curative, 加速器 [剂]

acceptor [ək'septə] *n.* 受体 A compound, molecule, ion, etc., that accept electrons in the formation of a coordinate bond.

accessory [æk'sesəri] (1) *n.* (pl.) 辅助设备 [装置], 附件 (2) *a.* 附属的, 辅助的

accessory material 辅助材料

accidental error 偶然误差, 随机

误差

acclimation [ækklai'meiʃən] *n.* 适应环境 The physiological and behavioral adjustments of an organism to changes in its immediate environment.

acclimatization [ækklaimətai'zeiʃən] *n.* 环境适应性 The acclimation or adaptation of a particular species over several generations to a marked change in the environment.

accumulation error 累计误差

accuracy [ˈækjʊrəsi] *n.* 精度, 准确性

acenaphthene [ˈæs'næpθi:n] *n.* 茈 It is used as an intermediate in the production of some dyes.

acet- [ə'sit, ə'set, 'æsit] 乙酰基, 次乙基

acetal [ˈæsitæl] *n.* 乙缩醛, 乙醛缩二乙醇 Organic compounds produced by addition of alcohol molecules to aldehyde molecules.

acetaldehyde [æsi'tældihaid] *n.* 乙醛

acetamide [æsi'tæmaid] *n.* 乙酰胺

acetylate [ə'setileit] *v.* & *n.* 乙酰化 (产物)

acetylation [ə'setileiʃən] *n.* 乙酰化

A process by which an acyl group is introduced into a compound.

acetylene [ə'setilin:] *n.* 乙炔, 电石气

acid-base balance 酸碱平衡

acid-base catalyst 酸碱催化剂

acid-base indicator 酸碱指示剂

acid dye 酸性染料 Dyes containing one or more sulfonic acid substitu-

ents or other acidic groups. They are anionic and water-soluble, and are used to dye wool and nylon. They are functioned by aligning the anionic, negatively charged portion of the dye molecule in solution with a cationic positively charged site on the fiber.

acid egg 酸蛋 Also called blow-case. Device consisting of an egg-shaped container filled with liquid to be pumped. This container is fitted with an inlet pipe for the charge, an outlet for the discharge, and a pipe for the compressed air or gas. Liquid is forced out of the discharge pipe by pressure of air or gas on the surface of the liquid.

acidic [ə'sidik] *a.* 酸性的; 酸式的

acidify [ə'sidifai] *v.* 酸化

acidity [ə'siditi] *n.* 酸性; 酸度

acid mist 酸雾

acid-proof 耐酸的, 防酸的

acid rain 酸雨 Precipitation having a pH value of less than about 5.0. It is results from the emission into the atmosphere of various pollutant gases, mainly sulphur dioxide and various oxides of nitrogen, when they are dissolved in atmospheric water, the acid rain, snow, or hail is formed. It is also results from the deposition of pollutants as gases or minute particles (dry deposition).

acid resistance 耐酸的; 抗酸的

acrylic [ə'krilik] *a.* 丙烯酸

acrylic acid 丙烯酸

acrylic ester 丙烯酸酯

acrylic fiber 丙烯酸系纤维 Fibers produced by solvent spinning or wet spinning.

acrylic resin 丙烯酸树脂 Polymers made from the polymerization of esters or other derivatives of acrylic acid such as acrylonitrile.

acrylics [ə'kriliks] *n.* 丙烯酸树脂 ⇒ acrylic resin

acrylonitrile ['ækrilənai'tril] *n.* 丙烯腈

acrylonitrile-butadiene-styrene copolymer 丙烯腈-丁二烯-苯乙烯共聚物

acrylonitrile-butadiene-styrene plastic

ABS 塑料 Plastics based on acrylonitrile-butadiene-styrene copolymers. It has high strength and heat and chemical resistance. ABS has good melt strength and can be made into uniformly tough molded and thermoformed objects.

acrylonitrile - butadiene - styrene resin (ABS) 丙烯腈-丁二烯-苯乙烯共聚树脂, **ABS** 树脂 An important class of structural polymers which is a two-phase system by dispersing the rubber in the rigid SAN (styreneacrylonitrile) copolymer matrix.

