Linus Pauling
1901-1994
Biography

He was an American scientist, peace activist, author and educator. He was one of the most influential chemists in history and ranks among the most important scientists in any field of the 20th century.

He was among the first scientists to work in the fields of quantum chemistry, molecular biology and orthomolecular medicine. He is one of a small number of individuals to have been awarded more than one Nobel Prize, one of only two people to receive them in different fields (the other was Marie Curie) and the only person in that group to have been awarded each of his prizes without sharing it with another recipient.

He was born and raised in Oregon. He attended Oregon Agricultural College (now Oregon State University) and graduated in 1922 with a degree in chemical engineering. He then went to the California Institute of Technology (Caltech), where he received his Ph. D in physical chemistry and mathematical physics in 1925. Two years later, he accepted a position at Caltech as an assistant professor in theoretical chemistry. In 1932, he published a landmark paper, detailing his theory of orbital hybridization and analyzed the tetravalency of carbon. That year, he also established the concept of electronegativity and developed a scale that would help predict the nature of chemical bonding. He continued this work, but also began publishing papers on the structure of the atomic nucleus. In 1954, he was awarded the Nobel Prize in Chemistry. As a biochemist, he conducted research with X-ray crystallography and modeling in crystal and protein structures. This type of approach was used by scientists in the UK to discover the double helix structure of the DNA molecule.

During the Second World War, he worked on military research and development. However, when the war ended he became particularly concerned about the further development and possible use of atomic weapons and with the destruction inflicted on the world by war in general. His wife, Ava, was a pacifist and in time he came to share her views. He soon began to express his concerns with the effects of nuclear fallout and in 1962, was awarded the Nobel Peace Prize for his campaign against above ground nuclear testing. His beliefs were not without controversy at the time and he was criticized by some for his actions.

He was also successful as an author and educator. His first book, *The Nature of the Chemical Bond* (1939), is considered influential even to this day, as is his introductory textbook, *General Chemistry* (1949). Later in life, he became an advocate for greatly increased consumption of vitamin C and other nutrients. He generalized his ideas to define orthomolecular medicine, which is still regarded as unorthodox by conventional medicine. He popularized his concepts, analyses, research and insights in several successful but controversial books, such as *How to Live Longer and Feel Better* in 1986.
I am astonished! It is 18 days since I started thinking about bottinite. Only last night, in bed, did I recognize that the formula Ni(0H)4 Sb(OH)6 is wrong. It would require Sb(III), which is unlikely. It is a pale blue-green mineral.

Two possibilities - mostly Sb(III), or Sb(II), with formula Ni(0H)6 Sb(OH)6 8H.

But I have now noticed that Bishare et al. give the formula as Mg(Ai)2 SbO2Si2. Hence all of my preceding discussion needs to be revised.

MW = Mg(Ai)2 SbO2Si2 = 536.67

Bennetti form unit: 18 16 x 16

N = 2.176 A³ = 1310 cm³ x 280 = 366920 Z = 5.9400 00 84 16