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On the cover: Photomicrograph of crystals of vitamin B_1.
(*Dennis Kunkel, University of Hawaii*)

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INTERNATIONAL EDITION

$K(A)$, the Grothendieck group of A. { ¦al·jə¦brā·ik 'kā ‚thē·ə·rē }

algebraic language [MATH] The conventional method of writing the symbols, parentheses, and other signs of formulas and mathematical expressions. { ¦al·jə¦brā·ik 'laŋ·gwij }

algebraic manipulation language [COMPUT SCI] A programming language used in the solution of analytic problems by symbolic computation. { ¦al·jə¦brā·ik mə·ni·pyə'lā·shən ‚laŋ·gwij }

algebraic number [MATH] Any root of a polynomial with rational coefficients. { ¦al·jə¦brā·ik 'nəm·bər }

algebraic number field [MATH] A finite extension field of the field of rational numbers. { ¦al·jə¦brā·ik 'nəm·bər ‚fēld }

algebraic number theory [MATH] The study of properties of real numbers, especially integers, using the methods of abstract algebra. { ¦al·jə¦brā·ik 'nəm·bər ‚thē·ə·rē }

algebraic object [MATH] Either an algebraic structure, such as a group, ring, or field, or an element of such an algebraic structure. { ¦al·jə¦brā·ik 'äb‚jekt }

algebraic operation [MATH] Any of the operations of addition, subtraction, multiplication, division, raising to a power, or extraction of roots. { ¦al·jə¦brā·ik ‚äp·ə'rā·shən }

algebraic scattering theory [PHYS] An approach to the analysis of reactions between composite particles in which the fundamental role is played by the scattering matrix, which is obtained algebraically, without the use of a wave equation, by using the concept of dynamic symmetry. { ¦al·jə¦brā·ik 'skad·ə·riŋ ‚the·ə·rē }

algebraic set [MATH] A set made up of all zeros of some specified set of polynomials in n variables with coefficients in a specified field F, in a specified extension field of F. { ¦al·jə¦brā·ik 'set }

algebraic sum [MATH] **1.** The result of the addition of two or more quantities, with the addition of a negative quantity equivalent to subtraction of the corresponding positive quantity. **2.** For two fuzzy sets A and B, with membership functions m_A and m_B, that fuzzy set whose membership function m_{A+B} satisfies the equation $m_{A+B}(x) = m_A(x) + m_B(x) - [m_A(x) \cdot m_B(x)]$ for every element x. { ¦al·jə¦brā·ik 'səm }

algebraic surface [MATH] A subset S of a complex n-space which consists of the set of complex solutions of a system of polynomial equations in n variables such that S is a complex two-manifold in the neighborhood of most of its points. { ¦al·jə¦brā·ik 'sər·fəs }

algebraic symbol [MATH] A letter that represents a number or a symbol indicating an algebraic operation. { ¦al·jə¦brā·ik 'sim·bəl }

algebraic term [MATH] In an expression, a term that contains only numbers and algebraic symbols. { ¦al·jə¦brā·ik 'tərm }

algebraic topology [MATH] The study of topological properties of figures using the methods of abstract algebra; includes homotopy theory, homology theory, and cohomology theory. { ¦al·jə¦brā·ik tə'päl·ə·jē }

algebra of subsets [MATH] An algebra of subsets of a set S is a family of subsets of S that contains the null set, the complement (relative to S) of each of its members, and the union of any two of its members. { ¦al·jə·brə əv 'səb‚sets }

algebra with identity [MATH] An algebra which has an element, not equal to 0 and denoted by 1, such that, for any element x in the algebra, $x1 = 1x = x$. { ¦al·jə·brə with i'den·ə·tē }

alged malaria See falciparum malaria. { ¦al·jəd mə'ler·ē·ə }

Algenib [ASTRON] A star in the constellation Pegasus. { ‚al'jen·əb }

Algerian onyx See onyx marble. { al'jer·ē·ən 'än·iks }

algesia [PHYSIO] Sensitivity to pain. { al'jēz·ē·ə }

algesimeter [PHYSIO] A device used to determine pain thresholds. { ‚al·jə'sim·əd·ər }

algesireceptor [PHYSIO] A pain-sensitive cutaneous sense organ. { ‚al·jə¦si·rō·ri¦sep·tər }

algicide [MATER] A chemical used to kill algae. { 'al·jə‚sīd }

algin [MATER] A hydrophilic polysaccharide extracted from brown algae, such as giant kelp. [ORG CHEM] See sodium alginate. { 'al·jən }

alginate [BOT] An algal polysaccharide that is a major constituent of the cell walls of brown algae. { 'al·jə‚nāt }

