



ELSEVIER

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March

MARCH SCIENTIST

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- 1** **Franklin, Edward Curtis** (1 March 1862–13 February 1937), American scientist. He contributed to the development of the electronic theory of acids and bases through studies of the ammonia system.
- Martin, Archer John Porter** (1 March 1910–28 July 2002), British scientist. He studied the structure of vitamin E. He developed partition chromatography, paper chromatography, and gas chromatography. He identified a variety of new antibiotics and amino acids. He and R.L.M. Synge were co-winners of the Nobel Prize in chemistry in 1952.
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- 2** **Barbier, Philippe A.** (2 March 1848–18 September 1922), French scientist. He performed the first synthesis of organomagnesium compounds. He became famous for the Barbier reaction. He was the PhD supervisor of V. Grignard.
- de Haas, Wander Johannes** (2 March 1878–26 April 1960), Dutch scientist. He is best known for the Shubnikov–de Haas effect, discovered in a study of the magnetoresistance of bismuth, and the Haas–van Alphen effect, discovered in the study of diamagnetism at low temperatures in bismuth. He worked on magnetism with Einstein, and the phenomenon is known as the Einstein–de Haas effect.
- Condon, Edward Uhler** (2 March 1902–26 March 1974), American scientist. He is known for his work in the field of quantum mechanics. He was involved in the development of radar.
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- 3** **Marggraf, Andreas Sigismund** (3 March 1709–7 August 1782), German scientist. He is known for the discovery of beet, formic acid and phosphoric acid. He also discovered zinc and alumina.
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- 4** **Bayer, Karl Josef** (4 March 1847–22 October 1904), Austrian scientist. He became famous for the discovery of the precipitation of aluminum hydroxide under various conditions and for achieving the extraction of alumina from bauxite (a process that bears his name). He also discovered cesium and rubidium.
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- 5** **de Ruolz, Henri** (5 March 1808–30 September 1887), French scientist. He was responsible for the discovery of a gilding technique that did not use mercury. An alloy consisting of copper, silver and nickel is called “Ruolz” in his honor.
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- 6** **von Fraunhofer, Joseph** (6 March 1787–7 June 1826), German scientist. He invented the spectroscope. He identified the lines in the solar spectrum that now bear his name, the Fraunhofer lines. He pioneered the study of the diffraction of light through the medium of optical networks, which is known as Fraunhofer diffraction.
- 6 March 1869:** Mendeleev published his periodic table of chemical elements.
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7 **Becquerel, Antoine César** (7 March 1788–18 January 1878), French scientist. He created an early example of a constant-current electrochemical cell. In 1839, he built the first photovoltaic cells, but at the time, they could not be put to any practical use. He was also interested in climatology and physiology.

Herschel, John Frederick William (7 March 1792–11 May 1871), British scientist. He was the first to measure the brightness of stars with precision. He introduced the use of sodium thiosulfate to dissolve the silver halide salts, and their usefulness as a fixer of photographic images. In 1839, he created sensitized paper; he was the first to use the terms “negative” and “positive”.

Haller, Albin (7 March 1849–29 April 1925), French scientist. His work focused on the use of sodium amide in organic synthesis and especially on the chemistry of camphor. He achieved the first partial synthesis of camphor and, after 7 years, eventually achieved total synthesis. His studies demonstrated that camphor is a bicyclic terpene ketone.

Rietveld, Hugo (7 March 1932), Dutch crystallographer. He established a crystallographic method that is used in the characterization of crystalline materials. The Rietveld method was named in his honor.

Fert, Albert (7 March 1938), French scientist. He is famous for the discovery of giant magnetoresistance, which led him to be the co-winner of the 2007 Nobel Prize in physics with Peter Grünberg.

8 **Crafts, James Mason** (8 March 1839–20 June 1917), American scientist. He, together with Charles Friedel, is known for the discovery of the catalytic effect of inorganic halogenated compounds on the synthesis of certain aromatic organic compounds. The corresponding reactions (alkylation and acylation reactions) are named after two researchers, Friedel and Crafts.