ACT (= **activated-complex theory**) 活化络合物理论

actification [ˌæktifiˈkeɪʃən] *n.* 再生 (作用)

activate [ˈæktiveɪt] *n.* & *v.* 活 (性) 化; 对……起作用

activated adsorption 化学吸附, 活性吸附 ⇒ chemisorption

activated alumina 活性氧化铝 Ad-sorbent used primarily to dry gases and liquids.

activated carbon 活性炭 (黑) A microcrystalline material prepared by thermal decomposition of wood, vegetable shells, coal, etc.. It is used to remove odors and toxic substances from gaseous emissions. It is also used in advanced waste treatment to remove dissolved organic matter from wastewater.

activated complex 活化络合物 ⇒ activated-complex theory

activated-complex theory (ACT) 活化络合物理论 A theory under which the rate constants in chemical reactions can be calculated by using statistical thermodynamics. As two reactants approach each other, the potential energy increases. When the potential energy is near the maximum the activated complexes are formed. After the atoms have rearranged in the chemical reaction, the value of the potential energy decreases as the products of the reaction are formed.

activated sludge 活性污泥 Sludge used to remove organic matter from

sewage, which has been aerated and subject to bacterial action.

activated sludge process 活性污泥法 The process of using biologically active sewage sludge to treat sewage and waste water. In the process, the waste-water from the sedimentation tank in primary treatment is pumped to an aeration tank where it is mixed with air and sludge loaded with bacteria, and remain for several hours. During this time, the bacteria break down the organic matter.

activation [æktiˈveɪʃən] *n.* 活 (性) 化, 激活

activation energy 活化能 The minimum energy required for a chemical reaction to occur, which determines the variation of the rate of reaction with temperature. In a reaction, the reactant molecules come together and chemical bonds are stretched, broken, and reformed in forming the products. During this process the energy of the system rises to a maximum, then falls to the energy of the products. So the activation energy is the difference between the maximum energy and the energy of the reactants, in other words, it is the energy barrier that has to be overcome for the reaction to proceed.

activator [ˈæktiveɪtə] 活化剂 Substances that can increase the activi-

- ty of a catalyst.
- active** ['æktiv] *a.* 活泼[性]的, 有效的
- active constituent** 活性组分
- active site** 活性部位 Sites on the surface of a catalyst where activity occurs.
- activity** [æk'tiviti] *n.* 活度 A thermodynamic function as concentrations (or pressures) corrected for nonideal behaviour, and used in place of concentration in equilibrium constants for reactions when involving nonideal gases and solutions.
- activity coefficient** 活度系数
- actual gas** 实际[真实]气体
- acute toxicity** 剧毒性 Any poisonous effect produced within a short period of time, usually from 24 to 96 hours, resulting in severe biological harm and often death.
- acyclic** [ei'saiklik] *a.* 无环的; 非循环的
- acyl group** 酰基
- adaption** [ə'dæpfən] *n.* 适应 A change in structure or habit of an organism that allows it to exist in a changed environment.
- addition polymerization** 加成聚合
- addition reaction** 加成反应 Chemical reaction in which one molecule adds to another without splitting off by-products. It occurs with unsaturated compounds containing double or triple bonds, and may be electrophilic or nucleophilic.
- additive** ['æditiv] *n.* 添加剂 Substances added to another substance or material to improve its properties in some way. Additives are often used in small amounts and for a variety of purposes, as in preventing corrosion, preserving and improving foods, and stabilizing polymers.
- adhere** [əd'hiə] *v.* 黏附, 附着(于); 坚持; 追随
- adherend** [əd'hiərənt] *n.* 被粘物, 黏附物
- adhesion** [əd'hi:ʒən] *n.* 黏合, 黏附; 黏合力, 黏附力
- adhesion preventives** 防粘剂
- adhesive** [əd'hi:siv] (1) *n.* 黏合剂, 黏结剂 Substances that can be used to joint surfaces together. (2) *a.* 黏附[着]的
- adiabatic** [ædiə'bætik] *a.* 绝热的
- adiabatically** [ædiə'bætikəli] *ad.* 绝热地
- adiabatic process** 绝热过程 Any process that occurs without heat exchanging with surroundings.
- adiabatic-saturation line** 绝热饱和(温度)线
- adiabatic-saturation temperature** 绝热饱和温度
- adiabatic system** 绝热系统[体系] Systems in which any process occurs without exchange of heat with the surroundings.
- adiabatic temperature rise** 绝热温升

