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April

APRIL SCIENTIST

1 Zsigmondy, Richard Adolf (1 April 1865–23 September 1929), Austrian-German scientist. He dedicated his life to scientific research in the field of colloid chemistry, which is derived from the Greek word meaning kolla (glue), and is a pioneer of modern colloid chemistry. He proved that colloidal solutions are heterogeneous and received the Nobel Prize in chemistry in 1925.

Cohen-Tannoudji, Claude (1 April 1933), French scientist. He researched the laser cooling of atoms, a method to cool atomic gases to temperatures on the order of mK (Doppler cooling) or μ Kelvin (Sisyphus cooling). He is co-winner with S. Chu and W.D. Phillips of the Nobel Prize in physics in 1997 for their research on the cooling and trapping of atoms using lasers.

2 Bigelow, Erastus Brigham (2 April 1814–6 December 1879), founder of the MIT (Massachusetts Institute of Technology).

Balaban, Alexandru T. (2 April 1931), Romanian scientist. He is known for his research on chemical etchings, chemical graph theory, theoretical chemistry, green chemistry on ionic liquids and isotopic marking.

2 April 1513 – The peninsula currently known as Florida was discovered.

3 Grissom, Virgil Ivan (3 April 1926–27 January 1967), American astronaut. He is known as the second astronaut in space. In 1958, he was part of the first team in the Mercury US space program, which had the objective of placing a human in orbit and analyzing the impact on the human body.

Cornish-Bowden, Athelstan John (3 April 1943), French scientist. He is known for his work in the field of biocatalysis and kinetics. He is interested in the properties of multi-enzyme systems, metabolic control analysis and the theory of metabolic regulation. He studied the fundamentals of enzyme kinetics.

4 Siemens, Carl Wilhelm (4 April 1823–19 November 1883), English engineer of German origin. He discovered that the hot gaseous products of combustion were wasted and could be recovered to heat fuel. He is credited with pioneering work in the development of the electric locomotive, the installation of submarine cables, and having improved the electric generator.

Gramme, Zénobe Théophile (4 April 1826–20 January 1901), Belgian inventor. He is known for the construction of a dynamo in 1867 that improves alternating current and, in 1869, the development of a dynamo that produces direct current. He made the first electricity-generating device, which proved useful for industry.

4 April 1975 – Microsoft was founded.

5 Bjerrum, Jannick (5 April 1909–22 August 1992), Danish scientist. He studied metal ions in ammonia complexes as a function of ammonia vapor pressure. We owe the introduction of the glass electrode in analytical, inorganic, and biochemistry to him. He also discovered that complexation reactions can be slowed (they were considered instantaneous) using methanol at 200 K.

Giaever, Ivar (5 April 1929), Norwegian scientist. He is known for his research on the physics of superconductors and semiconductors. The Nobel Prize in physics 1973 was awarded to him and L. Esaki for their discoveries regarding tunneling in superconductors and semiconductors.

6 Watson, James (6 April 1928), American scientist. He is known as a discoverer of the structure of DNA. He received the Nobel Prize in physiology or medicine in 1962 for this discovery.

Störmer, Horst Ludwig (6 April 1949), German scientist. He worked on the fractional quantum Hall effect (FQHE) in the 1980s and discovered a new form of quantum fluid with fractionally charged excitations. He is a co-winner with R.B. Laughlin and D. Tsui of the Nobel Prize in physics in 1998.

7 Hammett, Louis Plack (7 April 1894–9 February 1987), American scientist. He is known for his work on the relationship between the reaction rate and equilibrium constants for some classes of organic reactions (Hammett equation). His work on super acid also led to the development of a scale (Hammett scale) that compares the acidities of different acid–base pairs in various solvents.

Kobayashi, Makoto (7 April 1944), Japanese scientist. His name is associated with the research concerning the violation of CP symmetry. The Nobel Prize in physics 2008 was awarded to him and T. Maskawa for the discovery of the genesis of spontaneous broken symmetry, which predicts the existence of at least three families of quarks.

