



ELSEVIER

Contents lists available at ScienceDirect

Comptes Rendus Chimie

www.sciencedirect.com



Block calendar

June

JUNE	SCIENTIST
1	<p>Carnot, Nicolas Léonard Sadi (1 June 1796–24 August 1832), French engineer. He is known for his work in the field of thermodynamics. In his book, published in 1824, he stated that it is possible to produce mechanical energy via heat transfer (Carnot principle–1824).</p> <p>Whittle, Frank (1 June 1907–9 August 1996), British engineer. He is known as the inventor of the reactor, a jet engine intended to power a vehicle, with applications in aeronautics, space exploration and water jets.</p> <p>Knowles, William Standish (1 June 1917–13 June 2012), American scientist. He developed the asymmetric catalytic synthesis, a technology used to manufacture several drugs. For his research on the chirality of hydrogenation reaction catalysis, he received the Nobel Prize in chemistry in 2001 with R. Noyori.</p>
2	<p>Tafel, Julius (2 June 1862–2 September 1918), German scientist. He is known for the discovery of an electrosynthetic rearrangement reaction of various alkylated ethyl acetoacetates to form hydrocarbons, called the Tafel rearrangement, as well as the Tafel equation, which relates the rate of an electrochemical reaction to its overpotential.</p> <p>2 June 2003 – The first mission of the European Space Agency (ESA) to Mars was launched.</p>
3	3 June 1965 – Gemini 4 was launched.
4	Wieland, Heinrich Otto (4 June 1877–5 August 1957), German scientist. He showed how three bile acids were closely related in their structures. Additionally, he showed how they differ and that the molecular skeleton has a steroid nature, so the parent was the well-known cholesterol molecule. For his research on the formation of bile acids and related substances, he was awarded the Nobel Prize in chemistry in 1927.
5	<p>Chaptal, Jean-Antoine (5 June 1756–29 July 1832), French scientist. He gave his name to chaptalisation, a method of increasing the alcohol content of wine by sweetening. He is credited for the artificial production of alum, saltpeter, cements, steam bleaching, dyeing and the art of red cotton.</p> <p>Gadolin, Johan (5 June 1760–15 August 1852), Finnish scientist. His research focuses on the chemistry of lanthanides. In 1794, analyzing the mineral ytterbine (later, gadolinium in his honor), he showed that in addition to iron oxides, beryllium and silicon, it contained a mineral oxide of an unknown element. The discovered element was yttrium.</p> <p>Gabor, Dennis (5 June 1900–8 February 1979), British scientist of Hungarian origin. He was awarded the 1971 Nobel Prize in physics for the invention of holography (despite his actual goal was the development of electron microscopy principles).</p> <p>Peierls, Rudolf Ernst (5 June 1907–19 September 1995), German scientist. His early work in quantum physics led to the positive carriers theory to explain the electrical and thermal behavior of semiconductors. He was a pioneer of the concept of “holes” in semiconductors.</p>