admission space 装填体积

admix [əd'miks] *v.* 混合, 掺和

adsorb [æd'sɔ:b] *v.* 吸附

adsorbable [æd'sɔ:bəbl] *a.* 可吸附的

adsorbate [æd'sɔ:bit] *n.* 吸附质, (被) 吸附物 ⇒ adsorption technology

adsorbed phase 吸附相 ⇒ adsorption process

adsorbent [æd'sɔ:bənt] (1) *n.* 吸附剂

Substances on the surface of which a substance is adsorbed. They are natural or synthetic materials of amorphous or microcrystalline structure, such as activated carbon, activated alumina, silica gel, and molecular sieves.

(2) *a.* 吸附的

adsorber [æd'sɔ:bə] *n.* 吸附剂 ⇒ adsorbent; 吸附器 [设备] Devices in which adsorption occurs.

adsorption [æd'sɔ:pʃən] *n.* 吸附 A separation process in which one or more components of a liquid or gas mixture are adsorbed on the surface or in the pores of a solid adsorbent and a separation is obtained. Chemisorption and physisorption are two types of the process that are different in the nature of the forces involved. Desorption is the reverse process by which the adsorbate is removed from the surface to the bulk fluid phase.

adsorption refining 吸附精制

adsorption stripping 解吸 (附) ⇒ de-

sorption

adsorption technology 吸附技术

adsorptive-bubble separation 泡沫吸附分离 Processes in which certain components of a solution or suspension are adsorbed selectively on the surfaces of gas bubbles that is passing through the solution or suspension. For any adsorptive-bubble separation method, if the material to be removed is not itself surface-active, a suitable surfactant may be added to unite with it by chelation or other complex formation, and adsorb it to the bubble surface so that it may be removed.

adsorptive process 吸附过程 When a fluid mixture is contacted with a solid surface, certain components of the mixture being concentrated at the surface forming an adsorbed phase. The composition of the adsorbed phase is different from that of the bulk fluid phase, which forms the basis of separation by adsorption technology.

adsorbable method 泡沫吸附分离

advanced performance composite 高能复合材料

advanced polymeric material 高能聚合材料 Materials that have very good temperature stability (many hours or days at 250 ~ 300°C).

When reinforced with fibers they are stronger than most metals on a

weight/weight basis. They are often used in critical parts of a structure.

advanced waste treatment 废水深度处理 Also known as tertiary treatment. Wastewater treatment that follows the secondary or biological stage and produces a high-quality effluent. The process includes removal of nutrients such as nitrogen and phosphorus and removal of a high percentage of suspended solids.

aerate ['æreɪt] *v.* 充气, 曝气, 通气

aeration [æ'reɪʃən] *n.* 充气, 曝气, 通气 The process of being supplied or impregnated with air, which is used in wastewater treatment to foster biological and chemical purification.

aerator ['æreɪtə] *n.* 充气机, 曝气机, 通气机

aer (o) - ['æər (əu)] 空气; 气体

aerobic [æ'roubɪk] *a.* 好氧的, 需氧的, 有氧的

aerobic treatment 需氧处理

aerogel [ˈæərədʒel] *n.* 气凝胶

aerosol [ˈæərəʊəl] *n.* 气溶胶 A system in which particles dispersed in a gaseous medium. “Smoke,” “fog,” “haze,” and “dust” are terms commonly used to describe particular types of aerosols, depending on the shape, size, and characteristic behavior of the dispersed particles.

AES (= **atomic emission spectroscopy**) 原子发射光谱

AFBC (= **atmospheric-pressure fluidized-bed combustion**) 常压流化床燃烧

affinity [ə'fɪnɪti] *n.* 亲和性, 亲和力

affinity chromatography 亲和层析

A biochemical technique for purifying natural polymers, especially proteins. A specific ligand, having a specific affinity for the polymer, is attached by covalent bonding to an insoluble inert support, so that when a solution containing the ligand is passed down a column filled with the material, it is specifically retarded and separated from any contaminating molecules.

