



Block calendar/Éphéméride

Ferdinand Frédéric Henri Moissan: The first French Nobel Prize winner in chemistry or *nec pluribus impar*

Moissan, an eminent French chemist and pharmacist, was the discoverer of fluorine, the inventor of calcium carbide and of the acetylene lamp and a promoter of the use of the electric furnace in chemistry and sciences. He invented the electric arc furnace to achieve high temperatures (up to 3500 °C), with which he isolated more metals and manufactured several compounds such as carbides. The furnace paved the way for chemical syntheses at notably high temperatures. His research was of fundamental importance and opened new fields for scientific research and industrial activity. Moissan was a distinguished scientific mind, a great experimental talent and a teacher. He was defined by a high code of honor based on sacrifice and work.

Moissan, an eminent French chemist of unequalled brilliance and intellectual prowess, was the first French scientist to receive the Nobel Prize in chemistry, which he received in 1906. This year, 2016, the French Academy of Science is celebrating its 350th anniversary, which is the best occasion to remember Moissan, as he was appointed a member of the French Academy of Science in 1891.

1. Moissan – Life, death and life after death

Moissan was born in Paris on 28 September 1852, in a family with the high values of work and honor. His father was employed at the “Chemins de fer de l’Est”, and his mother was a seamstress. In 1864, his family left Paris to go to the town of Meaux. In October 1864, Moissan began to attend college in the city of Meaux. It was part of a special secondary education because his family was too modest to give him an opportunity to follow longer-term studies. In July 1870, he obtained his vocational certificate. At the college, he was remembered as a student with a keen intellect, open to mathematics and to physical sciences. Then, he was an apprentice to a clockmaker in Meaux. His professional life as an apprentice watchmaker was interrupted by the events of 1870, the siege of Paris, and the Franco-Prussian

War of 1870/1871, and his family was forced to return to Paris. He was 18 during the siege of the capital; he was incorporated for a year in the army and participated in the commitment in Avron in December 1870.

After the capitulation and armistice, upon the advice of his father, he enrolled in pharmacy school to prepare for a second-class degree in pharmacy, which was only accessible to non-graduate students. In February 1871, he became a trainee at the pharmacy Baudry, rue Saint-Martin in Paris, where he continued his training until June 1874. Then, he followed the theoretical teaching for three years to complete his pharmaceutical studies. Because Moissan hesitated between Pharmacy and Chemistry for a long time, he enrolled in 1872 at the Experimental Chemistry School of Edmond Frémy at the Museum of Natural History. After a semester during which he learned practical chemistry, he joined Dehérain’s laboratory, where he undertook plant physiology research on the absorption of oxygen and carbon dioxide emission by plants in darkness. Encouraged by Dehérain, he continued the classical studies and obtained his baccalaureate in 1874. In November 1875, he completed his year of military service in a nursing section in Lille and obtained his “licence ès sciences” in 1877. On his return to civilian life, impressed by the mineral chemistry class of Professor Alfred Rich at the School of Pharmacy, he selected this branch of chemistry as a field of research. In 1879, he reported his research in his thesis to obtain a first-class degree in pharmacy. His first extensive work in chemistry, which he started in Lille, addressed the family of iron oxides, had been proposed by Henri Debray, professor at the Sorbonne, and would be the subject of his doctoral thesis of Science, which he defended in 1880.

As a lecturer and head of practical work at the Paris School of pharmacy since November 1880, he was appointed as an associate professor in 1882 with a thesis entitled “Cyanogen Series”. In 1887, Moissan became the holder of the professor chair at the School of Pharmacy of Paris in toxicology and, starting from November 1899, in

inorganic/mineral chemistry. He remained there until July 1900, when he was appointed to the inorganic chemistry chair of the Faculty of Paris, succeeding Louis Troost. Therefore, he had two functions. In 1899, he was appointed the Director of Practice and Industrial Chemistry Laboratory (founded by Charles Friedel in 1896) and replaced Charles Friedel, who had died. He held this position until his death in 1907.

