

# GENEALOGY DATABASE ENTRY

©Vera V. Mainz and Gregory S. Girolami 1998

Gay-Lussac, Joseph Louis

1778 - 1850

DEGREE: MA

DATE: 1800

PLACE: Paris

TEACHER/RESEARCH ADVISOR: Berthollet

co-discovered Charles's Law relating temperature to the volume of gases; discovered boron and established elementary nature of iodine and sulfur (both with Thenard); analyzed sugar; showed that fluoride was a constituent of bones; discovered law of combining volumes and originator of volumetric analysis; showed that one volume of oxygen reacts with two volumes of hydrogen to give water, and established similar relationships for  $\text{NH}_3 + \text{HCl}$ ,  $\text{N}_2 + \text{O}_2$ , and  $\text{N}_2 + 3\text{H}_2$ ; developed assay of  $\text{Ag}^+$  by titration with chloride; studied chemistry of cyanogen and determined its composition; showed that "prussic acid" was HCN; first prepared ethyl iodide, hydrogen fluoride, organic amides, and the peroxides of Na and K; coined the name racemic acid; held world record for manned balloon flight (7019 meters) and pioneered measurement of temperature, pressure, humidity, and magnetic field strength as a function of height.

1. Asimov, I. *Asimov's Biographical Encyclopedia of Science and Technology (2nd Ed.)*; Doubleday: 1982; p282-284.
2. *Dictionary of Scientific Biography*; Charles Scribner's Sons: 1970-1990; vol. 5, p317-327.
3. Partington, J. R. *A History of Chemistry*; Macmillan: 1964; vol. 4, p77-90.
4. Weeks, M. E. *Discovery of the Elements (7th Ed.)*; Leicester, H. M., Ed.; J. Chem. Ed.: 1968; p545-549.
5. *Great Chemists*; Farber, E., Ed.; Interscience: 1961; p359-367.
6. *Proc. Roy. Soc.* **1850**, 5, 1013-1023.
7. *A Biographical Dictionary of Scientists*; Williams, T. I., Ed.; Wiley: 1969; p209.
8. Tilden, W. A. *Famous Chemists*; Routledge & Sons: 1921; p119-126.
9. *Proc. Am. Acad. Arts Sci.* **1950**, 78, 18-20.
10. *Ann. Rept. Smithsonian Inst.* **1876**, 3, 138-172.
11. *Nature* **1950**, 165, 708-709.
12. Crosland, M. P. *Gay-Lussac. Scientist and Bourgeois*; Cambridge University Press: 1978.
13. *Gay-Lussac: La Carriere et l'Ouvre d'un chimiste francais durant la premiere moitre du XIXe siecle*; Sadoun-Goupil, M., Ed.; Ecole Polytechnique: 1980.
14. *Das Buch der Grossen Chemiker*; Bugge, G., Ed.; Verlag Chemie: 1929; vol. 1, p386-404.
15. Mangin, A. *Savants Illustres de la France*; Ducrocq: 1865; p401-413.