aftertreatment [ˈɑːftə'trɪtmənt] *n.* 后处理

agent [ˈeɪdʒənt] *n.* 剂; 介质

agglomerate [ə'glɒməreɪt] (1) *v.* 附聚; 烧结 (2) *n.* 附聚(物), 烧结块 (3) *a.* 附聚的, 烧结的

agglomeration [ə'glɒmə'reɪʃən] *n.* 附聚, 凝聚

aggregation [ægrɪ'geɪʃən] *n.* 聚集, 集合

agitate [ˈædʒɪteɪt] *v.* 搅拌, 搅动; 拌和

agitated extraction tower 搅拌萃取塔 Extraction towers in which a series of paddle agitators, mounted on a central rotating shaft, provides the agitation for the two phases. The agitators are separated from each

other by a calming section of wire mesh to encourage coalescence of the droplets and phase separation. This apparatus is essentially a series of mixer-settlers one above the other.

agitated-film evaporator 搅拌式薄膜蒸发器 A modified falling-film evaporator which consists of a single large jacketed tube containing an internal agitator. Liquid feed enters at the top of the tube and is spread out into a turbulent film by the vertical agitator blades as it flows downward. This type of evaporator has a greater heat-transfer coefficient than in forced-circulation evaporators.

agitated tank 搅拌釜

agitated tank crystallizer 搅拌式结晶釜 [槽] A tank crystallizer equipped with a propeller or a turbine and a cooling system (jacket or coils).

agitated thin-film evaporator 搅拌式薄膜蒸发器 ⇒ agitated-film evaporator

agitated tower contactor for extraction 搅拌萃取塔 ⇒ agitated extraction tower

agitation [ædʒi'teɪʃən] *n.* 搅拌, 搅动; 拌和 Forcing a fluid by mechanical devices to flow in a circulatory or other pattern inside a vessel.

agitator [ˈædʒɪteɪtə] *n.* 搅拌器 [机], 搅拌装置 Devices for the mixing

of liquid-liquid, liquid-solid, or liquid-gas by utilizing compressed air or rotating means.

agreed-upon 约定的, (各方) 同意的

agricultural pollution 农业污染

The liquid and solid wastes from all types of farming, including runoff from pesticides, fertilizers, and feed-lots, water and wind erosion and dust from plowing, animal manure, carcasses, and crop residues and debris.

agrochemical [ægrəʊ'kemɪkəl] *n.* 农用化学品; 农业化肥; 农产品中提炼出的化学品

aids [eɪdz] *n.* 助剂

air [eə](1) *a. & n.* 空气 (的); 气流 (的) (2) *v.* 通风 [气]; 风干

air classification 气流分级 Classifier designed on the principle that the rate at which solid particles settle in air depends on the particle size. The larger particles may be drawn off at the bottom and the smaller particles are carried away at the top by air.

air conditioning 空气调节, 空气调理, 空调 Techniques for the treatment of the air in a room to adjust its humidity, temperature, cleanliness, and flow rate.

air conductivity 透气性

air conveyor 气流输送机 An air system, which entrains and carries

the solid particles along a pipe by blowing at one end of the pipe, and sometimes sucking at the discharge end or both. It is most suitable for finely divided or light materials.

air-cooled heat exchanger 空气冷却器 Exchangers including a tube bundle and a fan. The tube bundle commonly has spiral-wound fins upon the tubes. The fan is used to move air across the tubes, which is commonly driven by electric motors.

air-cooled overhead condenser (AOC) 塔顶空气冷却器 This condenser is used as integral parts of distillation systems and installed above distillation columns. The condensers generally have inclined tubes, and the air is induced by a fan to flow over the finned surfaces. Advantages by using AOC include: reducing ground-space requirements and piping and pumping requirements, and smoother column operation.

air dehumidification 空气减湿 Removal of steam in wet air by condensation to make the humidity decreasing. It is used primarily in air conditioning.

air distillation 常压蒸馏 Distillation at atmosphere pressure.

air draft 空气通风; (空气) 气流

air escape 泄气

air flue 风道, 烟道

air free 无空气的

air humidification 空气增湿 Introduction of steam to air to increase its humidity.

air lift 气升, 气提; 空气升液器, 扬液器 Devices for raising liquid by means of compressed air. Compressed air is induced into the liquid near the bottom of the well. The air-liquid mixture so formed is lighter than liquid alone, so that rises in the well casing.

