

The background of the book cover is a complex, abstract pattern of overlapping, translucent, geometric shapes in various colors including blue, purple, yellow, and green. The shapes create a sense of depth and movement, resembling a crystalline or optical effect.

**McGraw-Hill**

**DICTIONARY OF  
SCIENTIFIC AND  
TECHNICAL  
TERMS**

**Fifth Edition**

On the cover: Photomicrograph of crystals of vitamin B<sub>1</sub>.  
(Dennis Kunkel, University of Hawaii)

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**McGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS,  
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mixture of osmic, chromic and acetic acids. { 'flem-igz sɔ,lü-shən }

**Fleming tube** [ELECTR] The original diode, consisting of a heated filament and a cold metallic electrode in an evacuated glass envelope; negative current flows from the filament to the cold electrode, but not in the reverse direction. { 'flem-ig,tüb }

**Flemish bond** [CIV ENG] A masonry bond consisting of alternating stretchers and headers in each course, laid with broken joints. { 'flem-ish 'bänd }

**Flemish garden wall bond** [CIV ENG] A masonry bond consisting of headers and stretchers in the ratio of one to three or four in each course, with joints broken to give a variety of patterns. { 'flem-ish 'gärd-ən 'wöl,bänd }

**flesh** [ANAT] The soft parts of the body of a vertebrate, especially the skeletal muscle and associated connective tissue and fat. { 'flesh }

**Flesh-Demag process** [CHEM ENG] A gas-making process in which a cyclic water-gas apparatus is used for feeding and charring the coal charge and for gas generation, with periodic automatic removal of the resultant ash. { 'flesh 'dä'mäk ,prä-s-äs }

**fleshing machine** [ENG] A machine that removes flesh from hides in a tannery. { 'flesh-ig mə,shən }

**fleshy fruit** [BOT] A fruit having a fleshy pericarp that is usually soft and juicy, but sometimes hard and tough. { 'flesh-ē ,früt }

**Fletcher-Munson contour** See equal loudness contour. { 'flech-ər ,mən-sən 'kün,tür }

**Fletcher radial burner** [ENG] A burner with gas jets arranged radially. { 'flech-ər ,räd-ē-əl 'börn-ər }

**Flettner windmill** [MECH ENG] An inefficient windmill with four arms, each consisting of a rotating cylinder actuated by a Savonius rotor. { 'flet-nər 'wind,mil }

**flex** [SCI TECH] To bend. { 'fleks }

**Flexibacter** [MICROBIO] A genus of bacteria in the family Cytophagaceae; cells are unshathed rods or filaments and are motile; microcysts are not known. { 'flek-sə,'bäk-tər }

**Flexibilia** [PALEON] A subclass of extinct stalked or creeping Crinoidea; characteristics include a flexible tegmen with open ambulacral grooves, uniserial arms, a cylindrical stem, and five conspicuous basals and radials. { 'flek-sə,'bil-ē-ə }

**flexibility** [MECH] The quality or state of being able to be flexed or bent repeatedly. { 'flek-sə,'bil-əd-ē }

**flexibilizer** [MATER] An additive that gives an otherwise rigid plastic flexibility. Also known as plasticizer. { 'flek-sə-'bäl,liz-ər }

**flexible circuit** [ELECTR] A printed circuit made on a flexible plastic sheet that is usually die-cut to fit between large components. { 'flek-sə-'bäl 'sär-kət }

**flexible collodion** [MATER] A collodion which has two additives (2% camphor and 3% castor oil) to make a pliable film. { 'flek-sə-'bäl kə'löd-ē-ən }

**flexible coupling** [ELECTROMAG] A coupling designed to allow a limited angular movement between the axes of two waveguides. [MECH ENG] A coupling used to connect two shafts and to accommodate their misalignment. { 'flek-sə-'bäl 'kəpl-ig }

**flexible glue** [MATER] A type of glue used for pliable molds and printers' rollers, for example, a mixture of glue, glycerol, and water. { 'flek-sə-'bäl 'glü }

**flexible gun** [ORD] A gun, especially a machine gun, mounted in an aircraft turret or on a post, tripod, or other mount in such a manner that the gun may be swung in both a vertical and horizontal plane. { 'flek-sə-'bäl 'gən }

**flexible-joint pipe** [ENG] Cast-iron pipe adapted to laying under water and capable of motion through several degrees without leakage. { 'flek-sə-'bäl jöint 'pīp }

**flexible manufacturing system** [CONT SYS] An arrangement of machines, and a connecting transport system under control of a central computer that allows processing of several workpieces simultaneously. { 'flek-sə-'bäl ,man-yə'fak-chər-ig ,sist-əm }

**flexible mold** [ENG] A coating mold made of flexible rubber or other elastomeric materials; used mainly for casting plastics. { 'flek-sə-'bäl 'möld }

