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Dictionary of Chemistry

Sybil P. Parker
Editor in Chief

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The McGraw-Hill Dictionary of Chemistry disciplines that constitute chemistry terms, it serves as a major component essential to understanding chemistry many unique disciplines which are in dictionaries and glossaries. Engineers, scientists, and general readers of scientific literature will find this single comprehensive reference.

Terms and definitions in the Dictionary of Chemistry, inorganic chemistry, and spectroscopy. Each definition is primarily used. When the same definition is used in chemistry, it is identified by the general term.

The terms selected for this Dictionary of Chemistry. All definitions were drawn from the McGraw-Hill Dictionary of Chemical and Technical Terms (5th ed., 1994). All terms also include synonyms, acronyms, and abbreviations. Such synonyms, acronyms, and abbreviations are listed in sequence as cross references to the corresponding terms.

The McGraw-Hill Dictionary of Chemistry will facilitate the communication of chemical information to the needs of readers with either professional or general interests.

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antimony yellow

- water; melting point 546°C; used as a pigment, and in matches and pyrotechnics. { 'an-tə-mō-nē /tɪ'sə'lɪd }
- antimony yellow** [INORGANIC CHEMISTRY] See lead antimonite. { 'an-tə-mō-nē 'ye-lō }
- antioxidant** [CHEMISTRY] An inhibitor, such as ascorbic acid, effective in preventing oxidation by molecular oxygen. { 'an-tē'āk-sə-dənt }
- anti-Stokes lines** [SPECTROSCOPY] Lines of radiated frequencies which are higher than the frequency of the exciting incident light. { 'an-tē'stōks-lɪnz }
- 4-AP** [ORGANIC CHEMISTRY] See 4-aminopyridine.
- apo-** [CHEMISTRY] A prefix that denotes formation from or relationship to another chemical compound. { 'ap-ō or 'ap-ə }
- apoptropine** [ORGANIC CHEMISTRY] C₁₇H₂₁NO₂ An alkaloid melting at 61°C with decomposition of the compound; highly toxic; obtained by dehydrating atropine. { 'ap-ō'a-trə-pēn }
- apodization** [SPECTROSCOPY] A mathematical transformation carried out on data received from an interferometer to alter the instrument's response function before the Fourier transformation is calculated to obtain the spectrum. { 'a-pə-də'zā-shən }
- apparent concentration** [ANALYTICAL CHEMISTRY] The value of analyte concentration obtained when the interference is not considered. { ə'pər-ənt-kən-sən'trā-shən }
- aprotic solvent** [CHEMISTRY] A solvent that does not yield or accept a proton. { ə'prɔt-ɪk 'səl-vənt }
- aqua** [CHEMISTRY] Latin for water. { 'āk-wə }
- aqua ammonia** [INORGANIC CHEMISTRY] See ammonium hydroxide. { 'āk-wə ə'mɔn-ē-ə }
- aqua fortis** [INORGANIC CHEMISTRY] See nitric acid. { 'āk-wə'fɔrd-əs }
- aquametry** [ANALYTICAL CHEMISTRY] Analytical processes to measure the water present in materials; methods include Karl Fischer titration, reactions with acid chlorides and anhydrides, oven drying, distillation, and chromatography. { ə'kwām-ə-trē }
- aqua regia** [INORGANIC CHEMISTRY] A fuming, highly corrosive, volatile liquid with a suffocating odor made by mixing 1 part concentrated nitric acid and 3 parts concentrated hydrochloric acid; reacts with all metals, including silver and gold. { 'āk-wə'rē-jə }
- aquasol** [CHEMISTRY] See hydrosol. { 'āk-wə'sól }
- aquation** [CHEMISTRY] Formation of a complex that contains water by replacement of other coordinated groups in the complex. { ə'kwā-shən }
- aqueous electron** [PHYSICAL CHEMISTRY] See hydrated electron. { 'āk-wē-əs 'lɛk-trən }
- aqueous solution** [CHEMISTRY] A solution with the solvent as water. { 'āk-wē-əs sə'lú-shən }
