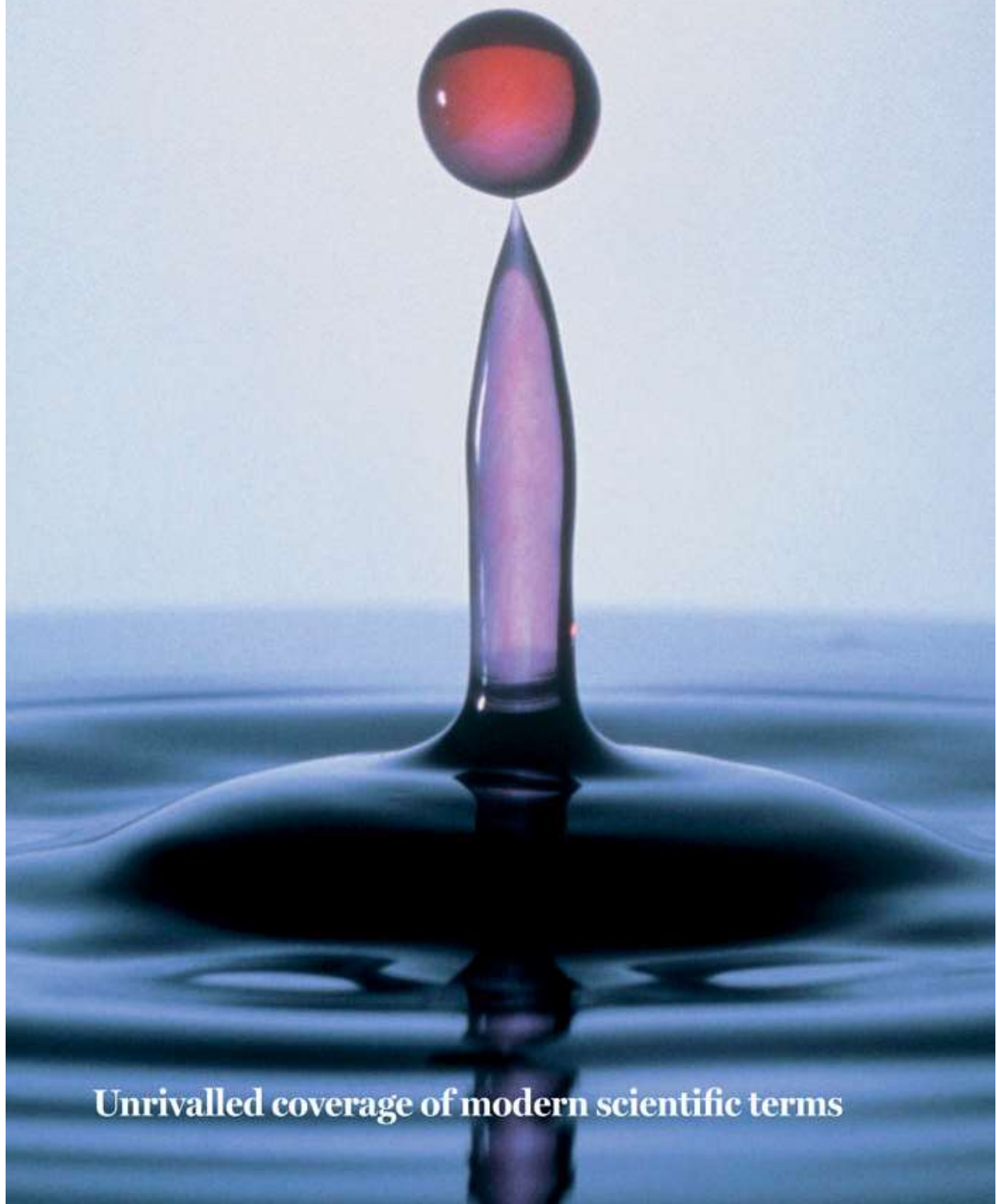


Chambers Dictionary of Science and Technology



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Chambers Dictionary of Science and Technology

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LAND MOBILE NETWORK containing a mobile's HOME LOCATION REGISTER.

homer (*ICT*) Any arrangement that provides signals or fields which can be used to guide a vehicle to a specified destination, eg a homing aid for aircraft, a leader cable for ships or a guidance system for missiles.

home range (*BioSci*) A definite area to which individuals, pairs or family groups of many types of animals restrict their activities.

home shopping (*ICT*) Buying products and services by means of telecommunication, eg over the Internet or cable TV. See panel on INTERNET.

homespun (*Textiles*) A coarse tweed hand-woven from hand-spun wool.

homing (*ICT*) The operation of a selector in returning to a predetermined normal position following the release of the connection.

homing aid (*Aero*) Any system designed to guide an aircraft to an airfield or aircraft carrier.

homing behaviour (*Psych*) Navigational behaviour in a number of species, ranging from returning home after a daily foraging or other excursion, to the more complex navigational task involved in long migrations.

hominin (*BioSci*) Current new name for humans and their ancestors (*Homo sapiens*, *H. ergaster*, *H. rudolfensis*, the Australopithecines, *Australopithecus africanus*, *A. boisei*, etc., and other ancient forms like *Paranthropus* and *Ardipithecus*). This nomenclature recognizes the evolutionary divergence from chimps and gorillas that, together with hominids, are in the subfamily Homininae (within the Hominoid Family).

hominoid (*BioSci*) Primate Family that is now generally subdivided into two subfamilies: Ponginae (orang-utans) and Homininae (humans and their ancestors, and chimps and gorillas). See HOMININ.

