

GENEALOGY DATABASE ENTRY

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Arrhenius, Svante August

1859 - 1927

DEGREE: PhD (physics)

DATE: 1884

PLACE: Stockholm

TEACHER/RESEARCH ADVISOR: Edlund

Nobel Prize in 1903 for his revolutionary proposal that electrolytes are dissociated in solution; discovered a connection between conductivity and the speed of reactions; investigated the action of light on the electrolytic conductivity of silver halide salts; studied the relationship between osmotic pressure and lowering of vapor tension, the thermodynamics of dissociation of electrolytes, and the hydrolysis of salts and weak acids and weak bases; discovered that molecules require a certain critical energy in order to react (concept of activation energy); investigated the influence of the moon on the electric state of the atmosphere, on the aurora, and on thunderstorms; proposed that electric charges originate from ionization of the air by UV rays; developed a theory for the explanation of the glacial periods and other great climatic changes, based on the ability of CO₂ to absorb the infrared radiation emitted from the earth's surface; studied the cosmic effects of the pressure of light rays.

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