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Ernest Gaston Joseph Solvay, a prestigious example of a scientific entrepreneur or *labor omnia vincit improbus*

Ernest Gaston Joseph Solvay, a Belgian chemist, scientist, industrialist, philanthropist, humanist, socialist, democrat and liberal in his heart, was the founder of the Solvay Company. Solvay is best known for his development of a commercially viable ammonia-soda process for producing soda ash (sodium carbonate), which is widely used in the manufacture of such products as glass and soap. He kept his position as a world leader in the production of soda ash. Solvay solved the practical problems of conducting the ammonia-soda process on a large scale, unaware that many chemists had tried and failed to do this over the past fifty years. All his life, he was a supporter of industrial, social, economic, and scientific progress. Solvay adapted to an ever-changing world for more than a century and a half. This world had to reinvent itself many times, always building on a strong heritage of social responsibility, technical excellence and a family character.

This year, the French Academy of Science is celebrating its 350th anniversary, which is the perfect occasion to remember Solvay, as he was also a member of the French Academy of Sciences.

The life of Ernest Gaston Joseph Solvay: as sacrifice, as modesty

“A well is nice if you share”, Seneca

Solvay was born with the birth of the telegraph, when Samuel Morse demonstrated the operation of his telegraphic code, and with the Atlantic crossing by a steamship, the Great Western, which left Bristol to reach New York. Solvay was born on 16 April 1838 in Rebecq-Rognon in Walloon Brabant, near Brussels, Belgium, to a family of industrial chemists. In 1854, Solvay was seriously ill with a severe pleurisy and was forced to abandon his secondary education in Malonne for these health reasons. Solvay did not have the opportunity to attend university. From an

early age, he demonstrated a passion for physics, chemistry and natural history. Taking into account his passion for chemistry, he was instructed in 1859 by his uncle, director of the gas works of Saint-Josse-ten-Node, to study the treatment of ammonia water, a byproduct of the manufacture of some gases.

Intelligenti pauca...

After being previously introduced to salt by his father, Ernest thereby met ammonia, the second of the two pillars of his life as an inventor. His uncle was also responsible for the development of coke ovens and CO₂ generators. Solvay imagined collecting ammonia gas and carbon dioxide in salt water. He observed that upon shaking the liquid, it thickened, and a precipitation reaction took place: the white precipitate was sodium hydrogen carbonate or bicarbonate. This bicarbonate turns into sodium carbonate after heating to 270 °C; it is this compound that is called “soda” in the industry parlance. The Solvay process is based on the low solubility of NaHCO₃ in an ammonia solution (basic), and its success is because the used ammonia gas can be recovered, and all operations can be carried out continuously. On April 15, 1861, Solvay filed his first patent, titled *Industrial manufacture of soda ash using sea salt, ammonia and carbon dioxide*. Solvay believed his finding was innovative, but the artificial production of soda from sea salt had already been discovered by Nicolas Leblanc, in 1783, shortly before the French Revolution. However, political circumstances had not allowed Leblanc to industrialize the process. The process was energy-intensive, costly and caused pollution through its release of hydrochloric acid and difficult-to-upgrade sulfides. In 1811, Augustin Fresnel made the same discovery as Solvay. At the Polytechnic of Paris, Fresnel mixed NaCl and NH₄HCO₃ and obtained a precipitate of NH₄Cl and NaHCO₃. The simplicity of the process seduced many people, including the English H.G. Dyar and J. Hemming in 1838 and the French industrialists Schloesing and Rolland in 1854; however, in the face of

the difficulties of large-scale industrialization and a lack of money, most inventors became discouraged. Solvay solved the practical problems of conducting the ammonia-soda process on a large scale, unaware that many chemists had tried and failed to achieve this over the past fifty years. He devised carbonating towers, which allowed large amounts of ammonia, salt solution, and carbon dioxide to be mixed; his process also allowed the recovery of expensive ammonia, which could then be reused.

Audaces fortuna juvat...