- 6 Braun, Karl Ferdinand** (6 June 1850–20 April 1918), German scientist. He is co-winner with G. Marconi of the 1909 Nobel Prize in physics for their contribution to the development of wireless telegraphy.
- Rohrer, Heinrich** (6 June 1933–6 May 2013), Swiss scientist. He is co-laureate of the 1986 Nobel Prize in physics for the design of the scanning tunneling microscope.
- Smalley, Richard Errett** (6 June 1943–28 October 2005), American scientist. He discovered the third allotrope of carbon, fullerene. He investigated the formation of groups and inorganic semiconductors using pulsed molecular beams and mass spectrometry. The 1996 Nobel Prize in chemistry was awarded to him, H. Kroto, and R. Curl, for their discovery of fullerenes.
-
- 7 von Lenard, Philipp Eduard Anton** (7 June 1862–20 May 1947), German scientist of Austro-Hungarian origin. He determined the laws of photoelectricity discovered by Hertz. He showed that the energy of the electrons emitted by the photoelectric effect does not depend on the intensity of light. For his invaluable contributions to the cathode ray, he is the winner of the Nobel Prize in physics in 1905.
- Barkla, Charles Glover** (7 June 1877–23 October 1944), English scientist. He received the 1917 Nobel Prize in physics for the discovery of the Roentgen radiation of chemical elements.
- Coandă, Henri** (7 June 1886–25 November 1972), Romanian engineer. He is known as the pioneer of world aviation. He invented and built the first jet engine.
- Mulliken, Robert Sanderson** (7 June 1896–31 October 1986), American scientist. The main part of his life was devoted to basic research into chemical bonds and the electronic structure of molecules. He was awarded the 1966 Nobel Prize in chemistry for the molecular orbital method.
-
- 8 Crick, Francis Harry Compton** (8 June 1916–28 July 2004), British scientist. He decrypted the structure of DNA. With James Watson and Maurice Wilkins, he won the Nobel Prize in physiology or medicine in 1962 for discovering the structure of DNA.
- Wilson, Kenneth Geddes** (8 June 1936–15 June 2013), American scientist. For the concept of critical phenomena in connection with phase transitions, he was awarded the Nobel Prize in physics in 1982.
-
- 9 Lebert, Hermann** (9 June 1813–1 August 1878), German doctor. He was responsible for essential contributions to the field of pathology and clinical medicine. He was among the first to use the microscope in pathology.
-
- 10 Dollond, John** (10 June 1706–30 November 1761), British engineer. He is known for his research on achromatic lenses by combining concave and convex lenses (1758).
-
- 11 von Linde, Carl Paul Gottfried** (11 June 1842–16 November 1934), German engineer. He is famous for the production of liquefied air (1895). In 1876, he designed the first functional refrigerator using dimethyl ether. Later, he used liquid ammonia for refrigeration.
- Parker, Eugene Newman** (10 June 1927), American astrophysicist. His research activities concern interplanetary space. He is known for the theory of solar wind (1950), the concept of the Parker spiral in the inner solar system and his idea of the formation of solar corona flares.
- Horeau, Alain** (11 June 1909–14 February 1992), French scientist. He was interested in kinetics, catalytic hydrogenation and stereochemistry (absolute configuration, optical purity and asymmetric synthesis).
- Warren, J. Robin** (11 June 1937), Australian scientist. He is known for his work on the role of *Helicobacter pylori* in duodenal ulcers. He received the Nobel Prize in physiology or medicine in 2005.
-
- 12 Lipmann, Fritz Albert** (12 June 1899–24 July 1986), American-German scientist. He discovered coenzyme A and demonstrated that vitamin B forms part of the molecule. In fact, this acid is essential to life precisely because of coenzyme A. An acetylcoenzyme proved the intersection of body chemistry. He received the Nobel Prize in physiology or medicine in 1953 for the discovery of coenzyme A.

