

## Linus Pauling the two Nobel Prize - scientists

Linus Pauling, it is very rare for the two Nobel Prize-winning scientists.

### Linus Pauling's life

Linus Pauling (1901 -- 1994), the well-known American chemist.

In 1901, Pauling was born in the western United States, Oregon city of Portland, his father is a pharmacist. Pauling child, the father in the preparation of various pharmacies Lane powder and ointment very interested, and often a good friend of the family to see some interesting chemistry experiment. Later, from his father's friends to be a lot of chemicals, the first in a chemistry experiment.

Pauling at the age of 18 on the electronic valence bond theory interested. 1922 was chemical engineering degree, he want to be aware of their chemist instead of engineers, So enter the California Institute of Technology and who do graduate teaching assistants, and in 1925 obtained a doctorate. In 1926, to Munich, to follow the German postdoctoral status of theoretical physics master Sommerfeld working for a year. The following year, he returned to Caltech to teach. In 1963 in California after the Santa Barbara Research Center College of democracy as a four-year physics and biology professor. 1969 -- 1973, Pauling at Stanford University as a professor. After 1973, he served as a named its scientific and medical research professor at the Institute.

Pauling life scope of the study is widespread, and many have a leading position, as first proposed bond may have a mixed character, that is, containing covalent nature, containing ions; a "negative power" concept, and to determine the elemental power of negative values; "resonance" in the terminology used chemical bond theory; the first one to raise protein molecules spiral structure.

In 1929, Pauling to the ion charge and radius of the base, assuming the charge locally and, a series of simple coordination rules, not only to use their understanding, but they have also often able to predict and many other silicate mineral structure. This whole field of chemistry has a rational basis.

Pauling on the chemical bond in the early research papers, is a revolutionary, because it is using the wave theory to explain the dynamics of carbon tetrahedral coordination and transition metal square and octahedral coordination, and these people have never been involved before. Soon, he found that many of the nature of the material can not be used for some type of bonding structure to a single electronic, Pauling will resonance quantum mechanics concept of the use of chemistry to come. The valence bond theory of atomic and spacing between keys can be established ties in order to explain the success of many organic chemical properties, and in this established on the basis of a chemical structure distinguished school. He is the author of "Introduction to Quantum Mechanics," a book published in 1935, the chemical history of the classics.

As a biochemist, Pauling's most famous work is a-helix discovery. 30 to 40 years, scientists have created the X-ray structure determination of the amino acid, while a-helix discovery of X-ray analysis has reached a new peak. Pauling found this to the three-dimensional chemical data, has been sufficient to explain the protein fiber (such as hair, fingernails and muscle), X-ray diffraction spectra. This was reportedly found in their beds on completion. Pauling died cold Lying in bed, nothing better to do it packs a paper plane peptide bond house, Then he found per 3.6 residues for the week rotation can be a satisfactory helix structure. This discovery, together with his right chemistry for their many outstanding contributions, in 1954 he won the Nobel Prize in Chemistry. In addition, he on sickle-cell anemia and other genetic hemolytic anemia abnormal protein in the study, it is pioneering.

Pauling on the important contribution of the chemical involved is very broad, for the younger generation chemist enormous impact. From 1930 to 1940, from his chemical is a major phenomenon of the subject into a solid structure and quantum mechanics-based disciplines . Later, as Pauling pillar of the work of theoretical and resonant valence bond theory was molecular orbital theory to add, Bond made it to the further understanding. Pauling Thus the title of the 20th century's greatest chemist one.

Pauling also actively engaged in opposition to nuclear weapons, nuclear war movement, to safeguard world peace made a contribution. In 1955 the British philosopher Russell drafted a declaration against nuclear weapons. Before his death, Einstein signed a few days, Pauling and several other famous scientists who also signed, This led to the first Pugwash Conference, the meeting of Soviet and Western scientists discussed lowering the risk of nuclear war measures. In 1958, Pauling published a booklet entitled "War" book, there will be a 9,235 scientists signed a petition to the United Nations Secretary-General, strong demand to stop nuclear tests signed international agreements. In 1961 Pauling in Oslo organized a 40 scientists call nuclear disarmament, on the streets after hundreds of people staged a nuclear war against the torch procession. He protest actions and his speech has the same chemical appeal for 1963 eventual ban on atmospheric nuclear tests have made a significant contribution. In December the same year, and he won the Nobel Peace Prize, has become one of the two Nobel Prize-winning scientists.

In 1994, Pauling's death.

## About the Author

Eric Dexter freelancer.

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