homo-, homeo-, homoeo-, homoio- (*Genrl*) Prefixes from Gk *homos*, *homoios*, same.

homoblastic (*BioSci*) (1) Animals showing direct embryonic development from similar cells and without intervening larval forms. (2) Term describing a species in which the first-formed leaves in a seedling or shoot are very like those formed later. Cf HETEROBLASTIC.

homocentric (*Phys*) A term applied when rays are either parallel or pass through one focus.

homocercal (*BioSci*) Said of a type of tail fin, found in all the adults of the higher fish, in which the vertebral column bends abruptly upwards and enters the epichordal lobe, which is equal in size to the hypochordal lobe.

homochlamydeous (*BioSci*) Having a perianth consisting of members all of the same kind, not distinguishable into sepals and petals.

homocyclic (*Chem*) Containing a ring composed entirely of atoms of the same kind.

homocysteine (*BioSci*) An oxidized form of cysteine that occurs as a by-product of the metabolism of protein, thought to be an indicator of heart disease when present in high levels.

homocystinuria (*Med*) A metabolic defect resulting in the excretion of homocystine (the oxidized form of cysteine, an essential amino acid) in the urine.

homodesmic structure (*Crystal*) Crystal form with only one type of bond (either ionic or covalent).

homodont (*BioSci*) Said of an animal whose teeth all have the same characteristics.

homodyne reception (*ICT*) That using an oscillating valve adjusted to, or locked with, an incoming carrier, to enhance its magnitude and improve demodulation. Also *demodulation of an exalted carrier*.

homoeomerism (*BioSci*) In metameric animals, the condition of having all the somites alike. Adj *homoeomeric*. Cf HETEROMERISM.

homoeopathy (*Med*) See HOMEOPATHY.

homogametic (*BioSci*) Having all the gametes alike.

homogametic sex (*BioSci*) The sex that is *homozygous* for the *sex-determining chromosomes*. Cf HETEROGAMETIC SEX.

homogamy (*BioSci*) (1) Inbreeding, usually due to isolation. (2) The simultaneous maturation of the anthers and stigmas in a flower. Cf DICHOGAMY, PROTANDRY, PROTOGYNY.

homogeneous (*Chem*) Said of a system consisting of only one phase, ie a system in which the chemical composition and physical state of any physically small portion are the same as those of any other portion.

homogeneous co-ordinates (*MathSci*) A system of co-ordinates in which any multiple of the co-ordinates of a point or line represents the same point or line, eg the line (*a,b,c*) is the same as the line (*ka,kb,kc*).

homogeneous function (*MathSci*) An algebraic function such that the sum of the indices occurring in each term is constant, eg $x^3 + 2x^2y + y^3$.

homogeneous ionization chamber (*NucEng*) One in which both walls and gas have similar atomic composition, and hence similar energy absorption per unit mass.

homogeneous light (*Phys*) See MONOCHROMATIC LIGHT.

homogeneous radiation (*Phys*) Radiation of constant wavelength (monochromatic), or constant particle energy.

homogeneous reactor (*NucEng*) One in which the fuel and moderator are finely divided and mixed (or the fuel may be dissolved in a liquid moderator) so as to produce an effectively homogeneous core material. See SLURRY REACTOR.

homogenesis (*BioSci*) The type of reproduction in which the offspring resemble the parents.

homogenisation (*FoodSci*) Reducing fat particles in an emulsion (eg milk, ice cream) to a common size to improve stability and texture.

homogenization (*Glass*) See panel on GLASSES AND GLASS-MAKING.

homogenizer (*Phys*) A device in which coarse and polydisperse emulsions are transformed into nearly monodisperse systems. The liquid is subjected to an energetic shear.

homogeny (*BioSci*) Individuals or parts thereof that are HOMOLOGOUS and substantially similar in form and function. Adj *homogenous*.

homograft (*BioSci*) Graft of tissue from one individual to another of the same species. Also *allograft*.

homoiohydric (*BioSci*) Plants able to regulate water loss and to remain hydrated for some time (hours, days or years) when the external water supply is restricted, eg most terrestrial vascular plants, few of which can survive desiccation. Cf POIKILOHYDRIC.

homoiomeroous (*BioSci*) Descriptive of a lichen thallus that has an even distribution of algal cells through its thickness. Cf HETEROMEROUS.

homoioplastic (*BioSci*) In experimental zoology, said of a graft that is transplanted to a site identical with its point of origin, eg a skin graft to a skin site. Also *homoplastic*.

homoiosmotic (*BioSci*) Of an aquatic animal, maintaining a relatively constant internal osmotic pressure. Cf POIKILOSMOTIC.

homoiothermal (*BioSci*) See WARM-BLOODED.

homokaryon (*BioSci*) SOMATIC CELL HYBRID containing separate nuclei from the same species.

homologous (*BioSci*) Of the same essential nature and of common descent although the functions of homologous organ may differ; eg pentadactyl limbs are homologous but may be used in very different modes of locomotion.

homologous alternation of generations (*BioSci*) See HOMOLOGOUS THEORY OF ALTERNATION, ISOMORPHIC ALTERNATION OF GENERATIONS. Cf ANTITHETIC THEORY OF ALTERNATION.

homologous chromosomes (*BioSci*) Chromosomes that pair with each other during synapsis at *meiosis*, so that one member of each pair is carried by every gamete.

homologous organs (*BioSci*) Organs that are equivalent morphologically and of common evolutionary origin but that may be similar or dissimilar in appearance or function.