

# GENEALOGY DATABASE ENTRY

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Hildebrand, Joel Henry

1881 - 1983

DEGREE: PhD

DATE: 1906

PLACE: Pennsylvania

TEACHER/RESEARCH ADVISOR: Smith

expert on the behavior of liquids and nonelectrolyte solutions; formulated a general theory of regular solutions; independently devised the Scatchard-Hildebrand equation, which describes the activities of the components of such solutions; formulated the Hildebrand rule, which compares the entropies of vaporization of normal liquids at constant vapor volume rather than at constant pressure as in Trouton's rule; first to suggest that deep sea divers should use a mixture of helium and oxygen to avoid the bends; discovered the UV absorption that characterizes charge transfer complexes; one of the first to use the hydrogen electrode to follow acid-base titrations; wrote a general chemistry text, *Principles of Chemistry*, which departed from standard texts of the time in that it emphasized chemical principles rather than memorization of specific facts; coached the U. S. Olympic ski team at the winter 1936 Olympics.

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2. *Ann. Rev. Phys. Chem.* **1963**, 14, 1-4.
3. *Ann. Rev. Phys. Chem.* **1981**, 32, 1-23.
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5. *Persp. Biol. Med.* **1972**, 16, 88-111.
6. *Chem. Eng. News* **1976**, 54(38), 26-28, 30.
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8. *J. Chem. Ed.* **1975**, 52, 46-50.
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