英汉地学专业术语集注系列 丛书主编 董元兴 张红燕

英汉岩石学专业术语集注

许峰 唐晓云 张莉 冯迪 编著





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序 言

《英汉地学专业术语集注》以中国地质大学重点培育学科建设项目《基于语料库的跨学科科技英语翻译研究》为依托,由专门从事英汉古生物学、岩石学和矿物学领域的专家精心选择专业术语编撰而成。《英汉地学专业术语集注》词条选择科学,力图涵盖古生物学、岩石学及矿物学主要核心术语。词条配有中英文对照释义、词条来源并辅助学术期刊及专著例子,有利于读者全面了解学习该术语词条。词条汉语拼音的标注利于国际学生学习并掌握地学领域专业术语词汇。《英汉地学专业术语集注》主要包括三个分册词典,即《英汉矿物学专业术语集注》、《英汉古生物学专业术语集注》及《英汉岩石学专业术语集注》。

三个分册的内容主要由中英文释义、汉语拼音、词条来源、例子及延伸词条等组成,例如:

Sedimentary

Definition: (Geology) (of rock) that has formed from sediment deposited by water or air. (地质)(岩石)沉积形成的 (yán shí) chén jī xíng chéng de

Origin: Mid-16th century: from French sédiment or Latin sedimentum "settling", from sedere "sit".

Example:

- 1. The determination of semidentary characteristics of the Yanqi basin in Mesozoic Era and the boundaries of paleobasin is a very important scientific research task for the exploration and development of oil and gas in this region. 焉耆中生代古盆地沉积特征与古盆地边界的确定对于该区域油气勘探与开发是一项非常重要的科研任务。
- 2. Ordos Basin is the second largest sedimentary basin on land in China that possesses abundant oil and gas resources and has bright prospects in oil and gas exploration. 鄂尔多斯盆地是我国陆上第二大沉积盆地,油气资源非常丰富,油气勘探潜力很大。

Extended Terms:

sedimentary-environment 沉积环境
sedimentary-exhalation 沉积喷流
sedimentary-metamorphic 沉积变质
sedimentary-reformation 沉积改造
sedimentary structural evolution 沉积构造演化
sedimentary-structural episode 沉积-构造幕
sedimentary-tectonic 沉积-构造
sedimentary-transformation 沉积-改造
exhalative-sedimentary 喷流-沉积

hydrothermal-sedimentary 热水沉积 tectonic-sedimentary 构造沉积 volcano-sedimentary 火山沉积

2009年10月中国地质大学重点培育学科建设项目《基于语料库的跨学科科技英语翻译研究》获批启动,《英汉地学专业术语集注》于2009年10月开始编撰,2011年10月完成初稿,2014年10月《英汉地学专业术语集注》获得中国地质大学地球生物学基金资助。这里还要说明的是,本书的词条释义,例句的汉语译文并不与原文的专业术语词条和英文例句完全对应,但都是对上述词条与例句的最主要的表述。编写及校订数易其稿,由于经验所限,本书在选词和例句选用等方面难免有不足或错误之处,我们诚恳地希望广大读者提出批评和建议,以利我们进一步改正和修订。

董元兴 张红燕 2016年10月

前言

作为地质学一门分支学科,古生物学是生命科学和地球科学的交叉科学。该学科既是生命科学中唯一具有历史科学性质的一个独特分支,又是地球科学的一个分支。古生物学是历史生物学的一个重要基础和组成部分,不仅研究生命起源、发展历史、生物宏观进化模型、节奏与作用机制等,而且也研究保存在地层中的生物遗体、遗迹、化石,用以确定地层的顺序、时代,了解地壳发展的历史,推断地质史上水陆分布、气候变迁和沉积矿产形成与分布的规律。因此,古生物研究既具有理论意义,又对地质矿产的开发和应用有重要的实际意义。近些年来,中外地质矿产合作日益紧密,地质学以及古生物学研究日益趋向国际化,地质工作者和学生迫切需要有一本古生物学方面的专业术语英汉工具书,为此我们编写了这本专业术语集注。