airlift reactor 气升式反应器 Also called gaslift reactor. Reactors in which the liquid or slurry circulates between two physically separated zones. It is a type of loop reactor and is a hydrodynamic variant of the bubble column. The liquid circulates as a result of sparged gas in one zone inducing a density difference between the zones. In an airlift reactor design there must be the means used for ensuring liquid circulation, establishing high gas-liquid interfacial areas, and efficiently separating gas and liquid.

air meter 风速计 [仪]

air operated 气动的, 风动的

air pollution 大气污染, 空气污染 ⇒ atmospheric pollution

air separation 空气分离, 空分 Separation of air to obtain its components by cryogenic process, in

which the air is compressed and cooled, then separated by distillation.

air stripping 汽提 The removal of one or more volatile components from a liquid by contacting it with air.

airtightness ['eətaitnis] *n.* 气密性; 密封性

AIT (= **autoignition temperature**) 自燃温度 ⇒ spontaneous ignition temperature

alcohol ['ælkəhɒl] *n.* 酒精, 乙醇; 醇

alcoholic [ælkə'hɒlik] *n.* 酒精的, (乙)醇的

alcoholization [ælkəhɒli'zeɪʃən] *n.* 醇化

alcoholysis [ælkə'hɒləsɪs] *n.* 醇解

algebraic [ældʒɪ'breɪk] *a.* 代数(学)的

algorithm ['ælgərɪðm] *n.* 算术, 算法

aliphatic [æli'fætik] *a.* 脂(肪)族的; 无环的

aliphatic amine 脂肪族胺

aliphatic compounds 脂肪族化合物
Organic compounds that are not aromatic (every organic compound in the world is either aromatic or aliphatic). They include single bonded, double bonded, and triple bonded straight chain hydrocarbons as well as cyclic non-benzene structures.

aliphatic polyester 脂肪族聚酯
⇒ polyester

alkali ['ælkəlaɪ] *n.* 碱(性, 质), (强)碱 Bases that give hydroxide ions when dissolved in water. Ammonia and sodium hydroxide are common examples.

alkali alkyl 烷基碱金属

alkali-earth metal 碱土金属

alkalify ['ælkəlɪfaɪ] *v.* 碱化; 加碱

alkali lye 碱液

alkali metal 碱金属

alkalimetry [ælkə'limitri] *n.* 碱测定法; 碱量滴定法

alkaline ['ælkəline] (1) *a.* 强(碱)的; (2) *n.* 碱性

alkalinity [ælkə'liniti] *n.* 碱度, 碱性
A term describing the quality of water. It is a measure of the amount of bicarbonate, carbonate, and hydroxide (or caustic) compounds in the water. It is usually measured in pH, which indicates the concentration of acids and/or basic compounds.

alkali refining 碱精制 A process to remove the acids in the fractions of petroleum by sodium hydroxide or carbonate.

alkoxy (1) ['ælkɔksi] (1) *a.* 烷[烃]氧基

alkyd ['ækrɔulkið] *n.* 醇酸(树脂)

alkyd resin 醇酸树脂, 聚酯树脂

Condensation products derived from glycerol and phthalic anhydride.

alkyl ['ælkɪl] *n.* 烷[烃]基 The monovalent aliphatic hydrocarbon radicals.

alkylate ['ælkileit] *n.* & *v.* 烷基化(物)

alkylating agent 烷基化剂

alkylation [ælkil'eifən] *n.* 烷基化, 烷基取代 A process in which an alkane is combined with an alkene to form a highly branched alkane. In refineries it is often used to increase the total yield of gasoline by combining some of the gaseous light hydrocarbons to form bigger molecules boiling in the gasoline range.

alkylbenzene sulfonate 烷基苯磺酸盐

alkylide ['ælkilaid] *n.* 烷基化物

alloy ['æloi] *n.* 合金 Materials consisting of two or more metals, such as brass which is an alloy of copper and zinc, or materials consisting of a metal and a nonmetal, such as steel which is an alloy of iron and carbon, sometimes with other metals included. Alloys may be compounds, solid solutions, or mixtures of the components.

allyl resin 烯丙树脂 The resin formed by the polymerization of chemical compounds of the allyl group.

