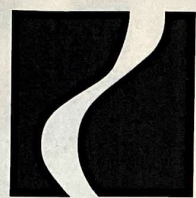


Academic Press
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Technology





Academic Press Dictionary of Science and Technology

Edited by
Christopher Morris



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plasmid rescue *Genetics*. the beneficial transformation of a bacterium by its incorporation of plasmid genes into the genome.

plasmin *Biochemistry*. an enzyme, produced by plasminogen, that removes fibrin clots from the blood stream.

plasminogen *Biochemistry*. a plasma protein that changes into plasmin when hydrolyzed by an Arg-Val bond. Also, PROFIBRINOLYSIN, PROPLASMIN.

plasminogen activator see UROKINASE.

plasmodesma *Cell Biology*. a narrow cytoplasmic channel connecting adjacent plant cells through the intervening cell wall.

plasmodial *Microbiology*. of or relating to the genus *Plasmodium*.

plasmodiidae *Invertebrate Zoology*. a family of protozoans in the order Haemosporina, parasites in the blood of vertebrates, transmitted by mosquitos; includes the malaria parasite.

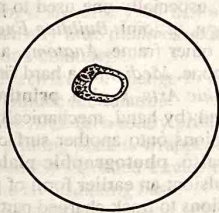
Plasmodiophoraceae *Mycology*. the single family of fungi belonging to the order Plasmodiophorales, which is composed of species that are pathogenic to plants, causing galls.

Plasmodiophorales *Mycology*. the single order of fungi belonging to the class Plasmodiophoromycetes, which parasitize algae, aquatic plants, and aquatic fungi; they are found in aquatic or semiaquatic environments.

Plasmodiophorida *Invertebrate Zoology*. an order of slime molds in the protozoan subclass Mycetozoa, endoparasites of plant roots; sometimes classified as fungi.

Plasmodiophoromycetes *Mycology*. a class of fungi that is currently listed within the division Myxomycota, but whose taxonomic association is not yet clear; they cause diseases in certain aquatic fungi, algae, and plants.

Plasmodium *Microbiology*. the malarial parasites, a genus of coccidian protozoa belonging to the suborder Haemosporina of the order Eucoccidiiida and parasitic in the erythrocytes of mammals. Several species, including *P. falciparum* and *P. malaria*, cause malaria in humans.



Plasmodium

plasmodium *Microbiology*. 1. a motile mass of protoplasm varying in size and form and containing numerous nuclei. 2. a parasite of the genus *Plasmodium*.

Plasmodroma *Invertebrate Zoology*. in some classification systems, a subphylum of the phylum Protozoa, including Mastigophora, Sarcodina, and Sporozoa.

plasmogamy *Invertebrate Zoology*. the joining of individual cells without fusion of nuclei in the formation of a plasmodium, especially in slime molds.

plasmoid *Physics*. an isolated aggregate of charged and neutral particles that is capable of maintaining its identity for periods much longer than the time between collisions of the constituent particles.

plasmolysis *Physiology*. 1. broadly, the dissolution of cell parts. 2. specifically, the contraction or shrinking of a plant cell membrane away from the cell wall after osmotic loss of water.

plasmoma see PLASMACYTOMA.

plasmome *Genetics*. the sum of extrachromosomal hereditary factors in a given cell, including the mitochondria, the protoplasts, and any plasmids or other genetic factors. *Solid-State Physics*. a quantum of excitation of a longitudinal mode-wave character in the electron gas of a metal.