Despite several difficulties, the Solvay brothers decided to found the company Solvay & Cie in 1863 with the support of several family members and friends. *Per aspera ad astra!* That same year, Solvay's second patent gave a description of each unit, each piece of equipment needed to prepare soda. Since 1865, the date of the startup of the plant, a continuous fight was initiated that was dedicated to the constant improvement of equipment and the resolution of a series of difficulties inherent in any new industry. Initially, Solvay used a series of absorbers and horizontal rolls, arranged in a cascade to slowly reacting the salt water, ammoniac and carbon dioxide. In 1869, Solvay began pursuing the idea of towers made of superimposed cylinders. Carbon dioxide was injected at the base at a pressure of several atmospheres, while the ammoniacal brine dripped from above. The famous "Solvay vertical column" guaranteed the company's success for decades to come. Since 1869, the Solvay process proved its economic superiority over the Leblanc process. Solvay, without a university degree, was truly a pioneer of Chemical Engineering. In 1874, Solvay & Cie began to create a network of European soda ash plants located close to salt deposits, and the first plant was located at Dombasle-sur-Meurthe in French Lorraine. In 1888, when the company was celebrating its twenty-fifth birthday, it already had a soda works network in major industrialized countries. After the death of his brother in Cannes on 23 January 1894, Solvay somewhat disconnected from Solvay & Cie to turn to the civil community as a generous patron and philanthropist. Although he had become one of the biggest manufacturers in the world, Solvay lost neither the simplicity of his beginnings nor his incredible intellectual activity. Despite amassing a large fortune, he never attached an exaggerated value to money but regarded it as a means of action.

Beati possidentes...

Solvay, self-taught, was a scholar and a theorist: his concerns ranged from chemistry and physics to sociology and economics, through physiology and even political management. Henri Van Laer, president of the Chemical Society of Belgium, offered the Jean Stas medal, engraved in 1897 by Fernand Dubois, one of the most renowned Brussels medalists, to Solvay.

Nobility of mind...

Solvay was very interested in the IUPAC and the IACS; he made an important donation of money for the organization

of the reception in honor of the members of the Council of IACS. Solvay also donated a significant amount of money to IACS, and it was decided that its meetings would be held every two years in Brussels. Solvay himself was a protector of the Chemical Society of Belgium. In September 1919, he promised the Chemical Company interest-bearing capital, which was returned to him by the IACS at its dissolution. On the death of J.S. Stas, the heirs offered his laboratory, a library and personal memories to the Belgian State, but the government refused this offer. It was Solvay who, upon the proposal of Professor ULB Paul Heger (1846–1925), bought the collection and confided it to the Solvay Institute of Physiology, Leopold Park, in Brussels in 1893.

Moral elegance is not a question of money, but rather self-confidence, and it comes with education...

Solvay founded various institutes: the Institute of Physiology (1893); the Institute of Social Sciences (1899), which was extended by the Institute of Sociology (1902); and the Institute of Trade (1903). There was also another scientific institute, the Institute of Hygiene, Bacteriology and Therapeutics (1894), founded by Alfred Solvay, brother of Ernest Solvay. To promote research and exchange of knowledge, Solvay finally founded the International Institute of Physics and Chemistry, which organized gatherings, including triennial international scientific meetings.

Ernest Solvay died on 26 May 1922, exactly one month after the first Chemistry Council. His contribution to his company and its impressive industrial and social heritage remain, to this day, an important example for all generations. Solvay's company has been developed into an international network of factories, close to salt deposits and consumer markets, while constantly improving the production process. With 24 manufacturing facilities worldwide, Solvay was, on the eve of the First World War, an undisputed industry leader. Solvay provided only his reason for living. Solvay was also concerned with social issues. He developed his reflections on the conditions for more equal opportunities for all through education and state intervention in the economy, social security and labor exchanges. At the forefront of social progress, his company was the first to provide sickness benefits for its workers (1878), to extend the 8-h day (1907), to create a pension fund and to offer paid leave with double salary (1913), while Belgium did not require such. True to a paternalistic concept of management, he spared neither time nor money to improve the living conditions of his personnel: co-operatives, housing, schools, training centers, a library, a hospital, and recreation organization – everything was made available.