8 Schweigger, Johann Salomo Christoph (8 April 1779–6 September 1857), German scientist. He invented the first galvanometer. He created this instrument, which is used for actual measurements as well as for the detection of small amounts of electric current, by wrapping a coil of wire around a graduated compass.

von Hofmann, August Wilhelm (8 April 1818–5 May 1892), German scientist. He observed the partial oxidation of methanol on a silver catalyst. He discovered aniline, rosaniline, and quinoline (red). He also discovered formaldehyde. He improved the voltammeter. The Hofmann rearrangement and the Hofmann elimination are well-known reactions in organic chemistry.

Calvin, Melvin (8 April 1911–8 January 1997), American scientist. He is known for his research on the absorption of CO₂ by plants. He received the Nobel Prize in chemistry in 1961 for discovering the Calvin cycle.

9 Steinmetz, Charles Proteus (9 April 1865–26 October 1923), American-German mathematician and engineer. Thanks to him, the use of electricity became available to the world.

10 Hérault, Paul (Louis-Toussaint) (10 April 1863–9 May 1914) French scientist. He is known as the inventor of the electrolytic method for aluminum production that allowed the development of the European aluminum industry. He also invented the electric arc furnace for steel in 1900, which is a significant tool for refining cast steel.

Woodward, Robert Burns (10 April 1917–8 July 1979), American scientist. He is considered as the precursor of modern organic chemistry. He synthesized steroids, such as cholesterol and cortisone, strychnine, lysergic acid, and reserpine—the first tranquilizer drug. He synthesized chlorophyll, and he synthesized tetracycline. He was awarded the Nobel Prize in chemistry in 1965.

11 Schmidt, Bernhard (11 April 1879–1 December 1935), German astronomer and optician. He is known for his research on lenses and mirrors in the field of astronomy. He designed a correcting plate, which was combined with a spherical mirror instead of a parabolic mirror to produce higher-quality images from telescopes. He invented the telescope that bears his name.

Rideal, Eric (11 April 1890–25 September 1974), English scientist. He is known for his remarkable work in the fields of surface chemistry, catalysis, chemical kinetics, and electrochemistry. He played an important role in the development of the Eley–Rideal mechanism. This mechanism involves an atom in the gas phase, which interacts with an atom initially adsorbed on the surface.

- 12 Urbain, Georges** (12 April 1872–5 November 1938), French scientist. He is known for the discovery of several chemical elements, ytterbium and lutetium, which he named in honor of the village (Lutèce) that was the origin of the city of Paris in Roman times, which is now called hafnium. He introduced the physical electrophoresis analysis method.

Perlman, Isadore (12 April 1915–3 August 1991), American scientist. He is known for his participation in the research team that discovered americium (Am).

- 13 Rossi, Bruno Benedetto** (13 April 1905–21 November 1993), American-Italian scientist. He revealed the enormous energy of cosmic-ray particles by showing that they could pass through a solid lead meter cube. He undertook experiments that provided the first evidence of the disintegration of an elementary particle, the mesotron, now called the muon, and an accurate measurement of its average lifetime at rest.

13 April 1970 – During the Apollo 13 mission, an oxygen tank exploded.

- 14 Huygens, Christian** (14 April 1629–8 July 1695), Dutch scientist. Between 1670 and 1685, he measured the acceleration due to gravity. This measurement gave Newton the opportunity to confirm his hypothesis by calculation and concluded that gravity and astral attraction obey one law. He established the wave theory of light and the calculation of centrifugal force and improved pendulum theory. He also discovered Titan (Saturn's moon) in 1655 and studied the rings of Saturn.

MacDiarmid, Alan Graham (14 April 1927–7 February 2007), New Zealand scientist. Conductive plastics can be used as antistatic materials for photographic films and “smart” screens that exclude sunlight. Semiconducting polymers are used in diodes, which emit light in solar cells and cell phone displays. Future developments include molecular electronics. He received the Nobel Prize in chemistry in 2000.

- 15 Fontana, Felice** (15 April 1730–10 March 1805) was an Italian scientist who discovered the water-gas shift reaction in 1780. The water-gas shift reaction describes the reaction of carbon monoxide and water vapor to form carbon dioxide and hydrogen.

Stark, Johannes (15 April 1874–21 June 1957), German scientist. He discovered the Doppler effect in canal rays and the separation of the spectral lines by electric fields. The Nobel Prize in physics was awarded to him in 1919 for his discovery of the splitting of spectral lines in the presence of an electric field.