**flexible pavement** [CIV ENG] A road or runway made of bituminous material which has little tensile strength and is therefore flexible. { 'flek-sə-'bäl 'pä-v'mənt }

**flexible resistor** [ELEC] A wire-wound resistor having the

appearance of a flexible lead; made by winding the Nichrome resistance wire around a length of asbestos or other heat-resistant cord, then covering the winding with asbestos and braided insulating covering. { 'flek-sə-'bäl ri'zist-ər }

**flexible sandstone** [GEOL] A variety of itacolumite that consists of fine grains and occurs in thin layers. { 'flek-sə-'bäl 'sän,stön }

**flexible shaft** [MECH ENG] 1. A shaft that transmits rotary motion at any angle up to about 90°. 2. A shaft made of flexible material or of segments. 3. A shaft whose bearings are designed to accommodate a small amount of misalignment. { 'flek-sə-'bäl 'shaft }

**flexible ventilation ducting** [MIN ENG] Flexible fabric tubes covered with rubber or polyvinyl chloride, used for auxiliary ventilation. { 'flek-sə-'bäl vent-əl'ä-shən ,dæk-tig }

**flexible waveguide** [ELECTROMAG] A waveguide that can be bent or twisted without appreciably changing its electrical properties. { 'flek-sə-'bäl 'wäv,gid }

**flexion** [BIOL] Act of bending, especially of a joint. { 'flek-shən }

**flexional symbols** [COMPUT SCI] Symbols in which the meaning of each component digit is dependent on those which precede it. { 'flek-shən-əl ,sim-bälz }

**flexion reflex** [PHYSIO] An unconditioned, segmental reflex elicited by noxious stimulation and consisting of contraction of the flexor muscles of all joints on the same side. Also known as the nociceptive reflex. { 'flek-shən ,rē,fleks }

**Flexithrix** [MICROBIO] A genus of bacteria in the family Cytophagaceae; cells are usually sheathed filaments, and unshathed cells are motile; microcysts are not known. { 'flek-sə,'θriks }

**flexographic printing** See flexography. { 'flek-sə,'graf-ik 'print-ig }

**flexography** [GRAPHICS] Relief printing with plates fastened to a cylinder and with a single inking roller supplied with aniline ink from two rollers in the ink fountain. Also known as aniline printing; aniline process; flexographic printing. { 'flek-'sägrə-fē }

**flexometer** [ENG] An instrument for measuring the flexibility of materials. { 'flek-'säm-əd-ər }

**flexor** [PHYSIO] A muscle that bends or flexes a limb or a part. { 'flek-sər }

**flexowriter** [COMPUT SCI] A typewriterlike device to read in manually or to read out information of a computer to which it is connected; it can also be used to punch paper tape. { 'flek-sə,'wrid-ər }

**flexuous** [BIOL] 1. Flexible. 2. Bending in a zigzag manner. 3. Wavy. { 'flek-shə-wəs }

**flexural modulus** [MECH] A measure of the resistance of a beam of specified material and cross section to bending, equal to the product of Young's modulus for the material and the square of the radius of gyration of the beam about its neutral axis. { 'flek-shə-rəl 'mäj-ə-ləs }

**flexural rigidity** [MECH] The ratio of the sideward force applied to one end of a beam to the resulting displacement of this end, when the other end is clamped. { 'flek-shə-rəl ri'jid-əd-ē }

**flexural slip** [GEOL] The slipping of sedimentary strata along bedding planes during folding, producing disharmonic folding and, when extreme, décollement. Also known as bedding-plane slip. { 'flek-shə-rəl 'slip }

**flexural strength** [MECH] Strength of a material in bending, that is, resistance to fracture. { 'flek-shə-rəl 'strenkth }

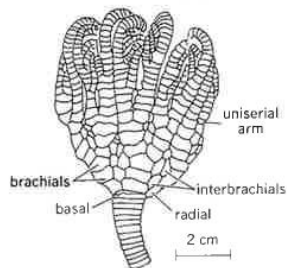
**flexure** [EMBRYO] A sharp bend of the anterior part of the primary axis of the vertebrate embryo. [GEOL] 1. A broad, domed structure. 2. A fold. [MECH] 1. The deformation of any beam subjected to a load. 2. Any deformation of an elastic body in which the points originally lying on any straight line are displaced to form a plane curve. [VERT ZOO] The last joint of a bird's wing. { 'flek-shər }

**flexure theory** [MECH] Theory of the deformation of a prismatic beam having a length at least 10 times its depth and consisting of a material obeying Hooke's law, in response to stresses within the elastic limit. { 'flek-shər ,thē-ər-ē }

**flicker** [OPTICS] A visual sensation produced by periodic fluctuations in light at rates ranging from a few cycles per second to a few tens of cycles per second. { 'flik-ər }

**flicker control** [AERO ENG] Control of an aircraft, rocket, or such in which the control surfaces are deflected to their maxi-

## FLEXIBILIA



Talanteroocrinus species.