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McGraw-Hill Dictionary of Scientific and Technical Terms

Fifth Edition

Sybil P. Parker

Editor in Chief

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On the cover: Photomicrograph of crystals of vitamin B₁.
(Dennis Kunkel, University of Hawaii)

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agreement residual [SOLID STATE] The sum of the differences between the observed and calculated structure amplitudes of a crystal, for all observed reflections, divided by the sum of the observed amplitudes. { 'ə'grē-mənt rə'zɪj-ə-wəl }

agrestal [ECOL] Growing wild in the fields. { 'ə'grɛst-əl }

agretope [IMMUNOL] In antigen presentation, the part of an antigen that interacts with a class II histocompatibility molecule. { 'ə'grɛ-tōp }

agricere [GEOL] A waxy or resinous organic coating on soil particles. { 'ə'grɛ-sir }

agricolite See eulytite. { 'ə'grɪk-ə,lɪt }

agricultural aircraft [AERO ENG] Aircraft adapted or designed for use in agriculture and forestry. { 'ə'grɛ-kəl'chə-rəl 'er,kraft }

agricultural chemicals [MATER] Fertilizers, soil conditioners, fungicides, insecticides, weed killers, and other chemicals used to increase farm crop productivity and quality. { 'ə'grɛ-kəl'chə-rəl 'kem-ə-kəls }

agricultural chemistry [AGR] The science of chemical compositions and changes involved in the production, protection, and use of crops and livestock; includes all the life processes through which food and fiber are obtained for man and his animals, and control of these processes to increase yields, improve quality, and reduce costs. { 'ə'grɛ-kəl'chə-rəl 'kem-ə-strē }

agricultural climatology [AGR] In general, the study of climate as to its effect on crops; it includes, for example, the relation of growth rate and crop yields to the various climatic factors and hence the optimum and limiting climates for any given crop. Also known as agroclimatology. { 'ə'grɛ-kəl'chə-rəl ,klɪ-mə'täl-ə-jē }

agricultural engineering [AGR] A discipline concerned with developing and improving the means for providing food and fiber for human needs. { 'ə'grɛ-kəl'chə-rəl ,en-jə'nɪr-ɪŋ }

agricultural geography [GEOGR] A branch of geography that deals with areas of land cultivation and the effect of such cultivation on the physical landscape. { 'ə'grɪ-kəl'chə-rəl jē'əgr-ə-fē }

agricultural geology [GEOL] A branch of geology that deals with the nature and distribution of soils, the occurrence of mineral fertilizers, and the behavior of underground water. { 'ə'grɛ-kəl'chə-rəl jē'əl-ə-jē }

agricultural lime [MATER] A hydrated lime which is used to condition soil. { 'ə'grɛ-kəl'chə-rəl 'lɪm }

agricultural machinery [AGR] Machines utilized for tillage, planting, cultivation, and harvesting of crops. { 'ə'grɛ-kəl'chə-rəl mə'shēn-rē }

agricultural meteorology [AGR] The study and application of relationships between meteorology and agriculture, involving problems such as timing the planting of crops. Also known as agrometeorology. { 'ə'grɛ-kəl'chə-rəl ,mēd-ē-ə'räl-ə-jē }

agricultural pipe drain [CIV ENG] A system of porous or perforated pipes laid in a trench filled with gravel or the like; used for draining subsoil. { 'ə'grɛ-kəl'chə-rəl ,pɪp ,dræn }

agricultural robot [CONT SYS] A robot used to pick and harvest farm products and fruits. { 'ə'grɛ-kəl'chə-rəl 'rō,bāt }

agricultural science [AGR] A discipline dealing with the selection, breeding, and management of crops and domestic animals for more economical production. { 'ə'grɛ-kəl'chə-rəl 'sɪ-əns }

agricultural wastes [AGR] Those liquid or solid wastes that result from agricultural practices, such as cattle manure, crop residue (for example, corn stalks), pesticides, and fertilizers. { 'ə'grɛ-kəl'chə-rəl 'wæsts }

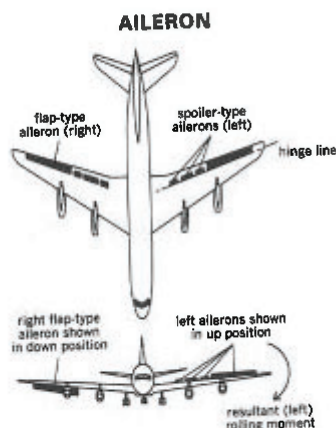
agriculture [BIOL] The production of plants and animals useful to man, involving soil cultivation and the breeding and management of crops and livestock. { 'ə'grɛ-kəl'chər }

Agrochoeridae [PALEON] A family of extinct tylopod ruminants in the superfamily Merycoidodontidae. { 'ə'gr-ē-ō'kir-ə,dē }

agroecology [ECOL] The ecology of cultivated plants. { 'ə'gr-ē-ō,'ē'käl-ə-jē }

Agriionidae [INV ZOO] A family of odonatan insects in the suborder Zygoptera characterized by black or red markings on the wings. { 'ə'gr-ē-ān-ə,dē }