《英汉古生物学专业术语集注》根据古生物的学科特点,共分为六个大部分,分别是古生物学总论、古无脊椎动物学、古脊椎动物学、古植物学、古生态学和地球生物学以及地球生物学和分子生物学。词条选择严格参照古生物学专业术语库。在体例上,以英语音标、英语释义、对应汉语名、汉语拼音注音、词源、例句(含汉语译文)和拓展词组为主要组成部分。在词汇释义和例句选择上紧扣专业主题,对部分较为复杂的复合词术语中的单词也进行了单独释义。词源部分除了提供部分术语在该专业领域的缘起,还包含许多普通词汇的由来和演变,有助于广大师生、研究员、从业人员了解该词汇的来龙去脉。本书兼顾专业和语言,融合了英汉科技专业词典和英语语言词典的双重特色。

本书的例句不少来自国内外有关著作和文献,限于体例,未予以注明出处;本词典的编写得到了中国地质大学(武汉)地球科学学院和地球科学学院相关专家的支持和帮助;外语学院赵妍老师的编撰以及2012届研究生许岚、张涵、张馨引、郑红红、辛华等做了大量资料收集整理工作,在此一并表示诚挚的谢意。

这里还要说明的是,本书的专业术语词条释义,例句的汉语译文并不与原文的专业术语词条和英文例句完全对应,但都是对上述词条、例句等的最主要的表述。由于时间和经验所限,本书在选词和例句选用等方面还存在许多不足的地方,我们诚恳地希望广大读者提出批评和建议,以便我们今后做进一步的改正和修订。

作者 2016年10月

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A-type granite [ei taip 'grænit]

Definition: A 型花岗岩 A xíng huā gāng yán

granite: a very hard, granular, crystalline, igneous rock consisting mainly of quartz, mica, and feldspar and often used as a building stone. 花岗岩 huā qāng yán

Example:

Qianshan granite has character of A-type granite, and it is the product of partial fusion. 潜山花岗岩有着 A 型花岗岩的特征, 它是部分熔融的产物。

aa lava [ei ei 'laivə]

Definition: blocky basalt lava. 块熔岩 kuài róng yán

Example:

Aa lava, on the other hand, moves faster and doesn't have time to develop a skin, resulting in a cooler flow with a more angular texture.

另一方面, 块状熔岩移动更快, 没有时间形成外皮, 这就导致了岩浆以较冷却的流动而形成了更有棱角的质地。

abyssal facies [ə'bisəl 'feifiiz]

Definition: 深海相 shēn hǎi xiāng

abyssal: relating to or denoting the depths or bed of the ocean, especially between about 3,000 and 6,000 metres down. 深海的 shēn hǎi de

facies: (Geology) the character of a rock expressed by its formation, composition, and fossil content. (地质)相 xiàng

Example:

The bathyal-abyssal facies, littoral facies, neritic facies and delta facies are beneficial to oil and gas exploration.

半深海-深海相区、滨浅海相区和三角洲相区是较为有利的油气分布区。

Extended Terms:

open abyssal belvedere facies 开阔海台地相 bathyal-abyssal facies 次深海-深海相

accessory mineral [əkˈsesəri ˈminərəl]

Definition: any mineral in an igneous rock not essential to the naming of the rock. When it

is present in small amounts, as is common, it is called a minor accessory. 副矿物 fù kuàng wù

Example:

According to its main rock forming mineral, accessory mineral formation, petrochemistry and geochemistry character, it shows that I type is the main genetic type for intrusive, only a few is A Type or S type.