Semenov, Nikolai Nikolaevich (15 April 1896–25 September 1986), Russian scientist. He is considered as the father of physical chemistry and the symbol of polymer theory. He is known for studies in the field of chemical kinetics. He received the 1956 Nobel Prize in chemistry with C.N. Hinshelwood.

Lefkowitz, Robert (15 April 1943), American scientist. He worked on the receptors coupled to G proteins. G protein-coupled receptors are a family of membrane receptors in mammals. He won the Nobel Prize in chemistry in 2012.

- 16 Solvay, Ernest** (16 April 1838–26 May 1922), Belgian scientist. He discovered the soda manufacturing process (sodium chloride mixture of limestone and Na₂CO₃ ammonia).
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- 17 17 April 1970** – The Apollo 13 moon mission returns to Earth due to the explosion of an oxygen capsule.
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- 18 de Boisbaudran, Paul-Émile Lecoq** (18 April 1838–28 May 1912), French chemist. He was responsible for the discovery of the chemical element samarium and dysprosium. He also discovered gallium. The origin of the name could be either the name of “cock” in Latin or Gallus, which is the Latin word for “French”.

Goldhaber, Maurice (18 April 1911–11 Mai 2011), American scientist. He provided evidence that the neutron is slightly more massive than the proton. In 1940, he discovered that beryllium works as a moderator; it slows down fast neutrons and helps initiate uranium fission.

