Dates of Note

Paul Karrer, the Swiss chemist who investigated the constitution of carotenoids, flavins, and vitamins A and B2, and was 1937 Nobel Prize Laureate (with Haworth), was born on April 21, 1889. ***Donald J. Cram***, the 1987 Nobel laureate in chemistry (with Pedersen and Lehn) for host-guest work, was born on 22 April 1919 and atomic scientist ***J. Robert Oppenheimer*** the same day in 1904. On April 26 in 1954, mass testing of the Salk polio vaccine began and involved about 1.8 million children. ***Abraham Pineo Gesner***, the Canadian chemist and geologist who pioneered the extraction of kerosene (which he named) by the dry distillation of asphalt rock and realised its usefulness as a cleaner-burning fuel in lamps than whale oil, died on April 29, 1864 – 150 years ago.

Alexander William Williamson, the English chemist whose research on alcohols and ethers clarified organic molecular structure and for whom the etherification synthesis named, was born on May 1, 1824, as was ***Hilaire Chardonnet*** the same day in 1839; he was the French chemist and industrialist who first developed rayon, the first commonly used artificial fibre. ***Frederic Stanley Kipping***, the British chemist who pioneered the chemistry of silicones, died on May 1, 1949, as did ***John Walker*** in 1859; he was the English chemist who invented friction matches made from small wooden sticks coated with sulfur, then tipped with a mixture of potassium chlorate, antimony sulfide and a binder of gum Arabic. May 1, 1964 was the day that saw the first BASIC program run on a computer. ***Sergey Vasilyevich Lebedev***, the Russian chemist who developed a method for industrial production of polybutadiene in 1910 and whose process was begun in Russia in 1932-33 using potatoes and limestone as raw materials, died on May 2, 1934, as did ***Giulio Natta***, the Italian chemist who contributed to the development of high polymers through the Ziegler-Natta catalysts, in 1979.

Wilbur Olin Atwater, the American scientist who developed agricultural chemistry, was born on May 3, 1844. ***Max Delbrück***, the German chemist who developed the fermentation industry, established a school for distillation workers, a glass factory for the manufacture of reliable apparatus and instruments, and an experimental distillery, died on May 4, 1919. ***Paul Lauterbur***, the American chemist who shared (with Mansfield) the 2003 Nobel Prize for Physiology or Medicine for discoveries concerning magnetic resonance imaging, was born on May 6, 1929. ***Alexander von Humboldt***, the German natural scientist, archaeologist, explorer and geographer, after whom the cold ocean current along the Peruvian coast is named after (the Humboldt Current) and who has given his name to the noted German Foundation, died on May 6, 1859. ***Sidney Altman***, the Canadian-American molecular biologist who shared the 1989 Nobel Prize for Chemistry with Cech for discoveries concerning RNA, has his 75th birthday on May 7.

Antoine-Laurent Lavoisier, the father of modern chemistry, was guillotined in Paris on May 8, 1794. ***Paul-Louis-Toussaint Héroult*** was the French chemist who invented the electric-arc furnace, widely used in making steel. Independently of the simultaneous work of Charles M. Hall of the US, he devised the electrolytic process for preparing aluminium; he died on May 9, 100 years ago. ***Roy J. Plunkett***, the American inventor of Teflon (the DuPont trademark name for polytetrafluoroethylene - PTFE), died on May 12, 20 years ago, the same day that ***Charles-Adolphe Wurtz*** died in 1884. ***Lars Frederik Nilson***, who discovered the oxide of scandium, scandia, in 1879 in the rare-earth mineral gadolinite, died on May 14, 1899. ***Georg Ernst Stahl***, who developed the phlogiston theory of combustion and of such related biological processes as respiration, fermentation, and decay, was born on the same day in 1734. ***Pierre Curie*** was born on May 15, 1859, while ***William Hume-Rothery***, the British metallurgist, internationally known for his work on the formation of alloys and intermetallic compounds was born on the same day in 1899. ***Roy Patrick Kerr***, the New Zealand mathematician who solved in 1963 Einstein's field equations of general relativity to describe rotating black holes, has his 80th birthday on May 16. ***Alfred O. C. Nier*** who refined the mass spectrometric process to distinguish isotopes, died on May 16, 20 years ago. ***Thomas Midgley***, who discovered the antiknock effectiveness of tetraethyl lead $(C_2H_5)_4Pb$ in 1921, was born on May 18, 1899, the day 100 years ago that the first commercial cargo entered the Panama Canal. ***Max Ferdinand Perutz***, the Austrian-born British biochemist and co-recipient of the 1962 Nobel Prize for Chemistry for his X-ray diffraction analysis of the structure of haemoglobin, was born on May 19, 100 years ago.

