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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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source of direct-current power; the pass element is driven by the amplified error signal to increase its resistance when the output needs to be lowered or to decrease its resistance when the output must be raised. { 'pas ,el-ə'mənt }

passenger [MOL BIO] A deoxyribonucleic acid segment that will be spliced into a plasmid or bacteriophage for subsequent cloning. { 'pas-ən-jər }

passenger car [ENG] 1. A railroad car in which passengers are carried. 2. An automobile for carrying as many as nine passengers. { 'pas-ən-jər ,kär }

passenger ship [NAV ARCH] A ship used primarily to carry passengers. { 'pas-ən-jər ,ship }

passeres [VERT ZOO] The equivalent name for Oscines. { 'pas-ə ,rēz }

passeriformes [VERT ZOO] A large order of perching birds comprising two major divisions: Suboscines and Oscines. { 'pas-ə-rə 'fər ,mēz }

passifloraceae [BOT] A family of dicotyledonous, often climbing plants in the order Violales; flowers are polypetalous and hypogynous with a corona, and seeds are arillate with an oily endosperm. { 'pas-ə-flə-rās-ē ,ē }

passiflorin See harmalin. { 'pas-ə ,flōr-ən }

passing point [MIN ENG] The point at which two vehicles, such as coal cars or mine elevators, pass each other while going in opposite directions. { 'pas-ɪŋ ,pɔɪnt }

passing track [ENG] A sidetrack with switches at both ends. { 'pas-ɪŋ ,trak }

passivation [ELECTR] Growth of an oxide layer on the surface of a semiconductor to provide electrical stability by isolating the transistor surface from electrical and chemical conditions in the environment; this reduces reverse-current leakage, increases breakdown voltage, and raises power dissipation rating. [MET] To render passive; to reduce the reactivity of a chemically active metal surface by electrochemical polarization or by immersion in a passivating solution. { 'pas-ə-vā-shən }

passivation potential [PHYS CHEM] The potential corresponding to the critical anodic current density of an electrode which behaves in an active-passive manner. { 'pas-ə-vā-shən ,pə-ten-shəl }

passive accommodation [CONT SYS] The alteration in the positioning or motion of the end point of a robot manipulator that results from bending or deforming of the manipulator components in response to forces exerted on the robot. { 'pas-ɪv ,akom-ə-dā-shən }

passive-active cell [MET] An electrochemical corrosion cell established between passive and active areas on a metal surface. { 'pas-ɪv ,ak-tiv ,sel }

passive-aggressive personality [PSYCH] A personality disorder characterized by the passive expression of hostility and aggressiveness, as by stubbornness, pouting, or inefficiency. { 'pas-ɪv ə'gres-ɪv ,pərs-ən'al-əd-ē }

passive anaphylaxis [IMMUNOL] Anaphylaxis elicited by temporary sensitization with antibodies followed by injection of the corresponding sensitizing antigen. { 'pas-ɪv ,an-ə-fə-lak-səs }

passive AND gate [ELECTR] See AND gate. [ENG] A fluidic device which achieves an output signal, by stream interaction, only when both of two control signals appear simultaneously. { 'pas-ɪv 'and ,gæt }

passive antenna [ELECTROMAG] An antenna which influences the directivity of an antenna system but is not directly connected to a transmitter or receiver. { 'pas-ɪv an'ten-ə }

passive antiroll system [NAV ARCH] A system of antiroll tanks connected by a channel that is sized so that the flow of the liquid is out of phase with the roll of the ship. { 'pas-ɪv ,an-ti-rəl ,sis-təm }

passive armor [ORD] A protective device against shaped charge ammunition; designed to absorb the energy of a shaped charge. { 'pas-ɪv 'ār-mər }

passive communications satellite [AERO ENG] A satellite that reflects communications signals between stations, without providing amplification; an example is the Echo satellite. Also known as passive satellite. { 'pas-ɪv kə ,myū-nə 'kā-shən ,sət-ɪ-līt }

passive component See passive element. { 'pas-ɪv kəm'pə-nənt }

passive congestion [MED] An increased content of blood in an organ or other body part due to impaired return of venous blood. { 'pas-ɪv kən'jes-chən }

passive corner reflector [ELECTROMAG] A corner reflector that is energized by a distant transmitting antenna; used chiefly to improve the reflection of radar signals from objects that would not otherwise be good radar targets. { 'pas-ɪv 'kɔrn-ər ,rɪ-flek-tər }