根据主要造岩矿物及副矿物组合、岩石化学和地球化学特征判别结果,岩体成因类型以 I型为主,少数为 A型和 S型。

Extended Terms:

accessory mineral assemblages 副矿物组合 accessory mineral chrome spinel 副矿物铬尖晶石

accessory rock [əkˈsesəri rɒk]

Definition: 附生岩 fù shēng yán

accessory: a thing which can be added to something else in order to make it more useful, versatile, or attractive. 附件 fù jiùn

rock: the solid mineral material forming part of the surface of the earth and other similar planets, exposed on the surface or underlying the soil. 岩石 yán shí, 岩 yán

accreting plate [æ'krixtin pleit]

Definition: 增生板块 zēng shēng bǎn kuài

accreting: growing by accumulation or coalescence. 增生 zēng shēng plate: a thin, flat sheet or strip of metal or other material, typically one used to join or strengthen things or forming part of a machine. 板 bǎn

Extended Term:

accreting convergent plate boundary 增生聚敛板块边界

accretionary wedge [əˈkriːʃənəri wedʒ]

Definition: 增生楔 zēng shēng xiē;加积楔 jiā jī xiē;增积岩体 zēng jī yán tǐ

accretionary: a process by which the size of a continent increases as a result of the moving together and deforming of tectonic plates. 增生 zēng shēng, 增大 zēng dà wedge: a piece of wood, metal, or some other material having one thick end and tapering to a thin edge, that is driven between two objects or parts of an object to secure or separate them. 楔

子 xiē zi

achondrite [ei'kondrait]

Definition: a rare stony meteorite that consists mainly of silicate minerals and has the texture of igneous rock but contains no chondrules. 无球粒陨石 wú qiú lì yǔn shí

Origin: 1900-1905; a- +chondrite.

Example:

GR99027 meteorite from Blue Ice Area in Antarctica is an achondrite. 来自南极格罗夫山蓝冰地区的 GR99027 陨石为一无球粒陨石。

Extended Terms:

calcium-poor achondrite 贫钙无球粒陨石 calcium-rich achondrite 富钙无球粒陨石

achondritic meteorite [reikon'dritik 'mittiərait]

Definition: 无球粒陨石 wú qiú lì yǔn shí

achondritic: relating to a stony meteorite containing no small mineral granules (chondrules). 无球粒陨星的 wú qiú lì yǔn xīnq de

meteorite: a piece of rock or metal that has fallen to the earth's surface from outer space as a meteor. Over 90 percent of meteorites are of rock while the remainder consist wholly or partly of iron and nickel. 陨石 yǔn shí

acid rock ['asid rok]

Definition: a form of psychedelic rock, which is characterized with long instrumental solos, few (if any) lyrics and musical improvisation. 酸性岩 suān xìng yán

Examples:

The Carboniferous volcanic rocks in eastern Junggar belong to basic and intermediate-acid rock assemblages and are characterized by early island-arc compression and late intraplate extension.

东准噶尔石炭系火山岩为一套基性、中酸性岩石组合, 具早期岛弧挤压、晚期板内伸展环境特征。

2 I Siliceous soil—Soil composed of acid rock that are crystalline in nature.

I 硅酸土壤——由透明的酸性岩石组成的土壤。

acmite ['ækmait]

Definition: a rare pyroxene mineral, sodium-ferric iron silicate, NaFe (Si₂O₆), found in

feldspathoid rocks 锥辉石 zhuī huī shí

Origin: 1830-1940; from Greek akm(ɛ) sharp point + -ite.

Extended Terms:

sahlite acmite 次透锥辉石 acmite-augite 霓辉石 jadeite-acmite 玉质锥辉

active continental margin ['aktiv kənti'nentəl 'matdəin]

Definition: 活动大陆边缘 huó dòng dà lù biān yuán

active: moving or tending to move about vigorously or frequently. 活跃的 huó yuè de continental: forming or belonging to a continent. 大陆的 dà lù de margin: the edge or border of something. 边 biān, 边沿 biān yán

Example:

Seventeen petroliferous basins have been found in circum-Pacific belt now and have been classified and analyzed in basinal origin, for the basins are all in the active continental margins. 环太平洋已发现 17 个含油气盆地,它们都处于活动大陆边缘,在盆地成因方面有类似之处,可以归类进行分析。

active continental margin basin ['æktiv konti'nentəl 'maːʤin 'beisən]

Definition: 活动大陆边缘盆地 huó dòng dà lù biān yuán pén dì active: moving or tending to move about vigorously or frequently. 活跃的 huó yuè de continental: forming or belonging to a continent. 大陆的 dà lù de margin: the edge or border of something. 边 biān, 边沿 biān yán basin: a place where the earth's surface is lower than in other areas of the world. 盆地 pén dì;

Example:

凹地āo dì

During the Neoproterozoic to the Early Paleozoic, the South China was a marginal basin captured by the Yangtze active continental margin, filled with very thick flysch, sandstone, and shale sediments.