alternating copolymer 交替共聚物

Polymers in which two or more monomers is connected alternatively into the chain.

alternative [ɔ:l'tə:nətiv] (1)*a.* 交替的; 可替换的 (2) *n.* 二者取一; 替换物

alumina [ə'lju:mi:nə] *n.* 氧化铝, 矾土

aluminate [ə'lju:mineit] *n.* 铝酸盐

aluminium [ə'lju:'miniəm] *n.* 铝 Al A silver-white metal which is very light, and is a good conductor of heat and electricity. It is extracted from bauxite by electrolysis.

aluminium alloy 铝合金 Alloys in which aluminium is the basis metal.

aluminium hydroxide 氢氧化铝

aluminium oxide 氧化铝

aluminium trichloride 三氯化铝

amalgam [ə'mælgəm] *n.* 汞齐; 汞合金 Alloys of mercury with one or more other metals.

amalgamation [əməlgə 'meiən] *n.* 汞合, 汞齐作用; 合并, 混合

ambient ['æmbinət] *a.* 周围的; 环境的; 外界的

ambient temperature 环境温度; 室温 A term describing temperature of surrounding air.

amidate ['æmideit] *n.* & *v.* 酰胺化(物)

amidation [əmaɪ'deiən] *n.* 酰胺化

amide ['æmaid] *n.* 酰胺 Organic compounds containing the amide group, i. e. group-CONH₂.

aminate ['æmineit] *n.* & *v.* 胺化(产物)

amination [æmi'neiʃən] *n.* 胺化(作用) Processes which yield amines, such as the reaction to form aniline by the reduction of nitrobenzene, or by the reaction of chlorobenzene with ammonia.

-amine (词尾) 胺

amino [ə'mi:nəu] *a.* 氨基的

amino acid 氨基酸 A group of water-soluble organic molecules, mainly composed of carbon, oxygen, hydrogen and nitrogen. In their structure both a basic amino group ($-NH_2$) and an acidic carboxyl group ($-COOH$) are attached to the same carbon atom.

amino acid sequence 氨基酸序列

The primary structure of a protein.

ammonia [ə'məunjə] *n.* 氨 A colourless gas, NH_3 , with a strong pungent odour. It is very soluble in water and soluble in alcohol.

ammoniacal [æmou'naiəkəl] *a.* (含) 氨的, 氨性的

ammonia oxidation 氨氧化(法) A process that produces nitric acid by the catalytic oxidation of ammonia with air on the surface of Pt-Rh gauze on $900^\circ C$.

ammonia-soda process 氨碱法 \Rightarrow Solvay process

ammonia synthesis 氨合成(法) \Rightarrow Haber process

ammonia synthesis converter 氨合成塔

ammoniate [ə'məunieit] (1) *n.* 氨合物; 有机氮肥 (2) *v.* 氨化; 充氮

ammoniated [ə'məunieitid] *a.* 充氮的, 含氮的

ammoniation [əməuni'eifən] *n.* 氨化

ammonium phosphate fertilizer 磷酸

铵类肥料

ammoxidation [æ,moksi'deifən] *n.* 氨(化)氧化, 氨氧化反应, 氨解氧化 \Rightarrow ammonia oxidation

amorphous [ə'mɔ:fəs] *a.* 无定形的
Particles that are not crystalline.

amphipathic [ɹæmfi'pæθik] *a.* 两亲的, 既亲水又亲油的 A term describing a unsymmetrical molecular group, one end being hydrophilic and the other hydrophobic.

amphipathic lipid 两亲脂 Lipids which exhibit amphipathic property.

amphiprotic *a.* 两性的 A term describing a molecular having both protophilic and protogenic properties.

amphiprotic solvent 两性溶剂 Solvents that self-ionize, therefore can act as proton donators and acceptors.

amplitude ['æmplitju:d] *n.* 振幅; 幅度

anaerobic [æneə'rəubik] *a.* 厌氧的, 厌气的; 绝氧的 A term referring to life or processes that occur in the absence of oxygen.

anaerobic bacteria 厌氧菌

anaerobic digest 厌氧消化; 厌气消化 A biodegradation process capable of handling high-strength aqueous waste streams that would not be efficiently treated by aerobic biodegradation processes.