Agrobacterium [MICROBIO] A genus of bacteria in the family Rhizobiaceae; cells do not fix free nitrogen, and three of the four species are plant pathogens, producing galls and hairy root. { 'ə'gr-ō,bak'tɪr-ē-əm }



Flap- and spoiler-type ailerons on jet transport airplane.

agroecosystem [ECOL] A model for the functionings of an agricultural system with all its inputs and outputs. { 'ə'gr-ē-ō,'sɪstəm }

agroenvironment [AGR] The soil and climate of a region as they affect agriculture. { 'ə'gr-ē-ō,'vɪr-ənmənt }

agroforestry [AGR] The practice of growing trees in association with agricultural crops or animals to provide both ecological and economic benefits. { 'ə'gr-ē-ō'fär-əs-trē }

Agromyzidae [INV ZOO] A family of myodarian cyclorhaphous dipteran insects of the subsection Acalypterata; commonly called leaf-miner flies because the larvae cut channels in leaves. { 'ə'gr-ē-ō'mɪz-ə,dē }

agronomy [AGR] The principles and procedures of soil management and of field crop and special-purpose plant improvement, management, and production. { 'ə'grän-ə'mē }

agrophilous [ECOL] Having a natural habitat in grain fields. { 'ə'gräf-ə-ləs }

agrostology [BOT] A division of systematic botany concerned with the study of grasses. { 'ə'gr-ē-ō'stäl-ə-jē }

agrotechnology [AGR] An innovative technology designed to render agricultural production more efficient and profitable. { 'ə'gr-ē-ō,'tek'näl-ə-jē }

agullarite [MINERAL] Ag_4SeS An iron-black mineral associated with argentite and silver in Mexico. { 'ə'g-ə'lär-ɪt }

Agulhas Current [OCEANOGR] A fast current flowing in a southwestward direction along the southeastern coast of Africa. { 'ə'gəl-əs 'kər-ənt }

AGV See automated guided vehicle.

aglyphobia [PSYCH] Abnormal fear of crossing streets. { 'ə'gl-ē-ə'fōb-ē-ə }

Ah See abhenry.

Ah See ampere-hour.

ahaptoglobinemia [MED] An inherited lack of haptoglobin, a blood serum protein. { 'ə'hapt-ō,'glō-bə'nēm-ē-ə }

Aharonov-Bohm effect [QUANT MECH] An effect manifested when a beam of electrons is split into two beams that travel in opposite directions around a region containing magnetic flux and are then recombined, whereby the intensity of the resulting beam oscillates periodically as the enclosed magnetic field is changed. { 'ə'hä'r-ō,nōf 'bām i,fekt }

ahermatypic [INV ZOO] Non-reef-building, as applied to corals. { 'ə'hər-mə'tɪp-ɪk }

ahlfeldite [MINERAL] $(Ni,Co)SeO_3 \cdot 2H_2O$ A triclinic mineral identified as green to yellow crystals with a reddish-brown coating, consisting of a hydrous selenite of nickel. { 'əl'fel,dɪt }

AIA See anti-immunoglobulin antibody.

aichmophobia [PSYCH] Abnormal fear of sharp or pointed objects. { 'ä'k-mō'fōb-ē-ə }

aided matching [ORD] Mechanical system for transferring firing or other data from a data-transmission line to a gun data computer or other device. { 'äd-əd 'mach-ɪŋ }

aided tracking [ENG] A system of radar-tracking a target signal in bearing, elevation, or range, or any combination of these variables, in which the rate of motion of the tracking equipment is machine-controlled in collaboration with an operator so as to minimize tracking error. { 'äd-əd 'trak-ɪŋ }

aided-tracking mechanism [ENG] A device consisting of a motor and variable-speed drive which provides a means of setting a desired tracking rate into a director or other fire-control instrument, so that the process of tracking is carried out automatically at the set rate until it is changed manually. { 'äd-əd 'trak-ɪŋ ,mek-ə,nɪz-əm }

aided-tracking ratio [ENG] The ratio between the constant velocity of the aided-tracking mechanism and the velocity of the moving target. { 'äd-əd 'trak-ɪŋ ,rā-shō }

AIDS See acquired immune deficiency syndrome. { 'ädz }

aid to navigation [NAV] A device external to a craft, designed to assist in determination of position of the craft, or of a safe course, or to warn of dangers or obstructions. { 'äd tə ,nav-ə'gä-shən }

algulle [ENG] A slender form of drill used for boring or drilling a blasthole in rock. [GEOL] The needle-top of the summit of certain glaciated mountains, such as near Mont Blanc. { 'ä'gwəl }

alkinite [MINERAL] $PbCuBiS_3$ A mineral crystallizing in the orthorhombic system and occurring massive and in gray needle-shaped crystals; hardness is 2 on Mohs scale, and specific gravity is 7.07. Also known as needle ore. { 'ä'k-ä,nɪt }

aileron [AERO ENG] The hinged rear portion of an aircraft