华南新元古代到早古生代是扬子活动大陆边缘构造"捕获"的一个边缘海盆地,其间充填了巨厚的复理层、砂岩、页岩沉积。

active margin ['æktiv 'maːʤin]

Definition: 活动边缘 huó dòng biān yuán

此为试读,需要完整PDF请访问: www.ertongbook.com

active: moving or tending to move about vigorously or frequently. 活跃的 huó yuè de margin: the edge or border of something. 边 biān, 边沿 biān yán

Example:

Volcanic rifted margins geodynamic evolution is as complex as that of active margins. 火山型被动陆缘演化过程与活动陆缘一样复杂多变。

Extended Terms:

active plate margin 活动板块边缘 active type continental margin 主动型大陆边缘

adakite [əˈdeikait]

Definition: (Geology) rocks formed from lavas that melted from subducting slabs associated with either volcanic arcs or arc/continent collision zones; they were first described from Adak Island in the Aleutians. (地质)埃达克岩 äi dá kè yán

Examples:

- ①The adakite in Heishishan of Ganshu Province is of O-type composed of trondhjemite. 甘肃黑石山埃达克岩属 O 型埃达克岩, 其岩石类型为奥长花岗岩。
- ②The Bayan Bold gold deposit is of porphyry-type related to adakite. 矿床类型属于与埃达克岩有关的斑岩型金矿床。

Extended Term:

Adakite-like rocks 埃达克质岩

adiabat ['ædiəbæt]

- Definition: a line on a thermodynamic chart relating the pressure and temperature of a substance undergoing an adiabatic change. 绝热线 jué rè xiàn
- Origin: back formation from adiabatic.

Example:

Although Scheme B considers the condensation latent heat, the curvature of wet adiabat is not considered in the computational method. Scheme B is superior to Scheme A, but the errors are still large.

方案 B 虽然考虑水汽凝结潜热,但计算方法没有考虑湿绝热线的曲率等问题,计算结果虽优于 A 方案,但误差仍较大。

Extended Terms:

condensation adiabat 凝结绝热线 dry adiabat 干绝热线 pseudo adiabat 假绝热线 saturation adiabat 饱和绝热线 wet adiabat 湿绝热线

adiabatic decompression [mediabetik idi:kam'prefan]

Definition: In thermodynamics, an adiabatic process or—an isocaloric process is a thermodynamic process in which no heat is transferred to or from the working fluid. 绝热减压 jué rè jiǎn yā

adiabatic gradient [aediə'beetik 'greidiənt]

Definition: 绝热梯度 jué rè tī dù

adiabatic: relating to or denoting a process or condition in which heat does not enter or leave the system concerned. 绝热的 jué rè de

gradient: a measure of change in a physical quantity such as temperature or pressure over a particular distance. 梯度 tī dù, 倾斜度 qīnq xié dù, 坡度 pō dù

Extended Term:

adiabatic temperature gradient 绝热温度梯度

advection [æd'vekfən]

Definition: the transference of heat energy in a horizontal stream of gas, especially of air. 水平对流 shuǐ píng duì liú

Origin: C20: from Latin advectiō conveyance, from advehere, from ad- to + vehere to carry.

Example:

We must pay attention to the southern warm thermal advection as well as the northern cold thermal advection in the cold front shear type rainstorm process.

