Avogadro's Law Encyclopedia Article

Avogadro's Law

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Contents

Avogadro's Law Encyclopedia Article.....1

Contents.....2

Avogadro's Law.....3

Avogadro's Law

Avogadro's law (sometimes called Avogadro's principle) states that equal volumes of different **gases** at the same **temperature** and pressure contain equal numbers of molecules.**Amedeo Avogadro** (1776- 1856), an Italian physicist, formulated this law in 1811 as a direct consequence of Gay-Lussac's law which was artic ulated by the French chemist **Joseph-Louis Gay-Lussac** (1778-1850) in 1802.

Gay-Lussac's law states that gases combine in simple whole number ratios (all volumes measured at the same temperature and pressure). Avogadro's law explains Gay-Lussac's law without violating John Dalton's idea that atoms are indivisible. Avogadro's law also led to the concepts of **Avogadro's number** and the **mole**, and t o the ideal gas law. Avogadro's ideas were largely ignored for half a century until Stanislao Cannizarro (1826-1910) began to promote them in the 1850s.