passive cutaneous anaphylaxis [IMMUNOL] The vascular reaction at the site of intradermally injected antibody when, 3 hours later, the specific antigen, usually mixed with Evans blue dye, is injected intravenously. { 'pas-ɪv kyū'tā-nē-əs ,an-ə-fə-lak-səs }

passive-dependent personality [PSYCH] A character disorder marked by a behavioral pattern characterized by a lack of self-confidence, indecisiveness, and a tendency to cling to and seek support from others. { 'pas-ɪv di'pen-dənt ,pərs-ən'al-əd-ē }

passive detection [ORD] The detection of a target or other object by means that do not reveal the position of the detecting instrument. { 'pas-ɪv di'tek-shən }

passive device [COMPUT SCI] A unit of a computer which cannot itself initiate a request for communication with another device, but which honors such a request from another device. { 'pas-ɪv di'vīs }

passive double reflector [ELECTROMAG] A combination of two passive reflectors positioned to bend a microwave beam over the top of a mountain or ridge, generally without appreciably changing the general direction of the beam. { 'pas-ɪv 'dɒb-əl rɪ'flek-tər }

passive earth pressure [CIV ENG] The maximum value of lateral earth pressure exerted by soil on a structure, occurring when the soil is compressed sufficiently to cause its internal shearing resistance along a potential failure surface to be completely mobilized. { 'pas-ɪv 'ɔrθ ,presh-ər }

passive electronic countermeasures [ELECTR] Electronic countermeasures that do not radiate energy, including reconnaissance or surveillance equipment that detects and analyzes electromagnetic radiation from radar and communications transmitters, and devices such as chaff which return spurious echoes to enemy radar. { 'pas-ɪv i ,lek'trən-ik 'kaunt-ər ,mez-ər-z }

passive element [ELEC] An element of an electric circuit that is not a source of energy, such as a resistor, inductor, or capacitor. Also known as passive component. [ELECTROMAG] See parasitic element. { 'pas-ɪv 'el-ə-mənt }

passive filter [ELEC] An electric filter composed of passive elements, such as resistors, inductors, or capacitors, without any active elements, such as vacuum tubes or transistors. { 'pas-ɪv 'fɪl-tər }

passive fold [GEOL] A fold in which the mechanism of folding, either flow or slip, crosses the boundaries of the strata at random. { 'pas-ɪv 'fɔld }

passive front See inactive front. { 'pas-ɪv 'frənt }

passive glacier [HYD] A glacier with sluggish movement, generally occurring in a continental environment at a high latitude, where both accumulation and ablation are minimal. { 'pas-ɪv 'glā-shər }

passive guidance [NAV] Guidance of a vehicle by preset or inertial devices, without reliance on external signals or observations. { 'pas-ɪv 'gid-əns }

passive homing [NAV] The homing of an aircraft or spacecraft wherein the craft directs itself toward its destination by receiving radio emission from a base station without the necessity of initiating the transmission by sending an interrogating signal from the craft. { 'pas-ɪv 'hɔm-ɪŋ }

passive immunity [IMMUNOL] 1. Immunity acquired by injection of antibodies in another individual or in an animal. 2. Immunity acquired by the fetus by the transfer of maternal antibodies through the placenta. { 'pas-ɪv i'myūn-əd-ē }

passive jamming [ELECTR] Use of confusion reflectors to return spurious and confusing signals to enemy radars. Also known as mechanical jamming. { 'pas-ɪv 'jam-ɪŋ }

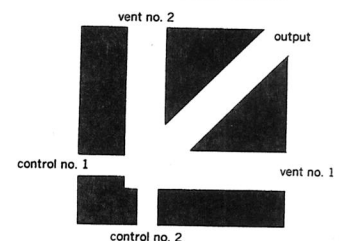
passive junction [ELECTROMAG] A waveguide junction that does not have a source of energy. { 'pas-ɪv 'jʌŋk-shən }

passive margin [GEOL] A continental margin formed by rifting during continental breakup. { 'pas-ɪv 'mār-jən }

passive metal [MET] A metal on which a surface film forms by natural process or by immersion in a passivating solution, making the metal resistant to corrosion. { 'pas-ɪv 'med-əl }

passive method [CIV ENG] A construction method in permafrost areas in which the frozen ground near the structure is not disturbed or altered, and the foundations are provided with

PASSIVE AND GATE



Passive AND gate, a type of fluidic element. When only one control signal appears it attaches to opposite wall and vents, producing no output. Output is achieved when both controls appear simultaneously.