The personal life and professional life of Solvay can be compared to the musical life of Beethoven. How liberal was Beethoven in his orchestration! Each instrument was requested to give its opinion, just like Solvay! What a liberal scientific entrepreneur was Solvay! In this case, the main idea in the opera of Beethoven was various original versions or spirit manifestations: sublime, sadness, and joy, but in harmony. For example, the *Appassionata* of Beethoven contains a melody that repeats many times like a rational moral principle, which Beethoven repeated to calm the

passionate agitation. The sound of Beethoven inspires us so! The work of Solvay charms the souls of generations of chemists. Solvay was a man who left traces and who does not need evidence to show his existence. Throughout his 83 years, he showed how work was his code of life because the economy was his wisdom and principles of life, even more so because, although he was the owner of his financial company, he would not be the owner of the ideology of its employer. He was a liberal, a democrat, and a social innovator who showed how he conquered *LIFE* and became a success (not by chance). After his death, individual superiority of Solvay was transformed into the superiority of his group, by work and only work. No favoritism! Just work and sacrifice! *Sursum corda...*

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April	MEMBERS OF THE FRENCH ACADEMY OF SCIENCES
1	<p>Ulrich, Frédéric Woldemar (1 April 1700–27 May 1755), Danish–German–French soldier.</p> <p>Schwoerer, Émile (1 April 1861–2 August 1927), French engineer.</p> <p>Breton, Jules-Louis (1 April 1872–2 August 1940), French inventor.</p> <p>Martonne, Emmanuel Louis Eugène de (1 April 1873–24 July 1955), French geographer.</p> <p>Cohen-Tannoudji, Claude (1 April 1933), Algerian–French physicist and Nobel laureate (1997).</p> <p>Connes, Alain (1 April 1947), French mathematician and Fields Medal (1982).</p>
2	<p>Charas, Moysse (2 April 1619–21 January 1698), French chemist.</p> <p>Winsløw, Jacob Benignus (2 April 1669–3 April 1760), Danish–French anatomist.</p> <p>Albert, Charles d' (2 April 1686–10 February 1751), French officer.</p> <p>Morand, Sauveur François (2 April 1697–21 July 1773), French surgeon.</p> <p>Hapel Lachenaie, Thomas Luc Augustin (2 April 1760–14 May 1808), French veterinarian.</p> <p>Delessert, François-Marie (2 April 1780–15 October 1868), French politician.</p> <p>Van de Sande Bakhuyzen, Hendricus Gerardus (2 April 1838–8 January 1923), Dutch astronomer.</p>
3	<p>Brisson, Mathurin Jacques (3 April 1723–23 June 1806), French zoologist and physicist.</p> <p>Patrin, Eugène Louis Melchior (3 April 1742–15 August 1815), French mineralogist and naturalist.</p> <p>Bretonneau, Pierre Fidèle (3 April 1778–18 February 1862), French medical doctor.</p> <p>Caumel, Jean Baptiste (3 April 1841–22 December 1917), French botanist.</p> <p>Vogel, Hermann Carl (3 April 1841–13 August 1907), German astrophysicist.</p>
4	<p>Harder, Johann Jacob (4 April 1658–1711), German medical doctor.</p> <p>Delisle, Joseph-Nicolas (4 April 1688–11 September 1768), French astronomer.</p> <p>Thomas, André Jean (4 April 1905–30 March 1999), French medical doctor.</p>
5	<p>Viviani, Vincenzo (5 April 1622–22 September 1703), Italian astronomer, physicist and mathematician.</p> <p>Le Dran, François Antoine (5 April 1690–7 February 1724), French medical doctor.</p> <p>Morogues, Sébastien François Bigot (5 April 1705–26 August 1781), French soldier.</p> <p>Duvaucel, Charles (5 April 1734–3 May 1820), French astronomer.</p> <p>Verdun, Jean-René Antoine de (5 April 1741–3 August 1805), French scientist.</p> <p>Loysel, Pierre (5 April 1751–29 June 1813), French politician.</p> <p>Viborg, Erik Nissen (5 April 1759–25 September 1822), Danish veterinarian and botanist.</p> <p>Savigny, Marie Jules César Lelorgne de (5 April 1777–5 October 1851), French zoologist.</p> <p>Guyon, Jean-Louis Geneviève (5 April 1794–23 August 1870), French medical doctor.</p> <p>Dujardin, Félix (5 April 1801–8 April 1860), French biologist.</p> <p>Demidoff, Anatole Nicolaïevitch (5 April 1813–29 April 1870), Russian industrialist.</p> <p>Lister, Joseph (5 April 1827–10 February 1912), British surgeon and scientist.</p> <p>Chodat, Robert Hippolyt (5 April 1865–28 April 1934), Swiss botanist.</p> <p>Lapparent, Marie Jacques Cochon de (5 April 1883–18 May 1948), French mineralogist.</p> <p>Cherwell of Oxford, Frederick Alexander Lindemann (5 April 1886–3 July 1957), English physicist.</p> <p>Blalock, Alfred (5 April 1899–15 September 1964), American surgeon.</p> <p>Ponte, Maurice Jules Henry (5 April 1902–26 September 1983), French engineer and physicist.</p> <p>Romanowicz, Barbara (5 April 1950), French geophysicist.</p>
6	<p>Lowendal, Ulric Frédéric Woldemar de (6 April 1700–27 May 1755), Danish–German–French soldier.</p> <p>Sapte, Henry-Bernard-Marie de (6 April 1707–11 April 1786), French scientist.</p>

