

# 180 Years of atmospheric CO<sub>2</sub> Gas Analysis by Chemical Methods, E&E Vol 18/2, 2007



## ABSTRACT

More than 90,000 accurate chemical analyses of CO<sub>2</sub> in air since 1812 are summarised. The historic chemical data reveal that changes in CO<sub>2</sub> track changes in temperature, and therefore climate in contrast to the simple, monotonically increasing CO<sub>2</sub> trend depicted in the post-1990 literature on climate-change. Since 1812, the CO<sub>2</sub> concentration in northern hemispheric air has fluctuated exhibiting three high level maxima around 1825, 1857 and 1942 the latter showing more than 400 ppm. Between 1857 and 1958, the Pettenkofer process was the standard analytical method for determining atmospheric carbon dioxide levels, and usually achieved an accuracy better than 3%. These determinations were made by several scientists of Nobel Prize level distinction. Following Callendar (1938), modern climatologists have generally ignored the historic determinations of CO<sub>2</sub>, despite the techniques being standard text book procedures in several different disciplines. Chemical methods were discredited as unreliable

choosing only few which fit the assumption of a climate CO<sub>2</sub> connection.

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