As a professor at the Sorbonne, he had more influence to reform the teaching procedures in a laboratory that he trained chemists for analysis and industry, but he did not train engineers. Moissan wanted to raise the level and train engineers. In 1901, the laboratory became the Applied Chemistry Institute (ICA). In 1906, he was allowed to deliver a chemical engineering degree. Education was accordingly reformed with a greater theoretical emphasis. The institute was named the National School of Chemistry of Paris (ENSCP) in 1948 and is currently ENSCP Paristech. Moissan also participated in the work of the Academy of Medicine and Health Council, the Aluminum Commission for the Ministry of War.

Everyone who had the pleasure of being in his company said that he was a great pedagogue. He was appreciated for his teaching skills and encouragement to young people. He wished that his students develop critical thinking, and he gave them the freedom to express opinions that were contrary to his own. He brought cheerfulness and enthusiasm, and he communicated it to those around. His presence in the laboratory was a joy for all. As a prestigious researcher, Moissan was also an outstanding teacher who aroused many vocations and had numerous French and foreign students.

In 1882, he married Meaux Marie Léonie Lugan, the daughter of a pharmacist in the city. From this union, a son, Henri Louis Ferdinand, was born, who was their only child. Henri Louis Ferdinand became a chemist and pharmacist engineer, assistant to the School of Pharmacy, and second lieutenant of the infantry reserve. He was killed in the war in the Meuse on 10 August 1914.

2. Research activities: *primus inter pares*

His first studies, which were conducted at Dehérain's lab, focused on oxygen absorption and carbon dioxide emission by plants that were kept in the dark. In 1874, he published his first results with Dehérain. In 1878–1879, he published two other memoirs and his first-class pharmaceutical thesis. Then, he abandoned plant physiology for inorganic chemistry. His first study in this area focused on oxides of the iron family, which was the subject of his doctoral thesis in sciences. The results led him to study various other metal oxides, particularly those of chromium, and he first discovered a method for obtaining pure chromium in 1879. As early as 1883, Moissan had turned his efforts toward fluorine isolation. On 26 June 1886, he passed an electric current through a solution of potassium fluoride in hydrofluoric acid in a platinum equipment; it cooled to $-50\text{ }^{\circ}\text{C}$ to reduce the activity of fluoride. He isolated a gas in the platinum environment and obtained a pale yellow gas that degraded anything except plastic. It was the desired fluorine!

Moissan also worked on the production of artificial diamond. Diamond synthesis was announced at the Academy of Sciences on 6 February 1893, and was fully confirmed a year later on 12 February 1894. The experiments on diamond synthesis were achieved due to the use of very high temperatures. To achieve this synthesis, Moissan primarily considered the use of very high temperatures. Moissan invented the electric oven. He described his oven for the first time on 12 December 1892, in a note to the Academy of Sciences, and he constantly perfected it thereafter. Moissan obtained temperatures of approximately $3500\text{ }^{\circ}\text{C}$, where the highest temperatures that had previously been obtained did not exceed $2000\text{ }^{\circ}\text{C}$. With an intense source of energy, Moissan paved the way for a new and important chapter in inorganic chemistry: that of high temperatures. As a result, he could melt and crystallize certain metal oxides that were considered infusible, obtain some refractory metals in pure form and large quantities by reducing their carbon oxides, and prepare often unknown metal carbides, nitrides, borides, silicides, distilled metals, and refractory materials. An important point of his work was obtaining calcium carbide, which paved the way for the chemistry of acetylene, which had two important applications at the time: gas lighting and oxyacetylene welding. Moreover, the preparation of pure calcium enabled him to study their properties and compounds, and obtaining calcium hydride led him to become interested in metal hydrides, which were a class of unknown compounds at the time.

A later study by Moissan involved the isolation of the ammonium radical. His studies in this area were based on metal ammonium, and he thought to reduce the temperature or use an electrolyzer, but he faced failures. However, by decomposing sodium amalgam at $-80\text{ }^{\circ}\text{C}$ with a liquid ammonium iodide solution, he obtained a solid ammonium amalgam whose state of purity he could study. He had promised to complete his study when death overtook him! The extensions of Moissan's work remain important today both in the field of fluorine and its inorganic and organic compounds and in the high-temperature and industrial diamond synthesis, where production is based on his principle of recrystallizing amorphous carbon at very high temperature and very high pressure.