- Tedenat, Pierre** (6 April 1755–4 November 1832), French mathematician.
Miller, William Hollowes (6 April 1801–20 May 1880), Welsh mineralogist.
Bassot, Jean Antonin Léon (6 April 1841–17 January 1917), French astronomer.
Bigourdan, Camille Guillaume (6 April 1851–28 February 1932), French astronomer.
Danjon, André Louis (6 April 1890–21 April 1967), French astronomer.
Royer, Louis Michel (6 April 1895–31 March 1980), French scientist.
Changeux, Jean-Pierre (6 April 1936), French neurobiologist.
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- 7** **Adanson, Michel** (7 April 1727–3 August 1806), French naturalist.
Clark, Bracy (7 April 1771–16 December 1860), English veterinary surgeon.
Munier-Chalmas, Charles Philippe Ernest (7 April 1843–9 August 1903), French geologist.
- 8** **Bonté, Pierre Joseph Marie** (8 April 1730–2 August 1806), French scientist.
Dumas, Charles Louis (8 April 1765–3 April 1813), French medical doctor.
Mohl, Hugo von (8 April 1805–1 April 1872), German botanist.
Brown-Séguard, Charles-Édouard (8 April 1817–2 April 1894), Mauritian physiologist and neurologist.
Hofmann, August Wilhelm von (8 April 1818–5 May 1892), German chemist.
Parenty, Henry Louis Joseph (8 April 1851–16 December 1921), French scientist.
Loeb, Jacques (7 April 1859–12 February 1924), German–American physiologist and biologist.
Fredholm, Eric Ivar (7 April 1866–17 August 1927), Swedish mathematician.
Calas, Raymond (8 April 1914–28 September 1996), French scientist.
Bruhat, François (8 April 1929–17 July 2007), French mathematician.
-
- 9** **Fèvre, Jean Le** (9 April 1652–1796), French astronomer.
Damoiseau de Montfort, Marie-Charles-Théodore de (9 April 1768–6 August 1846), French astronomer.
Cialdi, Alessandro (9 April 1807–26 June 1882), Italian engineer.
Delaunay, Charles-Eugène (9 April 1816–5 August 1872), French astronomer.
Laguerre, Edmond Nicolas (9 April 1834–14 August 1886), French mathematician.
Bonnier, Gaston Eugène Marie (9 April 1853–30 December 1922), French botanist.
Bouvier, Louis Eugène (9 April 1856–14 January 1944), French entomologist.
Cartan, Élie Joseph (9 April 1869–6 May 1951), French mathematician and physicist.
Karrer, Paul (9 April 1889–18 June 1971), Swiss chemist and Nobel Prize (1937).
Monod, André Théodore (9 April 1902–22 November 2000), French naturalist.
Cotton, Albert (9 April 1930–20 February 2007), American chemist.
Hironaka, Heisuke (9 April 1931), Japanese mathematician and Fields Medal (1970).
Sansonetti, Philippe (9 April 1949), French scientist.
Carosella, Edgardo D. (9 April 1951), French immunologist.
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- 10** **Tschirnhaus, Ehrenfried Walther de** (10 April 1651–11 September 1708), German scientist.