在该暴雨的发生过程中,北部冷平流具有十分重要的作用,但南部暖平流的作用也不可忽视。

Extended Terms:

advection effluent 平流流出 advection scale 平流尺度 geostrophic advection 地转平流 warm advection 暖平流 thermal advection 温度平流

aegirine ['eigəˌriːn]

Definition: a mineral, mainly sodium-ferric iron silicate, NaFe \cdot (Si₂O₆), occurring in feldspathoid rocks in slender prismatic crystals 霓石 ní shí

Origin: 1830-1840; Aegir + -ite₂.

Example:

There exist quite a few deep xenoliths in silicified aegirine syenite porphyry within Jinhe intrusive body of Jianchuan, western Yunnan Province.

云南剑川金河岩体中的硅化霓辉正长斑岩含有较多的镁铁、超镁铁质深源岩石包体。

Extended Terms:

aegirine aplite 霓细晶岩 aegirine-augite 霓辉石 aegirine carbonatite 霓碳酸岩 aegirine granite aplite 霓岗细晶岩 aegirine grorudite 多霓细岗岩

aenigmatite [it'niqmə,tait]

Definition: an inosilicate mineral of sodium, iron, and titanium, forming brown to black triclinic lamellar crystals. 三斜闪石 sān xié shǎn shí;钠铁闪石 nà tiě shǎn shí

aeolian cross bedding [it'oulian kros bedding]

Definition: 风成交错层理 fēng chéng jiāo cuò céng lǐ

aeolian; relating to or arising from the action of the wind. 风成的 fēng chéng de cross; pass in an opposite or different direction; intersect. 相交 xiāng jiāo bedding: (Geology) the stratification or layering of rocks or other geological materials. (地质) 层理 céng lǐ

agglomerate [əˈglɔmərət]

Definition: a coarse-grained volcanic rock composed of sharp or sub-angular fragments of lava, set in a fine matrix 集块岩 jí kuài yán

Origin: 17 century: from Latin agglomerare, from glomerare to wind into a ball, from

glomus ball, mass.

Extended Terms:

agglomerate lava 集块熔岩 slaggy agglomerate 多孔集块角砾岩; 渣状集块岩 vent agglomerate 喷溢道集块岩 welded agglomerate 熔结集块岩

agglomeratic texture [əˌgloməˈrætik ˈtekstʃə]

Definition: 集块结构 jí kuài jié gòu

agglomeratic: of or related to agglomerate. 集块岩的 jí kuời yán de texture: the arrangement of the particles or constituent parts of any material, as wood, metal, etc., as it affects the appearance or feel of the surface; structure, composition, grain, etc. 结构 jiế qòu

Al-spinel Iherzolites [arl-spi'nel l'heəzəlaits]

Definition: 铝尖晶石二辉橄榄岩 lǚ jiān jīng shí èr huī gǎn lǎn yán

Al: the chemical element aluminium. (化学元素)铝 lǚ

spinel: a hard glassy mineral occurring as octahedral crystals of variable colour and consisting chiefly of magnesium and aluminium oxides. 尖晶石 jiān jīng shí

lherzolite: a coarse-grained rock containing minerals high in iron and magnesium that is believed to originate in the Earth's mantle. 二辉橄榄岩 èr huīgǎn lǎn yán

alaskite [əˈlæskait]

Definition: (Petrology) a granitic rock composed mainly of quartz and alkali feldspar, with few dark mineral components. (岩石学)白岗岩 bái gắng yán

Example:

Rossing uranium mine is the only operating uranium mine in the world where the uranium occurs in intrusive alaskite.

罗辛铀矿山是目前世界上唯一尚在运营中的侵入体白岗岩型铀矿。

Extended Terms:

alaskite aplite 白岗细晶岩 alaskite porphyry 白岗斑岩 soda alaskite 钠白岗岩

albite ['ælbait]

Definition: a colourless, milky-white, yellow, pink, green, or black mineral of the feldspar group and plagioclase series, found in igneous sedimentary and metamorphic rocks. It is used in the manufacture of glass and ceramics. Composition: sodium aluminium silicate. 钠长石 nà cháng shí

Formula: NaALSi₃O₈. Crystal structure: triclinic.