- 13** **Young, Thomas** (13 June 1773–10 May 1829), British physician and Egyptologist. He was the first to discover the way in which the lens of the eye changes shape to focus on objects at different distances. He described the cause of astigmatism: the blurring of vision due to irregularities in the corneal curve. He demonstrated the wave nature of light. He was the first to use the word energy in the modern sense.
- Maxwell, James Clerk** (13 June 1831–5 November 1879), Scottish physicist and mathematician. He devised the unified theory of electromagnetism. He showed that the oscillation of an electric charge produces an electromagnetic field that radiates out from its source at a constant speed. This velocity can be calculated by taking the ratio between certain units expressing a magnetic phenomenon and some units expressing an electrical phenomenon. He is known to have made the first true color photograph in 1861.
- Lehmann, Otto** (13 June 1855–17 June 1922), German scientist. He is known for his fundamental research on the phenomena of crystal growth and crystalline polymorphism. In 1888, he began the study of liquid crystals and is considered a pioneer in this field.
- Griffith, Alan Arnold** (13 June 1893–13 October 1963), English engineer. He invented the turboprop in 1920, a gas turbine whose energy is primarily used to drive one or more propellers.
- Alvarez, Luis Walter** (13 June 1911–1 September 1988), American scientist. He worked in nuclear physics and the study of cosmic rays. He was awarded the Nobel Prize in physics in 1968 for his successful contribution to the physics of elementary particles, discovering a large number of resonant states that allowed for the development of techniques that use hydrogen bubble chambers.
-
- 14** **Coulomb, Charles Augustin** (14 June 1736–23 August 1806), French scientist. He was responsible for several sets of precise measurements of electrical attraction. In 1785, he formulated the law that bears his name, Coulomb's law, which is the quantitative basis for electrostatics, where we previously had only qualitative information.
- 14 June 1967** – The *Mariner 5* spacecraft was launched to explore Venus.
-
- 15** **Fourcroy, Antoine François** (15 June 1755–16 December 1809), French scientist. He was responsible for the establishment of a new chemical nomenclature. He is responsible for the creation of the National Institute of Sciences and Arts (1795), the *École polytechnique* (1796), and several medical schools.
- Fenn, John Bennett** (15 June 1917–10 December 2010), American scientist. He is a co-laureate of the 2002 Nobel Prize in chemistry for the development of soft desorption ionization methods for the analysis of biological macromolecules using mass spectrometry.
-
- 16** **Wittig, Georg Friedrich Karl** (16 June 1897–26 August 1987), German scientist. He is known for the Wittig reaction (synthesis of ethylenic derivatives) developed in 1950, which is of significant importance in organic chemistry. For this discovery, he was awarded the Nobel Prize in chemistry in 1979.
- Barrer, Richard Maling** (16 June 1910–12 September 1996), New Zealand scientist. He is considered the founding father of zeolites. The mineral barrerite was named after him.
-
- 17** **Crookes, William** (17 June 1832–4 April 1919), British scientist. He discovered thallium (Tl) (from the Greek word *thallos* meaning green shoot) in 1861. He was responsible for the discovery of “cathode rays”. Crookes is considered the first scientist to study plasma.
-
- 18** **Maracineanu, Stefania** (18 June 1882–15 August 1944), Romanian scientist. His research was conducted with Marie Curie on the determination of the decay constants of polonium and actinium. He made outstanding contributions to the artificial radioactivity phenomenon.
- Karle, Jerome** (18 June 1918–6 June 2013), American scientist. With remarkable results for direct methods of determining crystal structures, he and H.A. Hauptman are co-winners of the Nobel Prize in chemistry in 1985.
- Boudart, Michel** (18 June 1924–2 May 2012), American-Belgian scientist. His research interests were in catalysis, particularly the catalytic properties of small metal particles and the understanding of their chemical reactions. He recognized the catalytic consequences of the electronic properties of solids, and he performed a classification of reactions based on their sensitivity to surface structure.
- Herschbach, Dudley Robert** (18 June 1932), American scientist. He, Y. T. Lee and J. C. Polanyi are co-winners of the 1986 Nobel Prize in chemistry for their contributions to the dynamics of elementary chemical processes.
-