Pringle, John (10 April 1707–18 January 1782), British medical doctor.
Bordenave, Toussaint (10 April 1728–12 March 1782), French anatomist.
Leslie, John (10 April 1766–3 November 1832), Scottish mathematician.
Dufour, Jean Marie Léon (10 April 1780–18 April 1865), French medical doctor.
Lindet, Gaston Aimé Léon (10 April 1857–15 June 1929), French chemist.
Marchal, Émile Jules Joseph (10 April 1871–17 November 1954), Belgian botanist.
Darmois, Émile Eugène (10 April 1884–4 November 1958), French physicist.
Houssay, Bernardo Alberto (10 April 1887–21 September 1971), Argentine physiologist.
Woodward, Robert (10 April 1917–8 July 1979), American chemist.
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- 11** **Du Puy, Jean Cochon** (11 April 1674–10 November 1757), French medical doctor.
Louvois, Camille Le Tellier de (11 April 1675–5 November 1718), French clergyman.
Artur, Jacques François (11 April 1708–21 March 1779), French naturalist.
Lassus, Pierre (11 April 1741–16 March 1807), French surgeon.
Melloni, Macedonio (11 April 1798–11 August 1854), Italian physicist.
Rougé, Olivier-Charles-Camille-Emmanuel de (11 April 1811–27 December 1872), French scientist.
Sinaý, Pierre (11 April 1938), French chemist.
Gibbs, Josiah Willard (11 April 1839–28 April 1903), American scientist.
Campbell, William Wallace (11 April 1862–14 June 1938), American astronomer.
Stroobant, Paul-Henri (11 April 1868–15 July 1936), Belgian astronomer.
Bénard, Henri Auguste (11 April 1885–3 August 1973), French physicist.
Nozières, Philippe (12 April 1932), French physicist.
Lazdunski, Michel (11 April 1938), French biologist.
Wiles, Andrew John (11 April 1953), British mathematician.
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- 12** **Jussieu, Antoine-Laurent de** (12 April 1748–17 September 1836), French botanist.
Heim, Albert (12 April 1849–31 August 1937), Austrian doctor
Urbain, Georges (12 April 1872–5 November 1938), French chemist.
Kolmogorov, André Nicolas (12 April 1903–20 October 1987), Russian mathematician.
Joussot-Dubien, Jacques (12 April 1928–28 May 2009), French chemist.
Moffatt, Keith (12 April 1935), British mathematician.
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- 13** **Crousaz, Jean-Pierre de** (13 April 1663–22 March 1750), Swiss theologian and philosopher.
Frisi, Paolo (13 April 1728–22 November 1784), Italian mathematician and astronomer.
Trembley, Jean (13 April 1749–11 September 1811), Swiss mathematician.
Flourens, Marie-Jean-Pierre (13 April 1794–6 December 1867), French medical doctor and biologist.
Guignard, Jean Louis Léon (13 April 1852–7 March 1928), French pharmacist.
Severi, Francesco (13 April 1879–8 December 1961), Italian mathematician.
Milloux, Paul Henri (13 April 1898–28 June 1908), French mathematician.