In 1906, Moissan received the Nobel Prize in Chemistry for the isolation of fluorine in 1886 and the development of the electric furnace, which was described for the first time in 1892 and opened the path to high-temperature chemistry.

Moissan published more than three hundred articles, two books of notes (one on fluoride and the other on the oven), and a mineral chemistry treatise in five volumes. Various brochures still describe his active participation in the university and academic life and the town planning problems in the city of Meaux, to which he always remained attached.

In 1896 and 1902, Moissan became the President of the Chemical Society. Elected vice president in 1907, he would have led a third time in 1908, but he died in early 1907. He was appointed a member of the Academy of Medicine in 1888 and a member of the Academy of Sciences in 1891. In 1883, he was elected a member of the Pharmacy Society of Paris. He was a commander of the Legion of Honor and received many other French and foreign awards.

Moissan had a special relationship with the industry. This link between university and industry was one of his main concerns.

Moissan he was a fine man with a mischievous mood and great culture and was a great collector of paintings, works of art, and autographs. Moissan, with his encyclopedic spirit, wrote the comedy *An unexpected marriage*, which he proposed to the Odeon Theatre in November 1879.

On 20 February 1907, two months after receiving the prize, he died at the age of fifty-four. The great respect expressed in these words not only pays tribute to a visionary scholar who has earned an honorable place in the history of science for eternal life, but also honors the man who loved his work and forged his star, which will continue to shine for centuries. The work of Moissan charms the souls of generations of chemists. Throughout his 54 years of existence, Moissan—*dignitas dignitatum*—showed how work was his code of life!

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SEPTEMBER	MEMBER OF FRENCH ACADEMY OF SCIENCES
1	Saurin, Joseph (1 September 1655 – 29 December 1737), French mathematician. Andouillé, Jean-Baptiste Antoine (1 September 1718 – 28 February 1799), French surgeon. Ratte, Estienne Hyacinthe de (1 September 1722 – 15 August 1805), French mathematician and astronomer. Thomassin, Jean-François (1 September 1750 – 25 March 1828), French scientist. Darcet, Jean Pierre Joseph (1 September 1777 – 2 August 1844), French chemist. Winogradsky, Serge Nikolaevitch (1 September 1856 – 24 February 1953), Ukrainian-Russian ecologist and microbiologist. Charpy, Augustin Georges Albert (1 September 1865 – 25 November 1945), French chemist. Bergstrand, Carl Osten Emanuel (1 September 1873 – 27 September 1948), Swedish astronomer. Dehalu, Marcel Jacques Joseph (1 September 1873 – 15 June 1960), French astronomer. Rabin, Michael Oser (1 September 1931), Israeli computer scientist and Turing laureate (1976). Bard, Édouard (1 September 1962), French climatologist.
2	Chomel, Pierre-Jean-Baptiste (2 September 1671 – 4 July 1740), French botanist. Bornet, Jean Baptiste Édouard (2 September 1828 – 18 December 1911), French botanist. Voigt, Waldemar (2 September 1850 – 13 December 1919), German physicist. Vieille, Paul Marie Eugène (2 September 1854 – 15 January 1934), French chemist. Swarts, Frédéric Jean Edmond (2 September 1866 – 6 September 1940), Belgian chemist. Fréchet, René Maurice (2 September 1878 – 4 June 1973), French mathematician. Thom, René (2 September 1923 – 24 October 2002), French mathematician.
3	Bellini, Lorenzo di Girolamo (3 September 1643 – 8 January 1704), Italian medical doctor. Jussieu, Joseph de (3 September 1704 – 11 April 1779), French botanist. Trembley, Abraham (3 September 1710 – 12 May 1784), Swiss naturalist. Lévêque, Pierre (3 September 1746 – 16 October 1814), French scientist. Schumacher, Heinrich Christian (3 September 1780 – 28 December 1850), German-Danish astronomer. Sylvester, James Joseph (3 September 1814 – 15 March 1897), English mathematician. Størmer, Fredrik Carl Mülertz (3 September 1874 – 13 August 1957), Norwegian physicist and mathematician. Foëx, Gabriel Gustave (3 September 1887 – 20 January 1963), French physicist.
4	Pingré, Alexandre-Guy (4 September 1711 – 1 May 1796), French astronomer. Rougier, Jean-Baptiste (4 September 1757 – 13 September 1836), French agronomist. Rigaud de l'Isle, Louis-Michel (4 September 1761 – 4 June 1826), French politician. Gaudichaud-Beaupré, Charles (4 September 1789 – 16 January 1854), French botanist. Menabrea, Luigi Federico (4 September 1809 – 24 May 1896), Italian general. Andrade, Jules Frédéric Charles (4 September 1857 – 25 February 1933), French physicist and mathematician. Delbrück, Max (4 September 1906 – 10 March 1981), German-American biophysicist and Nobel laureate (1969).
5	Sarrazin, Michel (5 September 1659 – 8 September 1734), French scientist. Montucla, Jean-Étienne (5 September 1725 – 19 December 1799), French mathematician. Dalton, John (5 September 1766 – 27 July 1844), English chemist. Duodant, François Sulpice (5 September 1787 – 9 December 1850), French mineralogist. Dufrénoy, Ours Pierre Armand Petit- (5 September 1792 – 20 March 1857), French mineralogist. Laurent, Émile (5 September 1861 – 20 February 1904), Belgian medical doctor. Cauellery, Maurice Jules Gaston Corneille (5 September 1868 – 13 July 1958), French zoologist. Wallace, Thomas (5 September 1891 – 2 February 1965), English horticulturists.