- 19** **Hinshelwood, Cyril Norman** (19 June 1897–9 October 1967), English scientist. He and N. Semyonov are co-winners of the Nobel Prize in chemistry in 1956 for their involvement in basic research into chemical reaction mechanisms (Hinshelwood mechanism).
- Flory, Paul John** (19 June 1910–9 September 1985), American scientist. He was awarded the 1974 Nobel Prize in chemistry for achievements in the physical chemistry of macromolecules.
- Bohr, Aage Niels** (19 June 1922–8 September 2009), Danish scientist. He received the Nobel Prize in physics in 1975 with B.R. Mottelson and J. Rainwater for the discovery of the connection between collective motion and particle motion in atomic environments.
-
- 20** **20 June 1840** – The inventor Samuel Morse filed the patent for the electric telegraph.
- 20 June 1990** – The Eureka asteroid was discovered.
-
- 21** **21 June 2001**– The first eclipse of the 21st century occurred.
-
- 22** **22 June 1633** – The trial of Galileo was held; it is the most famous trial in history. Galileo defended the Copernican theory that the Earth and other planets move around the sun. The Inquisition accused Galileo of heresy.
- Minkowski, Hermann** (22 June 1864–12 January 1909), German scientist. He is known for his contribution to the theory of relativity (geometric interpretation in a 4-dimensional space, called Minkowski space-time).
-
- 23** **Eisele, Donn Fulton** (23 June 1930–2 December 1987), American astronaut. He is famous for the first manned flight aboard *Apollo 7*. He was also part of the crew of *Apollo 1*.
-
- 24** **Yonath, Ada** (23 June 1939), Israeli scientist. With V. Ramakrishnan and T. Steitz, she received the 2009 Nobel Prize in chemistry for fundamental studies of the structure and function of ribosomes.
- Hess, Victor Francis** (24 June 1883–17 December 1964), Austrian-American scientist. He is known as the discoverer of cosmic rays during balloon ascents in 1912, which earned him the Nobel Prize in physics in 1936.
- Hoyle, Fred** (24 June 1915–20 August 2001), British cosmologist. He is known as the primary critic of the Big Bang theory, the pioneer of nucleosynthesis in stars and a supporter of the stationary universe theory (as opposed to the Big Bang).
- Perl, Martin Lewis** (24 June 1927–30 September 2014), American scientist. For his discovery of the tau lepton, he is a co-winner of the Nobel Prize in physics in 1995.
- Moerner, William Esco** (24 June 1953), American scientist. He is recognized for his work in the field of nanoscience and nanoscopy, especially in the field of fluorescence microscopy. He received the Nobel Prize in chemistry in 2014.
-
- 25** **Nernst, Walther Hermann** (25 June 1864–18 November 1941), German scientist. He is known for the famous Nernst equation and his remarkable studies in the field of photochemistry and the chemistry of solids. He invented an electric lamp with a metal filament. This lamp is a precursor of current incandescent lamps. In recognition of his scientific work, he was awarded the Nobel Prize in chemistry in 1920.
- Jensen, Johannes Hans Daniel** (25 June 1907–11 February 1973), German scientist. For discoveries concerning the layered structure of the atomic nucleus, he received the Nobel Prize in physics in 1963.
- Stein, William Howard** (25 June 1911–2 February 1980), American scientist. For his contributions to the understanding of the links between chemical structure and the catalytic activity of the active center of ribonuclease, he is a co-winner of the Nobel Prize in chemistry in 1972.
- Alexeevich, Abrikosov Alexei** (25 June 1928), Russian scientist. He is known for his fundamental theoretical studies in the behavior of superconducting materials. With V. Ginzburg and A. Leggett, he is a co-winner of the 2003 Nobel Prize in physics for their pioneering work in the theory of superconductors and superfluids.
- Gautier, François** (25 June 1936), French scientist. He is one of the leading specialists in the electronic structure of metals and dilute metal alloys. He is also an indisputable expert in the field of the development of magnetism and the applications of magnetic materials, i.e., hard, soft or magnetic recording. He is one of the co-founders of the Institute of Physics and Chemistry of Materials in Strasbourg, France.