- 14** **Huygens, Christian** (14 April 1629–8 July 1695), Dutch physicist and mathematician.
Magnin, le P. Jean (14 April 1701–1764), Spanish missionary.
Ibanez de Ibero, Carlos (14 April 1825–29 January 1891), Spanish military.
Becquerel, Paul (14 April 1879–22 June 1955), French physicist.
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- 15** **La Faye, Jean-Élie Leriget de** (15 April 1671–20 April 1718), French diplomat.
Euler, Leonhard (15 April 1707–18 September 1783), Swiss mathematician.
Saint-Hilaire, Étienne Geoffroy (15 April 1772–19 June 1844), French naturalist.
Struve, Friedrich Georg Wilhem (15 April 1793–23 November 1864), German astronomer.
Ross, James Clark (15 April 1800–5 April 1862), British naval officer.
Lœwy, Maurice (15 April 1833–15 October 1907), French astronomer.
Masters, Maxwell Tylden (15 April 1833–30 May 1907), English botanist.
Semionov, Nikolai Nikolaïevitch (15 April 1896–25 September 1986), Russian chemist and Nobel Prize (1956).
Benjamin, Thomas Brooke (15 April 1929–16 August 1995), English mathematician.
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- 16** **Sloane, Hans** (16 April 1660–11 January 1753), Irish-British physicist.
Law, John (16 April 1671–21 March 1729), Scottish economist.
Garipey, François Philippe Antoine (16 April 1711–2 April 1782), French astronomer.
Black, Joseph (16 April 1728–6 December 1799), Scottish physician and chemist.
Kater, Henry (16 April 1777–26 April 1835), English-German physicist.
Franklin, John (16 April 1786–11 June 1847), British explorer.
Puiseux, Victor Alexandre (16 April 1820–9 September 1883), French mathematician and astronomer.
Solvay, Ernest Gaston (16 April 1838–26 May 1922), Belgian chemist, scientist, industrialist and philanthropist.
Santy, Paul Eugène (16 April 1887–19 January 1970), French medical doctor.
Gorodetzky, Serge (16 April 1907–27 February 1999), French physicist.
Simonart, Paul-Jules (16 April 1907–5 January 1998), Belgian biologist.
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- 17** **Maraldi, Giovanni Domenico** (17 April 1709–14 November 1788), French-Italian astronomer.
Blagden, Charles (17 April 1748–26 March 1820), British scientist.
Martius, Carl Friedrich Philipp von (17 April 1794–13 December 1868), German botanist.
Love, Augustus Edward Hough (17 April 1863–8 June 1940), English mathematician.
Waldenström, Jan (17 April 1906–1996), Swedish medical doctor.
Kahn, Gilles (17 April 1946–9 February 2006), French informatician.
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- 18** **Saint-Bonnet, Jean de** (18 April 1652–6 March 1702), French clergyman.
Favelet, Jean-François de (18 April 1674–30 June 1743), Belgian medical doctor.
Lecoq, Henri (18 April 1802–4 August 1871), French botanist.
Perrier, François (18 April 1833–20 February 1888), French officer.
Lecoq de Boisbaudran, François Paul-Émile (18 April 1838–28 May 1912), French chemist.
Morat, Jean-Pierre (18 April 1846–25 July 1920), French medical doctor.