Hahn, Otto (8 March 1879–28 July 1968), German scientist, considered the father of nuclear chemistry. He discovered ionium, protactinium and nuclear isomers. He also discovered that barium is produced by the fission of uranium. To his credit, the chemical element with the number 105 was named hafnium (Hf). He was awarded the Nobel Prize in chemistry in 1944.

Zeldovitch, Iakov Borissovitch (8 March 1914–2 December 1987), Soviet scientist. He is known for his contributions to the fields of catalysis and adsorption, particle physics and nuclear physics. He played a key role in the development of nuclear weapons and Soviet thermonuclear weapons.

Charpak, Georges (8 March 1924–29 September 2010), French scientist of Polish origin. He was awarded the Nobel Prize in physics in 1992 for his improvements to particle detectors.

9 **Acheson, Edward Goodrich** (9 March 1856–6 July 1931), American scientist. He is known for discovering carborundum (1891) and the improvement of a particular technique for the preparation of artificial graphite. He was also the inventor of silicon carbide.

10 **Malpighi, Marcello** (10 March 1628–29 November 1694), Italian scientist. He is known as the father of microscopy. He discovered capillaries in 1661. He wrote the first book on invertebrates and the first manual on the internal organs of silk worms.

Richter, Jeremias Benjamin (10 March 1762–14 April 1807), German scientist or the father of stoichiometry. He discovered that substances react with each other in fixed proportions. He demonstrated that acids and bases, when neutralizing each other to form salts, react only in fixed proportions. These reactions are called stoichiometric and follow the law of definite proportions. He was the first to establish the basis of quantitative chemical analysis.

Fitch, Val Logsdon (10 March 1923), American scientist. He is known for the discovery of the symmetry violation in the decay of neutral K mesons. With J.W. Cronin, he was a co-winner of the Nobel Prize in physics in 1980.

11 **Bjerrum, Niels Janniksen** (11 March 1879–30 September 1958), Danish scientist. He studied the theory of acids and bases, related to the concentration of hydrogen ions. He was interested in the study of the infrared spectra of polyatomic molecules. He also formulated the theory of the Bjerrum length.

Bloembergen, Nicolaas (11 March 1920), American scientist of Dutch origin. He and A.L. Schawlow were co-winners of the Nobel Prize in physics 1981 for their contribution to the development of laser spectroscopy. He devised a maser where energy was made at three levels instead of two, so that the higher levels could store energy while another gave off energy. He created the first continuous maser.