	Messines du Sourbier, Jean Paul Albert (5 September 1900 – 3 September 1989), French scientist.
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7	Beauchamp, Balthazar François de Merles de (7 September 1621 – 4 February 1702), French scientist. Escalona, Giovanni Emanuele Pacheco d' (7 September 1648 – 1725), Italian scientist. Vallière, Jean-Florent de (7 September 1667 – 7 January 1759), French general. Hales, Stephen (7 September 1677 – 4 January 1761), British chemist. Buffon, Georges-Louis Leclerc de (7 September 1707 – 16 April 1788), French mathematician and biologist. Darcet, Jean (7 September 1724 – 13 February 1801), French chemist Peters, Christian August Friedrich (7 September 1806 – 8 May 1880), German astronomer. Bouquet, Jean-Claude (7 September 1819 – 9 September 1885), French mathematician. David, Jean-Pierre Armand (7 September 1826 – 10 November 1900), French botanist. Kekule von Stradonitz, Friedrich August (7 September 1829 – 13 July 1896), German chemist. Cesaro, Giuseppe Raimondo de (7 September 1849 – 20 January 1939), Italian-Belgian mineralogist Léger, Louis Urbain Eugène (7 September 1866 – 7 July 1948), French zoologist. Desch, Cecil Henry (7 September 1874 – 19 June 1958), English metallurgist. Itô, Kiyoshi (7 September 1915 – 10 November 2008), Japanese mathematician. Veneziano, Gabriele (7 September 1942), Italian physicist.
8	Tronson du Coudray, Philippe-Charles-Jean-Baptiste (8 September 1738 – 11 September 1777), French army officer. Mangin, Louis Alexandre (8 September 1852 – 27 January 1937), French botanist.
9	Andoque, François (9 September 1679 – 26 March 1754), French intellectual. Brodie, Benjamin Collins (9 June 1783 – 21 October 1862), English surgeon. Bond, William Cranch (9 September 1789 – 29 January 1859), American astronomer. Lapparent, Marie Félix Albert Cochon de (9 September 1905 – 28 February 1975), French geologist.
10	Bartholin, Caspar (10 September 1655 – 11 June 1738), Danish anatomist. Needham, John Turberville (10 September 1713 – 30 December 1781), English biologist. Beauvau, Charles-Juste de (10 September 1720 – 21 May 1793), French officer. Mesnard de Chousy, Didier-François-René (10 September 1729 – 18 April 1794), French intellectual. Treviranus, Ludolf Christian (10 September 1779 – 6 May 1864), German botanist. Pérard, Albert Gustave Léon (10 September 1880 – 21 October 1960), French scientist. Rham, Georges William de (10 September 1903 – 7 October 1990), Swiss mathematician. Lundberg Anders (10 September 1920 – 18 May 2009), Swedish scientist.
11	Montmirail, Charles-François Le Tellier, marquis de (11 September 1734 – 13 December 1764), French nobleman. Rossel, Élisabeth-Édouard de (11 September 1765 – 20 November 1829), French astronomer. Neumann, Franz Ernst (11 September 1798 – 23 May 1895), German physicist and mineralogist. Malliavin, Paul (11 September 1925 – 3 June 2010), French mathematician. Haroche, Serge (11 September 1944), French physicist and Nobel laureate (2012). Fischer, Alain (11 September 1949), French medical doctor and biologist.
12	Le Gentil de La Galaisière, Guillaume Joseph Hyacinthe Jean Baptiste (12 September 1725 – 22 October 1792), French astronomer Flandrin, Pierre (12 September 1752 – 1 May 1796), French anatomist. Blainville, Henri Marie Ducrotay de (12 September 1777 – 1 May 1850), French zoologist. Serres, Étienne Reynaud Augustin (12 September 1786 – 22 January 1868), French physicist. Ostrogradsky, Michel Vassilievitch (12 September 1801 – 1 January 1862), Ukrainian physicist. Hall, James (12 September 1811 – 7 August 1898), American physicist and paleontologist. Herrgott, François-Joseph (12 September 1814 – 4 March 1907), French surgeon. Tulasne, Louis-René, dit Edmond (12 September 1815 – 22 December 1885), French botanist. Auwers, Georg Friedrich Julius Arthur von (12 September 1838 – 25 January 1915), German astronomer. Chagas, Carlos (12 September 1910 – 16 February 2000), Brazilian scientist. Lavorel, Sandra (12 September 1965), French ecologist.
13	Robinson, Robert (13 September 1886 – 8 February 1975), English chemist and Nobel laureate (1947). Guillemin, Claude Jean Guy (13 September 1923 – 2 April 1994), French geologist. Kahn, Olivier (13 September 1942 – 8 December 1999), French chemist.
14	Torcy, Jean-Baptiste Colbert de (14 September 1665 – 2 September 1746), French diplomat. Camus, François-Joseph de (14 September 1672 – 1732), French inventor. Dufay, Charles-François de Cisternay (14 September 1698 – 16 July 1739), French chemist. Brémond, François de (14 September 1713 – 21 March 1742), French intellectual. Jeaurat, Edme-Sébastien (14 September 1724 – 8 March 1803), French astronomer. Humboldt, Friedrich Heinrich Alexander von (14 September 1769 – 6 May 1859), German naturalist. Vinogradov, Ivan Matveevitch (14 September 1891 – 24 March 1983), Soviet mathematician.
15	Rouelle, Guillaume-François (15 September 1703 – 3 August 1770), French chemist.