Champy, Paul Émile Christian (18 April 1885–29 April 1962), French medical doctor.
Boivin, André Félix (18 April 1895–8 July 1949), French chemist.
Wegmann, Charles Eugène (18 April 1896–7 January 1982), Swiss geologist.
Noyes, William Albert (18 April 1898–25 November 1980), American chemist.
Bijaoui, Albert (18 April 1943), French astronomer.
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- 19** **Tinseau d'Amondans de Gennes, Charles-Marie-Thérèse-Léon de** (19 April 1749–29 March 1822), French military and mathematician.
Aubuisson de Voisins, Jean-François (19 April 1769–20 August 1841), French engineer.
Ehrenberg, Christian Gottfried (19 April 1795–27 June 1876), German zoologist.
Laussedat, Aimé (19 April 1819–19 March 1907), French scientist.
Dehérain, Pierre-Paul (19 April 1830–7 December 1902), French plant physiologist and agricultural chemist.
Gosselet, Jules Auguste Alexandre (19 April 1832–20 March 1916), French geologist.
Van Tieghem, Philippe Édouard Léon (19 April 1839–28 April 1914), French botanist.
Moureu, Charles François Léon (19 April 1863–13 June 1929), French chemist and pharmacist.
Dujarric de la Rivière, Auguste René (19 April 1885–28 November 1969), French biologist.
Veibel, Stig Erik (19 April 1898–15 May 1976), Danish chemist.
Joly, Pierre Jacques Auguste (19 April 1913–12 July 1997), French biologist.
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- 20** **Couplet, Claude Antoine** (20 April 1642–25 July 1722), French engineer.
Pinel, Philippe (20 April 1745–25 October 1826), French medical doctor.
Seguin, Marc (20 April 1786–24 February 1875), French engineer.
Fodera, Michele (20 April 1793–30 August 1848), Italian medical doctor.
Forbes, James David (20 April 1809–31 December 1868), Scottish physicist.
Leyden, Ernst Victor von (20 April 1832–5 October 1910), German internist.
Serpa-Pinto, Alexandre Albert da Rocha de (20 April 1846–28 December 1900), Portuguese explorer.
Fabry, Louis (20 April 1862–26 January 1939), French astronomer.
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- 21** **Rolle, Michel** (21 April 1652–8 November 1719), French mathematician.
Forfait, Pierre Alexandre Laurent (21 April 1752–8 November 1807), French engineer.
Lalande, Michel Jean Jérôme Lefrançois de (21 April 1766–8 April 1839), French astronomer.
Biot, Jean-Baptiste (21 April 1774–3 February 1862), French astronomer and mathematician.
Roussin, Albin-Reine (21 April 1781–21 February 1854), French admiral.
Barros, Charles (21 April 1851–5 November 1939), French geologist.
Gramont, Antoine Alfred Arnaud Xavier Louis de (21 April 1861–31 October 1923), French mineralogist and physicist.
Candel, Sébastien (21 April 1946), French physicist.
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- 22** **Pelletier, Joseph** (22 April 1788–19 July 1842), French chemist and pharmacist.
Boschma, Hilbrand (22 April 1893–22 July 1976), Dutch zoologist.
Gernez-Rieux, Charles Jules Émile (22 April 1898–11 June 1971), French medical doctor.

