

GENEALOGY DATABASE ENTRY

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Lewis, Gilbert Newton

1875 - 1946

DEGREE: PhD

DATE: 1899

PLACE: Harvard

TEACHER/RESEARCH ADVISOR: Richards

formulated the octet rule (Lewis dot structure), concept of Lewis acid/base, and concept of electron pair and shared electron pair bond; accurately measured electrochemical potentials of many elements; studied dyes and colored organic substances in general; discovered (with Calvin) paramagnetism of free radicals and the phosphorescent state of molecules; introduced concepts of activity, fugacity, and ionic strength in thermodynamics; first to obtain macroscopic quantities of D₂ and D₂O and study their properties; obtained first evidence of thermodynamic isotope effects.

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