- 12 Desaguliers, John Theophilus** (12 March 1683–29 February 1744), French scientist. To describe substances that can conduct an electrical current, he introduced the word “conductor”. He coined “insulating” for non-conductors, drawing from the word “island” in Latin because the drivers could not lock the current as the sea surrounds an island.
- Daniell, John Frederic** (12 March 1790–13 March 1845), English scientist. He invented the dew-point hygrometer and also designed a pyrometer, for the measurement of heat. He is best known for his invention of a battery based on copper and zinc, which is known as the Daniell cell in his honor. This device was the first reliable source of electrical power.
- Kirchhoff, Gustav Robert** (12 March 1824–17 October 1887), German scientist. Based on a technique invented by Isaac Newton, Kirchhoff and Bunsen developed the first spectroscope. Using this spectroscope, they discovered cesium (from the Latin word for “sky blue”) and rubidium (from the Latin word for “red”). He is known for formulating the three laws of spectroscopy and Kirchhoff’s law of thermochemistry.
- Friedel, Charles** (12 March 1832–20 April 1899), French scientist. He was a student of Wurtz. He is known for developing the Friedel–Crafts reactions (alkylation and acylation) in 1877.
- Perkin, William Henry** (12 March 1838–14 July 1907), English scientist. He is known for the discovery of the first artificial dye, which is known as mauveine. He also synthesized coumarin, a white substance with a pleasant vanilla scent. This discovery marks the beginning of the synthetic perfume industry.
- Vernadsky, Vladimir Ivanovich** (12 March 1863–6 January 1945), Ukrainian scientist or the father of modern geochemistry. He investigated the structure and chemistry of silicates and aluminosilicates, which constitute the bulk of the crust. He was a true environmentalist; he predicted the impact of deforestation on climate.
- Esaki, Reona (Leo)** (12 March 1925), Japanese scientist. He discovered the tunneling effect in semiconductors and superconductors, namely, the possibility that an electron in a PN junction may directly pass from the conduction band (the N region) to the valence band (the P region) with the proper doping of the N region. For this work, he and I. Giaever were co-winners of the Nobel Prize in physics in 1973.
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- 13 Hurmuzescu, Dragomir** (13 March 1865–31 May 1954), Romanian scientist. His research is centered on the study of diffraction, i.e., X-rays. He invented an insulator called the dielectrine. This insulation helped build the first modern electroscopes.
- Birge, Raymond Thayer** (13 March 1887–22 March 1980), American scientist who conducted his research in the field of molecular spectra. He established the properties of ^1_1H and ^2_1H with the help of mass spectrographs. He discovered the carbon isotope $^{13}_6\text{C}$ and determined the physical constants of some isotopes.
- Van Vleck, John Hasbrouck** (13 March 1889–27 October 1980), American scientist. He is co-winner with P.W. Anderson and N. Mott of the Nobel Prize in physics in 1977 for their fundamental theoretical research on the electronic structure of magnetic and disordered systems.
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- 14 van Musschenbroek, Pieter** (14 March 1692–19 September 1761), Dutch scientist. In that time, temporary electrical power could be generated by friction machines, but there was no way to store it. He discovered that it was possible to use a glass pot and water with a copper rod to store energy and that this energy could be released by connecting the copper rod and another conductor to an external circuit. Therefore, he invented the first effective device for storing static electricity.
- Einstein, Albert** (14 March 1879–18 April 1955), Swiss-American scientist of German origin. He is known for the famous theory of relativity, for his studies on Brownian motion, for the invention of the photoelectric effect, for various studies in the application of quantum mechanics. He was awarded the Nobel Prize in physics in 1921.
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- 15 Loschmidt, Johann Josef** (15 March 1821–8 July 1895), Austrian scientist. He acknowledged that some aromatics had benzene rings in their molecular structures. He was the first to estimate the size of the molecules that make up the air and determined the composition of ozone. The Loschmidt constant is named in his honor.
- Alferov, Jaures Ivanovich** (15 March 1930), Russian scientist of Belarusian origin. He is co-winner of the Nobel Prize in physics in 2000 thanks to his research on information and communication technology.