- Bailly, Jean-Sylvain** (15 September 1736 – 12 November 1793), French mathematician, astronomer, and politician.
Ehrmann, Charles-Henri (15 September 1792 – 19 June 1878), French scientist.
Billet, Félix (15 September 1808 – 27 January 1882), French physicist.
Gaudry, Jean Albert (15 September 1827 – 27 November 1908), French geologist.
Pavlov, Ivan Petrovitch (14 September 1849 – 14 February 1936), Russian medical doctor and Nobel laureate (1904).
Camichel, Charles Moïse (15 September 1871 – 27 January 1966), French physicist.
Lévy, Paul Pierre (15 September 1886 – 15 December 1971), French mathematician.
Serre, Jean-Pierre (15 September 1926), French mathematician.
Bartlett, Neil (15 September 1932 – 5 August 2008), British intellectual.
Ephrussi, Anne (15 September 1955), French biologist.
-
- 16** **Parent, Antoine** (16 September 1666 – 26 September 1716), French physicist and mathematician.
Desmarest, Nicolas (16 September 1725 – 28 September 1815), French geographer.
Dupuget, Edme Jean Antoine d'Orval (16 September 1742 – 14 April 1801), French general.
Courset, Georges Louis Marie Dumont de (16 September 1746 – 3 June 1824), French botanist.
Sivry, Esprit-Marie-Joseph-Pierre de (16 September 1762 – 2 April 1853), French intellectual.
Bouillaud, Jean (16 September 1796 – 29 October 1881), French medical doctor.
Gaudry, Jean Albert (16 September 1827 – 27 November 1908), French geologist.
Beghin, Henri (16 September 1876 – 22 February 1969), French engineer.
Schatzman, Evry Léon (16 September 1920 – 25 April 2010), French astrophysicist.
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- 17** **Condorcet, Marie Jean Antoine Nicolas Caritat, marquis de** (17 September 1743 – 29 March 1794), French mathematician and politician.
Lütke, Fedor Petrovitch (17 September 1797 – 8 August 1882), Russian navigator.
Riemann, Georg Friedrich Bernhard (17 September 1826 – 20 July 1866),
Bichat, Ernest Adolphe (17 September 1845 – 26 July 1905),
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- 18** **Allamand, Jean Nicolas Sébastien** (18 September 1713 – 2 March 1787), Swiss-Dutch natural philosopher.
Le Gendre, Adrien-Marie (18 September 1752 – 9 January 1833), French mathematician.
Sédillot, Charles Emmanuel (18 September 1804 – 29 January 1883), French military physicist and surgeon.
Larrey, Félix Hippolyte (18 September 1808 – 8 October 1895), French military medical doctor.
Foucault, Jean Bernard Léon (18 September 1819 – 11 February 1868), French physicist and astronomer.
Callandreau, Pierre Jean Octave (18 September 1852 – 13 February 1904), French astronomer.
Ambartsumian, Victor Amazaspovitch (18 September 1908 – 20 August 1996), Soviet Armenian scientist.
Stora, Raymond (18 September 1930 – 20 July 2015), French theoretical physicist.
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- 19** **Bignon, Jean-Paul** (19 September 1662 – 14 March 1743), French ecclesiastic.
Guettard, Jean-Étienne (19 September 1715 – 6 January 1786), French mineralogist.
Delambre, Jean-Baptiste-Joseph (19 September 1749 – 19 August 1822), French astronomer and mathematician.