- Levi-Montalcini, Rita** (22 April 1909–30 December 2012), Italian medical doctor.
Tirouflet, Jean (22 April 1922–12 April 2011), French chemist.
Atiyah, Michael Francis (22 April 1929), English mathematician.
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- 23** **Chicoyneau, François** (23 April 1672–13 April 1752), French medical doctor.
Lanux, Jean-Baptiste François de (23 April 1702–23 December 1772), French administrator.
Dubuat, Pierre Louis Georges du (23 April 1734–17 October 1809), French engineer.
Vicq d'Azyr, Félix (23 April 1748–20 June 1794), French anatomist and medical doctor.
Passy, Antoine François (23 April 1792–8 October 1873), French botanist and geologist.
Richard, Achille (23 April 1794–5 October 1852), French botanist and medical doctor.
Belgrand, Marie François Eugène (23 April 1810–8 April 1878), French engineer.
Witz, Marie Joseph Aimé (23 April 1848–25 January 1926), French scientist.
Coutagne, Aimé (23 April 1882–29 November 1970), French engineer.
Choquet, Daniel (23 April 1962), French medical doctor.
-
- 24** **Jaubert de Passa, François Jacques** (24 April 1785–16 September 1856), French agronomist.
Orfila, Mateo José Buenaventura (24 April 1787–12 March 1853), Spanish scientist.
Delafosse, Gabriel (24 April 1796–13 October 1878), French mineralogist.
Marignac, Jean-Charles Galissard de (24 April 1817–15 April 1894), Swiss chemist.
Gernez, Désiré Jean Baptiste (24 April 1834–31 October 1910), French chemist.
Gallieni, Joseph Simon (24 April 1849–27 May 1916), French military.
Helbronner, Paul (24 April 1871–18 October 1938), French engineer.
Plantefol, Lucien (24 April 1891–9 September 1983), French botanist.
Kaplan, Henri Seymour (24 April 1918–4 February 1984), American radiologist.
Panofsky, Wolfgang (24 April 1919–24 September 2007), German-American physicist.
Courtès, Georges (24 April 1925), French astronomer.
Gros, François (24 April 1925), French biologist.
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- 25** **Brunel, Marc Isambart** (25 April 1769–12 December 1849), English naturalist.
Buch, Christian Leopold von (25 April 1774–4 March 1853), German geologist and paleontologist.
Struve, Otto Wilhem (25 April 1819–14 April 1905), Russian–German astronomer.
Dwelschauvers-Dery, Victor Auguste Ernest (25 April 1836–15 March 1913), French scientist.
Klein, Félix (25 April 1849–22 June 1925), German mathematician.
Kolmogorov, Andreï Nikolaïevitch (25 April 1903–20 October 1987), Russian mathematician.
Malinvaud, Edmond (25 April 1923–7 March 2015), French economist.
Taquet, Philippe (25 April 1940), French paleontologist.
Caboche, Michel (25 April 1946), French biologist.
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- 26** **Morin, Jean** (26 April 1705–28 March 1764), French scientist.
Lallemand, Nicolas de Conteray (26 April 1739–12 October 1829), French mathematician.
Roux, Philibert Joseph (26 April 1780–23 March 1854), French medical doctor.
Léauté, Henry Charles Victor Jacob (26 April 1847–5 November 1916), French engineer and physicist.
Naquet, Robert (26 April 1923–7 December 2005), French medical doctor.
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- 27** **Paulet, Jean-Jacques** (27 April 1740–4 August 1826), French mycologist.
Audouin, Jean-Victor (27 April 1797–9 November 1841), French naturalist.
Gaillot, Jean Baptiste Aimable (27 April 1834–4 June 1921), French astronomer.
Gordan, Paul (27 April 1837–21 December 1912), German mathematician.
Maurice, Louis-César-Victor (27 April 1875–14 July 1960), French physicist.
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- 28** **Nicolas, le P. Pierre** (28 April 1643–16 September 1714), French scientist.
Lacroix, Sylvestre-François (28 April 1765–24 May 1843), French mathematician.
Baily, Francis (28 April 1774–30 August 1844), English astronomer.
Backlund, Johann Oskar (28 April 1846–16 August 1916), Swedish-Russian astronomer.
Bethenod, Joseph Frédéric Julien (28 April 1883–21 February 1944), French engineer.
Fessard, Alfred Eugène (28 April 1900–20 February 1982), French biologist.
Oort, Jan Hendrik (28 April 1900–5 November 1992), Dutch astronomer.
Laskar, Jacques (28 April 1955), French astronomer.
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- 29** **Poincaré, Jules Henri** (29 April 1854–17 July 1912), French physicist, mathematician and engineer.
Boulvain, Jules (29 April 1855–21 January 1920), Dutch-Belgian engineer.
Lecoqte, Georges (29 April 1869–27 May 1929), Belgian naval officer.
Montel, Paul Antoine Aristide (29 April 1876–22 January 1975), French mathematician.
Chaudron, Georges Léon (29 April 1891–14 March 1976), French chemist.
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- 30** **Fehrenbach, Charles** (29 April 1914–9 January 2008), French astronomer.
Amelot, Jean-Jacques (30 April 1689–7 May 1749), French politician.
Guattani, Carlo (30 April 1709–28 June 1773), Italian surgeon.
Burckhardt, Johann Karl (30 April 1773–22 June 1825), French mathematician.
Gauss, Carl Friedrich (30 April 1777–23 February 1855), German astronomer, mathematician and physicist.
Avebury, John Lubbock (30 April 1834–28 May 1913), English scientist, philanthropist and politician.
Simon, Eugène-Louis (30 April 1848–17 November 1924), French naturalist.
Demolon, Albert (30 April 1881–3 August 1954), French agronomist.
Chabre, Marc (30 April 1936–10 July 2010), French scientist.
Radman, Miroslav (30 April 1944), French-Croatian biologist.
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