- 26 Thomson, William [1st Baron Kelvin]** (26 June 1824–17 December 1907), British scientist. Most of his research focused on the field of thermodynamics. We owe the concept of “absolute zero” and the temperature measurement unit takes its name, Kelvin, from him. He studied the ability of a submarine cable to carry an electrical signal. He was interested in improvements to cables and galvanometers without which transatlantic cables would have been useless. He also improved the marine compasses and probes. He invented a machine to predict tides.
- Plunkett, Roy J.** (26 June 1910–12 May 1994), English scientist. He is known for the discovery (by chance) of the polymer tetrafluoroethylene or Teflon[®] (DuPont), which was patented in 1939 and began commercial operation in 1954.
- Spitzer Jr, Lyman** (26 June 1914–31 March 1997), American astrophysicist. By fusing hydrogen into helium gas, he was one of the first researchers to suggest that magnetic fields could be used to heat hydrogen to temperatures of approximately 100 million degrees. He designed a device to create magnetic fields to control the fusion of hydrogen.
-
- 27 Ripan, Raluca** (27 June 1894–5 December 1972), Romanian scientist. He is known for his significant contributions in the fields of mineral and inorganic chemistry. He worked on obtaining uranium from minerals and the separation of gold and its preparation for the decoration of glass.
- Tuve, Merle Anthony** (27 June 1901–20 May 1982), American geophysicist. He is known for his significant contributions to the fields of nuclear physics, biophysics, and geophysics.
- Veltman, Martinus J. G.** (27 June 1931), Dutch scientist. For his fundamental research on the quantum structure in the service of particle physics, he and G. Hooft are co-winners of the Nobel Prize in physics in 1999.
- Richardson, Robert Coleman** (27 June 1937–19 February 2013), American scientist. He, DM Lee and D. Osheroff are co-winners of the Nobel Prize in physics in 1996 for the discovery of superfluidity in helium-3.
-
- 28 Erlenmeyer, Emil** (28 June 1825–22 January 1909), German scientist. He was the first researcher to synthesize a large number of organic chemical compounds of interest, such as isobutyric acid (1865). He also synthesized tyrosine and guanidine. He proved that naphthalene has a double benzene ring. He formulated the Erlenmeyer rule. He is also known for giving his name to the conical, flat-bottom flask that he invented in 1861.
- Rowland, Franklin Sherwood** (28 June 1927–10 March 2012), American scientist. His research focuses on the chemistry of the atmosphere and the decomposition of ozone. This work won him the Nobel Prize in chemistry in 1995.
- Pickworth, Jenny** (28 June 1931), American scientist of English origin. Her research focused on the chemistry of cancer. She worked on the hexacarboxylic acid derivative of vitamin B12 and revealed the structure of the corrin ring. Her research interests include small-molecule structures related to cancer, the structural aspects of the Krebs cycle and citrates, metal ion coordination in proteins, the interaction of ligands with metal ions and the enzymes aconitase and xylose isomerase.
- von Klitzing, Klaus** (28 June 1943), German scientist. He discovered the quantum Hall effect, which earned him the Nobel Prize in physics in 1985.
- Chende-Roman, Valeria** (28 June 1948), Romanian professor. She is a professor and leading educator in the field of chemistry. She is a scholar and one of the architects of the art of chemical science, which combines chemistry, physics, and mathematics at the highest scientific and educational level. Her work in multidisciplinary education is original, with both universal scientific and academic heritages. She is a teacher with a remarkable, methodical mind and an exceptional woman.
-
- 29 Zamka, Georges David** (29 June 1962), American astronaut. He has participated in several space missions on the shuttles *Discovery* and *Endeavour* and advanced the scientific interests of mankind.
-
- 29 June 1850** – Coal was discovered on Vancouver Island.
-

30 Viktor Schaubberger (30 June 1885–25 September 1958), Austrian inventor. He is considered the pioneer of ecothechnology. In 1937, he developed an implosion motor with a gas muzzle velocity of 1290 m/s, or approximately four times the speed of sound. His work can bring environmental solutions to the energy problems of today.

Paul Berg (30 June 1926), American scientist. He received the 1980 Nobel Prize in chemistry for his fundamental contributions to the biochemistry of nucleic acids and DNA.

30 June 1905 – Albert Einstein published the theory of relativity, changing our perception of space and time.

Ioana Fechete
*Institut de chimie et procédés pour l'énergie, l'environnement et la santé (ICPEES),
UMR 7515 CNRS, université de Strasbourg, 25, rue Becquerel, 67087 Strasbourg cedex 2, France*
E-mail address: ifechete@unistra.fr