- 19 Seaborg, Glenn T.** (19 April 1912–25 February 1999), American scientist. He isolated the isotope uranium-233, which can be obtained with thorium. He identified americium, curium, berkelium, and californium. For his research and discoveries in the chemistry of transuranic elements, he and E. McMillan were co-winners of the Nobel Prize in chemistry in 1951.
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- 20 Siegbahn, Kai Manne Börje** (20 April 1918–20 July 2007), Swedish physicist. He is co-laureate of the 1981 Nobel Prize in physics for his fundamental contribution to the development of high-resolution electron spectroscopy.
- Müller, Karl Alexander** (20 April 1927), Swiss physicist. He discovered superconductivity at high temperatures. In recognition of his work on superconductivity in ceramic materials, he was awarded the Nobel Prize in physics in 1987.
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- 21 Biot, Jean-Baptiste** (21 April 1774–3 February 1862), French scientist. He discovered the science of polarimetry. He established the laws of rotation for the polarization plane of the light that passes through a liquid solution.
- Bridgman, Percy Williams** (21 April 1882–20 August 1961), American physicist. He was able to obtain black phosphorus at a pressure of 1200 atm. In 1955, he realized the synthesis of graphite diamond. He became famous for the invention of a device that produces very high pressures and for his discoveries in the field of physics at high pressures. Thus, in 1946, he won the Nobel Prize in physics.
- Karrer, Paul** (21 April 1889–18 June 1971), Swiss chemist. His research activities cover the fields of organic chemistry and biochemistry. For his research on carotenoids, vitamins and flavins, he was awarded the Nobel Prize in chemistry in 1937.
- Li, Choh Hao** (21 April 1913–28 November 1987), American biochemist of Chinese origin. He isolated a hormone and showed that its structure is very different from that of other species tested. The molecule is composed of 256 amino acids. It is much more complex than the other hormones from the pituitary gland. In 1970, he synthesized human growth hormone.
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- 22 Pelletier, Pierre Joseph** (22 April 1788–19 July 1842), French scientist. He is known for insulation, together with J.-B. Caventou, and chlorophyll (green leaf, from Greek). In 1820, he isolated some alkaloids, such as brucine, cinchonine, quinine, and strychnine.
- Planté, Gaston** (22 April 1834–21 Mai 1889), French scientist. He was responsible for the discovery (1855) of the fossils of prehistoric non-flying birds. He designed the first rechargeable battery. He invented the first electric battery, the lead battery (1859).
- Cram, Donald James** (22 April 1919–17 June 2001), American scientist. Together with J.-M. Lehn and C.J. Pedersen, he won the 1987 Nobel Prize in chemistry for the development and use of molecules that exert highly selective interactions due to their structures.
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- 23 Planck, Max** (23 April 1858–4 October 1947), German scientist. He introduced the hypothesis of energy quantization, and his theory remains the basis for quantum mechanics. He is the creator of quantum theory, and his contribution to the understanding of atomic structures is essential. He won the Nobel Prize in physics in 1918. His name remains attached to a universal constant of his theory.
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- 24 Galissard, Jean-Charles de Marignac** (24 April 1817–15 April 1894), Swiss chemist. He was responsible for the discovery/co-discovery of several chemical elements, e.g., ytterbium, samarium, and gadolinium. He also discovered that ozone is a compound of oxygen.
- Ehrenhaft, Felix** (24 April 1879–4 March 1952), Austrian physicist. He made significant contributions to the field of atomic physics. He became interested in the electrical and optical properties of colloidal metals.
- Kornberg, Roger D.** (24 April 1947), American scientist. For his work on the molecular basis of eukaryotic transcription (in Greek: eu, well; and karuon, nucleus), he received the Nobel Prize in chemistry in 2006.
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- 25 Marconi, Guglielmo** (25 April 1874–20 July 1937), Italian scientist. He is known for his significant contribution to the development of wireless telegraphy. Thus, he received the Nobel Prize in Physics in 1909, which he shared with K.F. Braun.
- Pauli, Wolfgang Ernst** (25 April 1900–15 December 1958), Swiss scientist of Austrian origin. He was responsible for the discovery of the exclusion principle in quantum mechanics, also called the Pauli exclusion principle. He has made significant contributions to electronic theory, the theory of relativity, wave mechanics and quantum theory. Pauli received the Nobel Prize in physics in 1945.
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- 25 April 1953** – DNA was discovered (Crick and Watson).
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- 26** **Richardson, Owen Willans** (26 April 1879–15 February 1959), British scientist. He was awarded the Nobel Prize in physics in 1928 in recognition of his work on the thermionic phenomenon, i.e., for Richardson's law.
- Smith, Michael** (26 April 1932–4 October 2000), Canadian scientist. He received the Nobel Prize in chemistry in 1993 for his contribution to the study of proteins and mutagenesis.
- Penzias, Arno Allan** (26 April 1933), American scientist. The discovery of cosmic microwave thermal radiation earned him the Nobel Prize in physics in 1978 with RW Wilson.
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- 27** **Breese Morse, Samuel Finley** (27 April 1791–2 April 1872), American inventor. He is known for the invention of the alphabet and the telegraph that bears his name.
- Carothers, Wallace** (27 April 1896–29 April 1937), American scientist. He developed the theory and the polycondensation process of technical-looking synthetic polyamides and polyester bases, and a method for obtaining neoprene. He studied diamines and dicarboxylic acids. In collaboration with Neuwland, he developed a Neoprene rubber manufacturing process.
- Abelson, Philip Hauge** (27 April 1913–1 August 2004), American scientist. He is known for designing the first nuclear propulsion submarine. He participated in the discovery of the chemical element neptunium. He made the important suggestion that uranium hexafluoride molecules are a volatile liquid and that their vapors are the easiest way to obtain uranium atoms in a gaseous form.
- Müller, Karl Alexander** (27 April 1927), Swiss scientist. For the discovery of superconductivity in ceramic materials, he and Bednorz received the Nobel Prize in physics in 1987.
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- 28** **Sharpless, Karl Barry** (28 April 1941), American scientist. For his work on the oxidation reactions chiral catalysis, he obtained the Nobel Prize in chemistry in 2001.
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- 29** **Drais, Karl** (29 April 1785–10 December 1851), German inventor. He is the inventor of the velocipede. He also invented the first typing keyboard in 1821 and the stenographer.
- Urey, Harold** (29 April 1893–5 January 1981), American scientist. He is known for the discovery of deuterium and heavy water (1932). Thus, he became the winner of the Nobel Prize in chemistry in 1934.
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- 30** **Gauss, Johann Carl Friedrich** (30 April 1777–23 February 1855), mathematician, physicist and German astronomer. He calculated the location of the magnetic pole based on geomagnetic observations and calculations. He designed a logical set of units of measurement for magnetic phenomena. The density unit of magnetic flux was eventually called the Gauss in his honor. In 1833, he built an electric telegraph.
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- 30 April 1897** – The British physicist J. J. Thomson announced the discovery of the electron.
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