- Karplus, Martin** (15 March 1930), Austrian-American scientist. His baseline studies are in the field of nuclear magnetic resonance, quantum chemistry, and molecular dynamics of biological macromolecules with simulations. He published the Karplus equation, which describes the relationship between the proton–proton coupling constants to three bonds and dihedral angles in nuclear magnetic resonance. He published the first simulation of protein molecular dynamics. Karplus was awarded the Nobel Prize in chemistry in 2013.
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- 16 Ohm, Georg Simon** (16 March 1789–6 July 1854), German scientist known for the law that bears his name: Ohm's law. He discovered that the amount of current passed was inversely proportional to the wire length, which defines the resistance of a wire. In his honor, the resistance measurement unit is called the *ohm*. The unit of conductivity is the *mho* inverted name.
- Reines, Frederick** (16 March 1918–26 August 1998), American scientist. He had a fundamental contribution to lepton physics. He received the Nobel Prize in physics in 1995 for his discovery of the neutrino and pioneering work on leptons.
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- 17 Irwin, James Benson** (17 March 1930–8 August 1991), American scientist-test pilot at NASA. He is known for being a lunar module pilot for Apollo 15.
- 17 March 1800:** the first pile was tried by Alessandro Volta.
- 17 March 1966:** back on Gemini 8 with N. Armstrong as the pilot and D. Scott.
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- 18 Diesel, Rudolf Christian Karl** (18 March 1858–30 September 1913), German engineer. He is known as the inventor of the internal combustion engine. The "Diesel" engine is named in his honor.
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- 19 Fischer, Franz Joseph Emil** (19 March 1877–1 December 1947), German scientist. His research concerns the field of catalysis and organic synthesis. In collaboration with H. Tropsch, he obtained synthetic gasoline via the Fischer–Tropsch process.
- Haworth, Norman** (19 March 1883–19 March 1950), English scientist. He is responsible for the discovery of vitamin C in 1934, and he proposed ascorbic acid. For this discovery, he was awarded the Nobel Prize in chemistry in 1937.
- Joliot, Jean Frédéric** (19 March 1900–14 August 1958), French scientist. He is co-winner of the 1935 Nobel Prize in chemistry with I. Joliot-Curie in recognition of their research reports on radioactive elements.
- Kohn, Walter** (19 March 1923), American scientist of Austrian origin. For his contribution to the functional theory of density (Density Functional Theory [DFT]), one of the most used methods in quantum calculations, he is the co-winner of the Nobel Prize in chemistry in 1998.
- Molina, Mario J.** (19 March 1943), Mexican scientist. He is known for his reference work in the decomposition of ozone. For this work, he received the 1995 Nobel Prize in chemistry with P.J. Crutzen and F.S. Rowland.
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- 20 van Marum, Martin** (20 March 1750–26 December 1837), Dutch scientist. He realized the dehydrogenation of alcohols on metal surfaces in 1796. When attempting to check Boyle's ideal gas, he managed to liquefy ammonia via compression.
- Menten, Maud Leonora** (20 March 1879–26 July 1960), Canadian scientist in the medical field. She has made significant contributions to the field of biochemistry and enzyme kinetics, the success of which is due mainly to the Michaelis–Menten equation.
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- 21 Burk, Dean** (21 March 1904–6 October 1988), American scientist. He is known for the discovery of biotin, also known as vitamin H or coenzyme R. Biotin is a coenzyme for carboxylase enzymes, which are involved in the synthesis of fatty acids, isoleucine, and valine, as well as in gluconeogenesis.
- Gilbert, Walter** (21 March 1932), American scientist, considered the precursor of molecular biology. Together with F. Sanger, he was the co-winner of the 1980 Nobel Prize in chemistry for studies made in understanding and determining the basic steps in nucleic acids.
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- 22 Millikan, Robert Andrews** (22 March 1868–19 December 1953), American scientist. He determined the charge of the electron in 1911, and in 1916, he measured the Planck constant. For his work on the elementary charge of electricity and on the photoelectric effect, he received the Nobel Prize in physics in 1923.
- McBain, James William** (22 March 1882–12 March 1953), Canadian scientist. He is known for his pioneering work in the field of colloid chemistry (micelles).