Richard, Louis Claude Marie (19 September 1754 – 6 June 1821), French botanist.
Mendoza y Rios, Don José José (19 September 1763 – 3 March 1816), Spanish astronomer.
Delépine, Stéphane Marcel (19 September 1871 – 21 October 1965), French chemist.
Nicloux, Maurice (19 September 1873 – 5 January 1945), French biochemist.
Mauguin, Charles Victor (19 September 1878 – 25 April 1958), French mineralogist.
Weisskopf, Victor (19 September 1908 – 22 April 2002), Austrian-American physicist.
Savéant, Jean-Michel (19 September 1933), French chemist.
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- 20** **Manfredi, Eustachio** (20 September 1674 – 15 February 1739), Italian astronomer and mathematician.
Pomel, Nicolas Auguste (20 September 1821 – 2 August 1898), French geologist.
Dewar, James (20 September 1842 – 27 March 1923), Scottish chemist and physicist.
Martin, Louis (20 September 1864 – 13 June 1946), French medical doctor.
Bouly de Lesdain, Maurice Léopold Joseph (20 September 1869 – 3 January 1965), French botanist.
Knobil, Ernst (20 September 1926 – 13 April 2000), German physicist.
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- 21** **Dangeau, Philippe de Courcillon, marquis de** (21 September 1638 – 9 September 1720), French diplomat and memorialist.
Tauvry, Daniel (21 September 1669 – 18 March 1701), French medical doctor.
Bertin, Exupère-Joseph (21 September 1712 – 25 February 1781), French medical doctor.
Swartz, Olof (21 September 1760 – 19 September 1818), Swedish botanist.
Ideler, Christian Ludwig (21 September 1766 – 10 August 1846), German astronomer.
Demontzey, Gabriel Louis Prosper (21 September 1831 – 20 February 1898), French engineer.
Cailletet, Louis Paul (21 September 1832 – 5 January 1913), French chemist and physicist
Kamerlingh Onnes, Heike (21 September 1853 – 21 February 1926), Dutch physicist and Nobel laureate (1913).
Nicolle, Charles Jules Henri (21 September 1866 – 28 February 1936), French medical doctor and Nobel laureate (1928).
Ancel, Albert Paul (21 September 1873 – 27 January 1961), French medical doctor.
Leriche, Maurice Henri Charles (21 September 1875 – 15 September 1948), French scientist.
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- 22** **Bose, Georg Matthias** (22 September 1710 – 17 September 1761), German physicist and astronomer.
Guettard, Jean-Étienne (22 September 1715 – 6 January 1786), French geologist.
Wargentin, Pehr Wilhelm (22 September 1717 – 13 December 1783), Swedish astronomer.
Pallas, Peter Simon (22 September 1741 – 7 September 1811), German zoologist.
Puissant, Louis (22 September 1769 – 10 January 1843), French engineer.
Faraday, Michael (22 September 1791 – 25 August 1867), British physicist.
Bentham, George (22 September 1800 – 10 September 1884), English botanist.
Yersin, Alexandre John Émile (22 September 1863 – 1 March 1943), Swiss-French medical doctor.
Petiau, Gérard Paul Daniel (22 September 1911 – 12 February 1990), French scientist.
Laubier, Lucien (22 September 1936 – 15 June 2008), French oceanographer.