- aquo ion** [CHEMISTRY] Any ion containing one or more water molecules. { 'a-kwō'vɪ-ən }
- Ar** [CHEMISTRY] See argon.
- arabine** [ORGANIC CHEMISTRY] See harman. { 'ar-ə-bēn }
- arabite** [ORGANIC CHEMISTRY] See arabitol. { 'ar-ə-bīt }
- arabitol** [ORGANIC CHEMISTRY] CH₂OH(CHOH)₃CH₂OH An alcohol that is derived from arabinose; a sweet, colorless crystalline material present in D and L forms; soluble in water; melts at 103°C. Also known as arabite. { ə'rəb-ə'tól }
- arachic acid** [ORGANIC CHEMISTRY] See eicosanoic acid. { ə'rak-ɪk 'as-əd }
- arachidic acid** [ORGANIC CHEMISTRY] See eicosanoic acid. { 'a-rə'kɪd-ɪk 'as-əd }
- aryl** [ORGANIC CHEMISTRY] A radical in which an aryl group is substituted for an alkyl H atom. Derived from arylated alkyl. { 'a-ral-kɪl }
- arbutin** [ORGANIC CHEMISTRY] C₁₂H₁₆O₇ A bitter glycoside from the bearberry and certain other plants; sometimes used as a urinary antiseptic. { ər'byūt-ən }
- arc spectrum** [SPECTROSCOPY] The spectrum of a neutral atom, as opposed to that of a molecule or an ion; it is usually produced by vaporizing the substance in an electric arc; designated by the roman numeral I following the symbol for the element, for example, HeI. { 'ār-k 'spek-trəm }
- arecoline** [ORGANIC CHEMISTRY] C₈H₁₃O₂N An alkaloid from the betel nut; an oily, colorless liquid with a boiling point of combustible; used as a medicine. { ə're
- arene** [ORGANIC CHEMISTRY] See aromatic
- argentic** [CHEMISTRY] Relating to or containing
- argentite** [INORGANIC CHEMISTRY] See
- argentocyanides** [INORGANIC CHEMISTRY] Cyanides of silver ores and in electroplating of soluble metal cyanides. Also known as
- argentometry** [ANALYTICAL CHEMISTRY] A method of determination of insoluble silver salts; the salt: 'tām-ə-trē }
- argentum** [CHEMISTRY] Latin for silver. { 'ar-gən }
- argon** [CHEMISTRY] A chemical element, 39.998. { 'ar-gən }
- aristolochic acid** [ORGANIC CHEMISTRY] C₁₇H₁₄O₆ A group of leaflets that decompose at 281-286°C; is acetic acid, and aniline; used as an ar { ə'lɪs-tə'lək-ɪk 'as-əd }
- aristolochine** [ORGANIC CHEMISTRY] See aristolochic acid.
- Armstrong's acid** [ORGANIC CHEMISTRY] A group of leaflets that decompose at 281-286°C; is acetic acid, and aniline; used as an ar { 'ərm-strɔŋz 'as-əd }
- Arndt-Eistert synthesis** [ORGANIC CHEMISTRY] A method of synthesis of an aliphatic acid by one carbon by reaction of an aldehyde with a nitrile. { 'ændt-əist-ərt 'sɪn-thə-sɪs }
- aromatic** [ORGANIC CHEMISTRY] 1. Pertaining to a benzene ring. 2. Describing the properties resembling those of benzene
- aromatic alcohol** [ORGANIC CHEMISTRY] A group in a side chain to a benzene ring { 'ar-ə-mat-ɪk 'al-kə-hɒl }
- aromatic aldehyde** [ORGANIC CHEMISTRY] A radical, such as benzaldehyde. { 'ar-ə-mat-ɪk 'al-də-haɪd-riɪd }
- aromatic amine** [ORGANIC CHEMISTRY] A radical, such as acetophenone. { 'ar-ə-mat-ɪk 'am-ɪn }
- aromatic nucleus** [ORGANIC CHEMISTRY] A group of leaflets that decompose at 281-286°C; is acetic acid, and aniline; used as an ar { 'ar-ə-mat-ɪk 'nʌ-kli-əs }
- aroyl** [ORGANIC CHEMISTRY] The radical (C₆H₅) group. { 'ar-ə-wəl }
- aroylation** [ORGANIC CHEMISTRY] A reaction of a molecule by substitution. { 'ar-ə-wəl-ə-ti-ən }
- ARPES** [SPECTROSCOPY] See angle-resolved photoemission spectroscopy.
- Arrhenius equation** [PHYSICAL CHEMISTRY] A rate constant k equals the frequency factor A e^{-E_a/RT} is the heat of activation, R the gas constant. { ə'r-ə-ni-əs 'i-kwā-zən }
- arsenate** [INORGANIC CHEMISTRY] 1. AsO₄³⁻ acid, H₃AsO₄ · 1/2H₂O. 2. A salt or ester of arsenic acid.
- arsenic** [CHEMISTRY] A chemical element, atomic weight 74.9216. { 'ərs-ən-ɪk }
- arsenic acid** [INORGANIC CHEMISTRY] H₃AsO₄