- Richter, Burton** (22 March 1931), American scientist. His basic research in the field of physics was rewarded by the discovery of a new heavy elementary particle: the psi meson. Therefore, he and S. Ting received the Nobel Prize in physics in 1976.
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- 23** **Laplace, Pierre-Simon** (23 March 1749–5 March 1827), French scientist. He designed a calorimeter and determined the specific temperatures of several substances. He showed that the amount of heat required to decompose a substance in its entirety is equal to that required to form these elements. He developed the foundations of thermochemistry, which led to the doctrine of conservation of energy.
- Staudinger, Hermann** (23 March 1881–8 September 1965), German scientist. He discovered that the mechanical strength and elasticity of natural fibers depend on their macromolecular structure, thus guiding the preparation of artificial fibers from synthetic macromolecules. For his work in the field of macromolecular chemistry, he won the Nobel Prize in chemistry in 1953.
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- 24** **Priestley, Joseph** (24 March 1732–6 February 1804), English scientist. He discovered oxygen and water vapor and invented soda water, thus becoming, in some sense, the founder of the carbonated beverages industry. Additionally, he was the first to discover that carbon conducts electricity. It was he who gave rubber its name. He achieved the alcohol dehydration using a ceramic.
- Becquerel, Alexandre-Edmond** (24 March 1820–11 May 1891), French scientist known for the discovery of the photovoltaic effect in 1839. He studied the solar spectrum and was also interested in magnetism, electricity and optics.
- Stefan, Joseph** (24 March 1835–7 January 1893), Austro-Hungarian scientist. He is known for his outstanding work on the desired birefringence of quartz. He established the Law of black body radiation, which is called the Stefan–Boltzmann law. He determined the thermal conductivity of various gases and the conduction of heat by fluids. He also worked on electromagnetism.
- Debye, Peter Joseph Wilhelm** (24 March 1884–2 November 1966), Dutch scientist. He contributed to the concepts of dipole moment correlated with temperature; Debye relaxation, which is used in the method of “Debye and Scherrer”; and the dielectric constant. His name is immortalized in the unit of measurement (Debye) of the dipole moments of molecules. He was awarded the Nobel Prize in chemistry in 1936.
- Butenandt, Adolf Friedrich Johann** (24 March 1903–18 January 1995), German scientist. He isolated and identified the structure of sex hormones. For this work, he was co-winner of the Nobel Prize in chemistry in 1939 with L. Ruzicka. Subsequently, in 1959, he discovered the bombykol phenomenon.
- Kendrew, John Cowdery** (24 March 1917–23 August 1997), British scientist with fundamental contributions to the structure of globular proteins. His work was awarded the Nobel Prize in chemistry in 1962, which was shared with M.F. Perutz.
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- 25** **Amici, Giovanni Battista** (25 March 1786–10 April 1863), Italian astronomer. He is credited with the invention of the immersion microscope in oil, where the lower lens is immersed in an oil droplet, thereby eliminating the sources of focal imperfection.
- Weiss, Pierre-Ernest** (25 March 1865–24 October 1940), French scientist. He is best known for his work on ferromagnetism. He proposed his theory of ferromagnetism, which allowed verification of the predictions of atomic theory for the magnetic moments of certain materials using measurements of the magnetic susceptibility of these materials. He suggested the existence of the magneton. He also discovered the magnetocaloric phenomenon.
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- 26** **Thompson, Benjamin** (26 March 1753–21 August 1814), American scientist. He was a pioneer of photometry, the measurement of light. He invented a photometer and introduced the standard candle as a unit of luminous intensity.
- Brickwedde, Ferdinand Graft** (26 March 1903–29 March 1989), American scientist. He is known for the discovery of deuterium. He is also part of the team of researchers that liquefied helium at $-269\text{ }^{\circ}\text{C}$.
- Anfinsen, Christian B.** (26 March 1916–14 May 1995), American scientist. His research on ribonuclease resulted in him being a co-winner of the Nobel Prize in chemistry in 1972.
- Ourisson, Guy** (26 March 1926–4 November 2006), French scientist. He devoted his life to research in the fields of the chemistry of natural products, organic geochemistry, chemistry and plant biology, prebiotic chemistry and neurochemistry. His research remains a reference for posterity.