- 23** **Mallet alias Mallet-Favre, Jacques André** (23 September 1740 – 31 January 1790), Swiss astronomer.
Encke, Johann Franz (23 September 1791 – 26 August 1865), German astronomer.
Fizeau, Armand Hippolyte Louis (23 September 1819 – 18 September 1896), French physicist and astronomer.
Gautier, Émile Justin Armand (23 September 1837 – 27 July 1920), French chemist.
Piveteau, Jacques Honoré Jean Marie (23 September 1899 – 7 March 1991), French paleontologist.
Berrou, Claude (23 September 1951), French scientist.
Werner, Wendelin (23 September 1968), German mathematician and Fields laureate (2006).
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- 24** **Ostrogradsky, Mikhaïl Vassilievitch** (24 September 1801 – 1 January 1862), Ukrainian physicist and mathematician.
Archiac, Étienne-Jules-Adolphe Desmiers de Saint-Simon, vicomte d' (24 September 1802 – 30 May 1869), French geologist.
Noether, Max (24 September 1844 – 13 December 1921), German mathematician.
Viala, Pierre (24 September 1859 – 11 February 1936), French specialist in vine diseases.
Sanarelli, Giuseppe (24 September 1865 – 6 April 1940), Italian medical doctor.
Claude, Georges (24 September 1870 – 21 May 1960), French chemist and physicist.
Darrieus, Georges Jean Marie Eugène (24 September 1888 – 15 July 1979), French scientist.
Wurmser, René Bernard (24 September 1890 – 9 November 1993), French biophysicist.
Cournand, André Frédéric (24 September 1895 – 19 February 1988), French physicist/physiologist and Nobel laureate (1956).
Swings, Pol Félix Ferdinand (24 September 1906 – 28 October 1983), Belgian astrophysicist.
Schmidt-Nielsen (24 September 1915 – 25 January 2007), American physiologist.
Bott, Raoul (24 September 1923 – 20 December 2005), Hungarian-American mathematician.
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- 25** **Perrault, Claude** (25 September 1613 – 9 October 1688), French medical doctor.
Roemer, Olaus (25 September 1644 – 19 September 1710), Danish astronomer.
Eisenhardt, Jean-Gaspard (25 September 1656 – 4 December 1712), French mathematician.
Werner, Abraham Gottlob (25 September 1750 – 30 June 1817), German mineralogist.
Beaumont, Jean Baptiste Armand Louis Léonce Élie de (25 September 1798 – 21 September 1874), French geologist.
Salmon, George (25 September 1819 – 22 January 1904), Irish mathematician.
Zittel, Karl Alfred von (25 September 1839 – 5 January 1904), German palaeontologist.
Morgan, Thomas Hunt (25 September 1866 – 4 December 1945), American biologist and Nobel laureate (1933).
Douady, Adrien (25 September 1935 – 2 November 2006), French mathematician.
Demailly, Jean Pierre (25 September 1957), French mathematician.
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- 26** **Proust, Joseph Louis** (26 September 1754 – 5 July 1826), French chemist.
Hansteen, Christopher (26 September 1784 – 15 April 1873), Norwegian geophysicist.
Gervais, François Louis Paul (26 September 1816 – 10 February 1879), French paleontologist.