Origin: 19 century: from Latin albus white.

Example:

As a common secondary mineral, feldspar minerals, especially albite, have shared a close relationship with jadeite minerals.

长石矿物特别是钠长石作为翡翠的常见次要矿物,与硬玉矿物之间存在着密切关系。

Extended Terms:

albite granite 钠长花岗岩 albite monzonite 钠长二长岩 albite moonstone 钠长月光石 albite twin 钠长石双晶;钠长双晶 secondary albite 次生钠长石

albite-anorthite system ['ælbait æ'nɔ:θait 'sistəm]

Definition: 钠长石-钙长石系 nà cháng shí-gài cháng shí xì

albite: a sodium-rich mineral of the feldspar group, typically white, occurring widely in silicate rocks. 钠长石 nà cháng shí

anorthite: a calcium-rich mineral of the feldspar group, typically white, occurring in many basic igneous rocks. 钙长石 gài cháng shí

system: (Geology) (in chronostratigraphy) a major range of strata that corresponds to a period in time, subdivided into series. (地质)(在年代地层学中)地层的系 dì céng de xì

albite-orthoclase-quartz system ['ælbait- 'ɔːθəukleis-kwɔːts 'sistəm]

Definition: 钠长石-正长石-石英系 nà cháng shí-zhèng cháng shí-shí yīng xì

albite: a sodium-rich mineral of the feldspar group, typically white, occurring widely in silicate rocks. 钠长石 nà cháng shí

orthoclase: a common rock-forming mineral occurring typically as white or pink crystals. It is a potassium-rich alkali feldspar and is used in ceramics and glass-making. 正长石 zhèng cháng shí quartz: a hard mineral consisting of silica, found widely in igneous and metamorphic rocks and

typically occurring as colourless or white hexagonal prisms. It is often coloured by impurities (as in amethyst, citrine, and cairngorm). 石英 shí yīng

system: (Geology) (in chronostratigraphy) a major range of strata that corresponds to a period in time, subdivided into series. (地质) (在年代地层学中) 地层的系 dì céng de xì

albite epidote hornfels facies ['aelbait 'epidout 'hornfelz 'feifiiz]

Definition: 钠长石-绿帘石-角岩相 nà zhǎng shí-lǜ lián shí-jiǎo yán xiāng

albite: a sodium-rich mineral of the feldspar group, typically white, occurring widely in silicate rocks. 钠长石 nà cháng shí

epidote: a lustrous yellow-green crystalline mineral, common in metamorphic rocks. It consists of a basic, hydrated silicate of calcium, aluminium, and iron. 绿帘石 lǜ lián shí

hornfels: a dark, fine-grained metamorphic rock consisting largely of quartz, mica, and particular feldspars. 角页岩 jiǎo yè yán

facies: the character of a rock expressed by its formation, composition, and fossil content. 相 xiàng

albitization ['ælbiti'zeiʃən]

Definition: (Petrology) the formation of albite in a rock as a secondary mineral. (岩石学) 钠长石化 nà zhǎng shí huà

Example:

Therefore, the albitization of plagioclase is shown in the early stage of diagenesis, and albitization of potash feldspar appears only in the late stage of diagenesis.

因此, 斜长石的钠长石化可见于成岩早期, 而钾长石的钠长石化只发生于成岩晚期。

Extended Term:

glaucophane-albitization 蓝闪钠长石化

algal dolomite ['ælgəl 'dələmait]

Definition: 藻白云岩 zǎo bái yún yán

algal: relating to a simple, non-flowering, and typically aquatic plant of a large assemblage that includes the seaweeds and many single-celled forms. Algae contains chlorophyll but lacks true stems, roots, leaves, and vascular tissue. 藻类的 zǎo lèi de, 海藻的 hǎi zǎo de

dolomite: a translucent mineral consisting of a carbonate of calcium and magnesium, usuallyalso containing iron. 白云石 bái yún shí