- Leggett, Anthony James** (26 March 1938), English scientist. He is known for his work in the field of low temperature physics. Together with V. Ginzburg and A. Abrikosov, he won the 2003 Nobel Prize in physics for his research on the theory of superconductors and superfluids.
- Wieman, Carl Edwin** (26 March 1951), American scientist. He is co-winner with E. Cornell and W. Ketterle of the Nobel Prize in physics in 2001 for the first fundamental studies of the properties of condensates and the development of a Bose–Einstein condensate in dilute gaseous alkali atoms.
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- 27** **Röntgen, Wilhelm Conrad** (27 March 1845–10 February 1923), German scientist. He discovered X-rays and won the Nobel Prize in physics in 1901. He discovered X-rays.
- Wallach, Otto** (27 March 1847–26 February 1931), German scientist. He discovered the terpenes, and in 1892, he obtained isoprene from terpene hydrocarbons. He studied the chemical composition of camphor and initiated research on vegetable oils. He was awarded the Nobel Prize in chemistry in 1910 for his fundamental research in the field of alicyclic compounds.
- Ewing, James Alfred** (27 March 1855–7 January 1935), Scottish scientist. He was interested in the magnetic properties of metals. He coined the term hysteresis.
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- 28** **Friedman, Jerome Isaac** (28 March 1930), American scientist. He won the Nobel Prize in physics in 1990 with H.W. Kendall and R.E. Taylor for his work on the deep inelastic scattering of electrons on protons and bound neutrons.
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- 29** **Drake, Edwin Laurentine** (29 March 1819–9 November 1880), American entrepreneur. He is known as the one who drilled the first American oil well on August 27, 1859 near Titusville (Pennsylvania). Oil was used to produce kerosene to replace whale oil for lighting. The world's first oil well was drilled in Poland in 1854 at Bóbrka near Krosno in southeast Galicia.
- Dunitz, Jack David** (29 March 1923), English scientist. He is known as one of the greatest crystallographers who participated in the construction of the first DNA model in 1953.
- Taylor Jr., Joseph Hooton** (29 March 1941), American scientist. Together with R.A. Hulse, he was co-winner of the Nobel Prize in physics in 1993 for the discovery of another type of pulsar, allowing for the detailed study of gravitation.
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- 30** **Bunsen, Robert** (30 March 1811–16 August 1899), a German scientist. He discovered hydrated iron oxide. He invented the carbon–zinc battery and the oil drop photometer to measure light. He was the first to produce magnesium and demonstrated that he could burn it to produce a bright light, which proved to be of significant importance in photography. He invented a spectroscopy technique in 1860. The Bunsen burner was named in his honor.
- Hanriot, Maurice** (30 March 1854–1830 August 1933), French scientist. His reference work concerns the study of the series of aromatic compounds (anthracene, diphenylmethane), medicinal chemistry, physiology, excesses glycerin, aldehyde and its polymers, and hydrogen peroxide.
- 30 March 1842:** ether is used for the first time as an anesthetic by an American doctor.
- 30 March 30 1977:** the five rings around the planet Uranus were discovered.
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- 31** **Descartes, René** (31 March 1596–11 February 1650), French scientist and philosopher. He stated the mechanistic theory of matter. He suggested a new view of atomism. The theory of motion of bodies according to their shape remains essential, despite the criticism of Newton. His laws of elastic collisions between solid bodies helped develop Boltzmann's kinetic theory of gases, which is used in the contemporary study of the kinetics of chemical reactions.
- Bragg, William Lawrence** (31 March 1890–1 July 1971), Australian scientist. He is known for his mathematical studies on crystallography; the empirical Bragg law for X-ray diffraction bears his name. He was 25-years-old when he won the Nobel Prize in physics in 1915 with his father W.H. Bragg for their work on crystal structures using X-ray diffraction.
- Tomonaga, Shin'ichiro** (31 March 1906–8 July 1979), Japanese scientist. Together with R. Feynman and J. Schwinger, he received the Nobel Prize in physics in 1965 for their work on quantum electrodynamics.
- Rubbia, Carlo** (31 March 1934), Italian scientist. He developed a new method for concentrating solar power at high temperatures to produce energy. For his research on the discovery of the W and Z field particles—vectors of the weak interaction—he was a co-recipient (with S. van der Meer) of the Nobel Prize in physics in 1984.

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