alginic acid [ORG CHEM] $(C_6H_8O_6)_n$ An insoluble colloidal acid obtained from brown marine algae; it is hard when dry and absorbent when moist. Also known as algin. { al'jin·ik 'as·əd }

alginic acid sodium salt See sodium alginate. { al'jin·ik 'as·əd 'sōd·ē·əm 'sólt }

alginite See algite. { 'al·jə‚nīt }

algite [PETR] The petrological unit that constitutes algal material present in considerable amounts in algal or boghead coal. Also known as alginite. { 'al‚jīt }

algodonite [MINERAL] Cu_6As A steel gray to silver white mineral consisting of copper arsenide and occurring as minute hexagonal crystals or in massive and granular form. { al'gäd·ə‚nīt }

Algol [ASTRON] An eclipsing variable star of spectral classification B8 in the constellation Perseus; the star β Persei. Also known as Demon Star. [COMPUT SCI] An algorithmic and procedure-oriented computer language used principally in the programming of scientific problems. { 'al‚gól }

algology [BOT] The study of algae. Also known as phycology. { al'gäl·ə·jē }

Algol symbiotic [ASTRON] A symbiotic star consisting of a red giant, a main-sequence star, and an accretion disk of gas from the red giant that forms around the main-sequence star and is heated by it. { 'al‚gól ‚sim·bē'äd·ik }

Algoman orogeny [GEOL] Orogenic episode affecting Archean rocks of Canada about 2.4 billion years ago. Also known as Kenoran orogeny. { al'gōm·ən ó'räj·ə·nē }

algometer [MED] An instrument for measuring pressure stimuli which produce pain. { al'gä·məd·ər }

Algonkian [GEOL] Geologic time between the Archean and Paleozoic. Also known as Proterozoic. { al'gäŋ·kē·ən }

algophage See cyanophage. { 'al·gə‚fāj }

algophobia [PSYCH] Abnormal fear of pain. { ‚al·gə'fōb·ē·ə }

algorithm [MATH] A set of well-defined rules for the solution of a problem in a finite number of steps. { 'al·gə‚rith·əm }

algorithmic error [COMPUT SCI] An error in computer processing resulting from imprecision in the method used to carry out mathematical computations, usually associated with either rounding or truncation of numbers. { ‚al·gə¦rith·mik 'er·ər }

algorithmic language [COMPUT SCI] A language in which a procedure or scheme of calculations can be expressed accurately. { ‚al·gə¦rith·mik 'laŋ·gwij }

algorithm translation [COMPUT SCI] A step-by-step computerized method of translating one programming language into another programming language. { 'al·gə‚rith·əm tranz'lā·shən }

algor mortis [PATH] Postmortem cooling of the body. { 'al·gər 'mór·təs }

alias [COMPUT SCI] **1.** An alternative entry point in a computer subroutine at which its execution may begin, if so instructed by another routine. **2.** An alternative name for a file or device. [STAT] Either of two effects in a factorial experiment which cannot be differentiated from each other on the basis of the experiment. { 'ā·lē·əs }

aliasing [COMPUT SCI] In computer graphics, the jagged appearance of diagonal lines on printouts and on video monitors. [MATH] Introduction of error into the computed amplitudes of the lower frequencies in a Fourier analysis of a function carried out using discrete time samplings whose interval does not allow the proper analysis of the higher frequencies present in the analyzed function. { 'ā·yəs·iŋ }

alicyclic [ORG CHEM] **1.** Having the properties of both aliphatic and cyclic substances. **2.** Referring to a class of saturated hydrocarbon compounds whose structures contain one ring. Also known as cycloaliphatic; cycloalkane. **3.** Any one of the compounds of the alicyclic class. Also known as cyclane. { ‚al·ə'sī·klik }

alidade [ENG] **1.** An instrument for topographic surveying and mapping by the plane-table method. **2.** Any sighting device employed for angular measurement. { 'al·ə‚dād }

alien substitution [GEN] The replacement of one or more chromosomes by those from a different species. { ‚āl·ē·ən ‚səb·stə'tü·shən }

allesterase [BIOCHEM] Any one of the lipases or nonspecific esterases. { al·ē'es·tə‚rās }

aligning drift [MECH ENG] A rod or bar that is used for aligning parts during assembly. { ə'līn·iŋ ‚drift }

alignment [ARCHEO] An arrangement of a single row or of multiple rows of standing stones at a sites formerly occupied by humans. [CIV ENG] In a survey for a highway, railroad, or similar installation, a ground plan that shows the horizontal

ALIDADE

A surveying alidade, having a telescope with attached graduated vertical circle, mounted on a flat base that can be moved about the table. (*Kern Instruments, Inc.*)