Plasmopara *Mycology*. a genus of fungi belonging to the order Peronosporales and causing downy mildew in such plants as grapes.

plasmotomy *Invertebrate Zoology*. the division of a multinucleate plasmodium into separate individuals without fission of the nuclei, especially in slime molds.

plast- or **plasto-** a prefix meaning "repair."

plaster *Materials*. 1. a pasty mixture, generally of lime or gypsum with water and sand, that is used as a coating on walls and ceilings. 2. see PLASTER OF PARIS. 3. a pasty mixture, usually containing herbs or other medicinal substances, that is spread on the body, either directly or after being saturated into a base material such as cloth. 4. to apply any of these materials.

plasterboard *Materials*. a material consisting of paper-covered sheets of gypsum and felt; used for insulating or covering walls, and as a lath.

plasterboard nail *Mechanical Devices*. a nail with a barbed or ringed shank and a larger head; used for securing plasterboard to framing.

plaster coat *Building Engineering*. a thin layer of plaster that covers walls throughout buildings or other structures.

plaster conglomerate *Geology*. a conglomerate made up entirely of boulders derived from a partially uncovered monadnock, forming a wedgelike mass on the side of the monadnock.

plaster ground *Building Engineering*. a wood piece fabricated to limit the thickness of a plaster coat applied to a wall; used primarily around windows and doors and above the floor strip on a wall.

plaster of Paris *Inorganic Chemistry*. $(\text{CaSO}_4)_2 \cdot \text{H}_2\text{O}$, a white noncombustible powder; slightly soluble in water and soluble in acid; loses 1.5 water at 128°C and becomes anhydrous at 163°C; used in tile, plaster, paints, and paper, and in metallurgy. *Materials*. a commercial form of this powder, composed primarily of the hemihydrate of calcium sulfate, made by calcining gypsum until it is partially dehydrated; the powder is mixed with water to form a paste that sets to form casts, art objects, or building materials. (Originally prepared from the gypsum of Paris, France.) Also, DRIED GYPSUM, CALCINED GYPSUM.

plaster shooting *Engineering*. a surface blasting process in which a charge of gelignite, primed with a safety fuse and detonator, is placed in close contact with a rock or boulder and covered completely with stiff, damp clay.

plaster slab *Building Engineering*. a perforated block made from plaster of Paris; used in partition construction.

plaster slap *Building Engineering*. a mixture of plaster of Paris and coarse sand that is used for coarse plastering, as between studs in a wall.

plastic *Materials Science*. 1. any of various synthetic or organic materials that can be molded or shaped, generally when heated, and then hardened into a desired form; for example, polymers, resins, and cellulose derivatives. Plastics are used in virtually all areas of industrial technology; among the major applications are packages and containers, construction materials, paints, adhesives, pipelines, automobile parts, electronic components, textiles, medical and scientific devices, and various consumer items such as toys and houseware. 2. relating to or composed of such a material. Thus, **plastic cement**, **plastic clay**, **plastic film**, **plastic paint**, **plastic wood**, and so on. *Chemistry*. describing any substance or material that is capable of being shaped or molded, with or without the application of heat. *Mechanics*. able to be deformed in any direction and to retain this deformed shape without rupture. *Surgery*. serving to shape tissues or restore a lost part, as in plastic surgery.

plastic anisotropy *Materials Science*. variations in directions in the resistance of a material to plastic deformation.

plasticate *Engineering*. to make a material malleable with a heating or kneading device. Also, PLASTIFY.

plastic bonding *Engineering*. any process used to join plastics; usually involving heating, adhesives, pressure, solvents, or radio frequency.

plastic bronze *Metallurgy*. a copper-base alloy containing 30% lead; used for bearings.

plastic clay *Materials*. a brick earth composed of silica and alumina combined with a small percentage of lime, magnesia, soda, or other salts. Also, FOUL CLAY.

plastic clot *Hematology*. a clot formed from the intima of an artery at the point of ligation, permanently obstructing the artery.

plastic deformation *Materials Science*. the permanent deformation arising from the relative displacement of atoms or molecules. *Geology*. a metamorphic process involving the recrystallization of previously existing minerals under pressure and stress into new minerals. *Mechanics*. see PERMANENT SET.

plastic equilibrium *Geology*. a condition of stress within a soil mass or a portion of a soil mass in which extensive deformation results in the mobilization of its ultimate resistance.

plastic-film capacitor *Electricity*. a capacitor made by rolling alternate layers of aluminum foil and plastic dielectric into a compact tube much like a paper capacitor; the foiled strips are then staggered to project alternately from the row ends, and leads are soldered to the foil. Also, FILM CAPACITOR.

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