Bengt Ingemar Samuelsson, the Swedish biochemist and co-recipient (with fellow Swede S.K. Bergström and J.R. Vane) of the 1982 Nobel Prize for Physiology or Medicine for the isolation, identification, and analysis of numerous prostaglandins, has his 80th birthday on May 21. ***William Whewell***, the British scientist, best known for his survey of scientific method and for creating scientific words (*scientist* and *physicist* by analogy with the word *artist*), founding mathematical crystallography, and developing Mohr's classification of minerals, was born on May 24, 1794. ***Waldo Semon*** who invented plasticised PVC (vinyl), died on May 26, 1999. Sir ***Joseph Wilson Swan***, the English scientist, chemist, physicist and inventor, who produced an early electric incandescent lamp, died on May 27, 100 years ago, the day 20 years ago that the highest temperature produced in a lab was a plasma temperature of 510,000^{o}C in the test reactor at Princeton University. ***Antoine A. B. Bussy***, the French chemist who first prepared magnesium in a coherent form, was born on May 29, 1794, while ***Sir Humphry Davy***, who discovered several chemical elements and compounds, invented the miner's safety lamp, and epitomised the scientific method, died on the same date in 1829.

June 2 marks the 280th anniversary of the founding of the Royal Swedish Academy of Sciences (Kungl. Vetenskapsakademien). On June 4, 1794, Joseph Priestley arrived

at New York in the US, having emigrated from England. Soon after, he settled in Northumberland, Pennsylvania. The day also marks the birth in 1739 of ***Johann Beckmann***, the German chemist and economist who established the science of agriculture. ***Adolf Windaus***, the German organic chemist, who was awarded the 1928 Nobel Prize for Chemistry for services rendered through his research into the constitution of the sterols and their connection with the vitamins, died on June 9, 1959. ***Fritz Albert Lipmann***, the German-American biochemist who shared (with Krebs) the 1953 Nobel Prize for Physiology or Medicine for the discovery of coenzyme A, was born on June 12, 1899. The Cavendish Laboratory opened at the University of Cambridge on June 16, 1874. ***Anders Jonas Angstrom***, the Swedish physicist whose pioneering use of spectroscopy is recognised in the name of the angstrom unit of length (10^{-10} metre), died on June 21, 1874.

Walther Hermann Nernst, the German scientist and one of the founders of modern physical chemistry was born on June 25, 150 years ago (1864). In 1889, Nernst devised his theory of electric potential and conduction of electrolytic solutions (the Nernst Equation) and introduced the *solubility product* to explain precipitation reactions. In 1906, he showed that it is possible to determine the equilibrium constant for a chemical reaction from thermal data, and in so doing he formulated what he himself called the third law of thermodynamics. ***Lord Kelvin (William Thomson)*** was born on June 26, 1824. ***Mikhail Semyonovich Tswett***, the Russian father of chromatography, who developed and named the adsorption chromatography technique of separating plant pigments by extracting them from leaves with ether and alcohol and percolating the solution through a column of calcium carbonate, died on June 26, 1919. ***James Smithson***, the English scientist who provided funds in his will for the founding of the Smithsonian Institution in Washington, DC, died on Jun 27, 1829. June 30 marks 75 years since the 60-in. diameter cyclotron was set in operation at University of California, Berkeley. Seven elements were discovered or made using it, beginning with the discovery of neptunium (Edwin McMillan), plutonium (Glenn Seaborg and his team), americium (atomic number 95), curium (96), berkelium (97), californium (98) and (by 1955) mendeleevium (101).

Gerald Maurice Edelman, the American biochemist whose contributions concerning the chemical structure of antibodies won him (with Porter) the Nobel Prize for Medicine or Physiology in 1972, has his 85th birthday on July 1. The day also marks 80 years since the first X-ray of the whole body was taken in a one-second exposure. ***Thomas Anderson***, the Scottish organic chemist who discovered pyridine, was born on July 2, 1819. ***Marie Curie*** died on July 4, 80 years ago. ***Edward Robinson Squibb***, the US chemist and pharmaceutical manufacturer who improved the purity and reliability of drugs while a Navy medical officer, was born on July 4, 1819. ***Georg Ohm***, the German physicist who showed by experiment that there are no perfect electrical conductors and was followed by his famous 1826 Ohm's law, died on July 6, 1854. ***Lyman C. Craig***, the American chemist who developed the countercurrent distribution (CCD) method for fractionation of complex mixtures with an apparatus that could simultaneously accomplish 20 quantitative extractions in a single step, died on July 7, 1974. The day also marks the 1954 death of ***Saul Dushman***, the Russian-American physical chemist who was world leader in vacuum science. ***Robert Burns Woodward***, the noted American organic chemist who received the Nobel Prize for Chemistry in 1965, died on July 8, 1979 as did ***Torbern Olof Bergman*** in 1784; he was the Swedish chemist who experimented with carbon dioxide, which he named *aerial acid* and successfully prepared artificial mineral water. ***Emil Fischer***, the German chemist who was awarded the Nobel Prize for Chemistry in 1902 in recognition of his investigations of sugar and purine, died on July 15, 1919. This day in 1869, ***Hippolyte Mège Mouriés*** patented margarine in France. ***Harold Dadford West***, the American biochemist and college president, who was the first to synthesise the essential amino acid threonine, was born on July 16, 1904. ***Samuel Colt***, of Colt 45 fame, was born on July 19, 200 years ago. Sir ***Ed***(***mund Percival***) ***Hillary*** was born on July 20, 1919, the day 50 years later (1969) that Apollo XI astronauts Neil Armstrong and Edwin "Buzz" Aldrin became the first men to walk on the moon.

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