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- 27** **Guglielmini, Domenico** (27 September 1655 – 11 July 1710), Italian chemist, mathematician and medical doctor.
Arcy, Patrick comte (27 September 1725 – 18 October 1779), French-Irish mathematician.
Pictet, François Jules (27 September 1809 – 15 March 1872), Swiss zoologist.
Gould, Benjamin Apthorp (27 September 1824 – 26 November 1896), American astronomer.
Appell, Paul Émile (27 September 1855 – 24 October 1930), French mathematician.
Marchal, Paul Alfred (27 September 1862 – 2 March 1942), French entomologist.
Missenard, Félix Simon André (27 September 1901 – 14 December 1989), French scientist.
Stommel, Henry Melson (27 September 1920 – 17 January 1992), American physicist.
Rapaport, Felix Theodosius (27 September 1929 – 12 June 2001), German-American scientist.
Fontecave, Marc (27 September 1956), French chemist.
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- 28** **Wurzelbau, Johann, Philipp von** (28 September 1651 – 22 March 1725), German astronomer.
Desportes, Jean-Baptiste René Poupé (28 September 1704 – 15 February 1748), French medical doctor.
Harding, Carl Ludwig (28 September 1765 – 15 July 1834), German astronomer.
Moissan, Ferdinand Frédéric Henri (28 September 1852 – 20 February 1907), French chemist and Nobel laureate (1906).
Villard, Paul Ulrich (28 September 1860 – 13 January 1934), French chemist and physicist.
Aigrain, Pierre (28 September 1924 – 30 October 2002), French scientist.
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- 29** **Hérissant, François David** (29 September 1714 – 21 August 1773), French medical doctor.
Grischow, Augustin Nathanaël (29 September 1726 – 4 June 1760), German mathematician and astronomer.
Cagnoli, Antonio (29 September 1743 – 6 August 1816), Italian mathematician and astronomer.
Givry, Alexandre Pierre (29 September 1785 – 6 March 1867), French engineer.
Sturm, Jacques Charles François (29 September 1803 – 18 December 1855), French mathematician.
Saint-Martin, Aristide Stanislas Auguste Verneuil de (29 September 1823 – 11 January 1895), French surgeon.
Labbé, Léon (29 September 1832 – 21 March 1916), French surgeon.
Gramont, Armand Antoine Auguste Agénor de (29 September 1879 – 2 August 1962), French scientist.
Lallemant, André (29 September 1904 – 24 March 1978), French astronomer.
Mitchell, Peter Denis (29 September 1920 – 10 April 1992), British biochemist and Nobel laureate (1978).
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- 30** **Laumonnier, Jean-Baptiste Nicolas Philippe René** (30 September 1749 – 24 January 1819), French surgeon.
Balard, Antoine-Jérôme (30 September 1802 – 30 March 1876), French pharmacist.
Eriksson, Jakob (30 September 1848 – 26 April 1931), Swedish plant pathologist.
Perrin, Jean Baptiste (30 September 1870 – 17 April 1942), French chemist/physicist and Nobel laureate (1926).
Fage, Baptiste Louis (30 September 1883 – 28 May 1964), French biologist.
Ramon, Gaston Léon (30 September 1886 – 8 June 1963), French biologist.
Lehn, Jean-Marie (30 September 1939), French chemist and Nobel laureate (1987).