

July 27, 2021

Dear Colleagues,

With deep sorrow, we announce the passing of Professor Emeritus Ruben Pauncz of the Technion, who died yesterday in Haifa, July 26, at the age of 101.

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Prof. Ruben Pauncz (1920 – 2021)

Ruben Pauncz was born on August 8, 1920, in Szoreg, Hungary. He studied chemistry, theoretical physics, and mathematics at the University of Szeged, and completed his Ph.D. in chemistry in 1944 just before the Nazi occupation. Most of his family did not survive the holocaust. Ruben himself was among the survivors liberated in May 1945 from the Theresienstadt camp. He was seriously ill with typhus, and his weight was 35 Kg. Later he was hospitalized for two years with severe tuberculosis. During a 1956 uprising in Hungary, he took the risk of illegally crossing the border to Austria with his pregnant wife Miriam and their 2-year-old son. Shortly after arriving in Israel, he received offers from David Ginsburg at the Technion and Aron Katzir at the Weizmann Institute. Ruben explained that he accepted the Technion's offer because he enjoyed giving lectures much. Very quickly, he became a highly demanded lecturer worldwide, with over 30 times lecturing in the famous summer schools on quantum chemistry in Sweden and many winter schools in Florida. He became the founding father of quantum chemistry in Israel and one of the first 25 members of the Academy of Quantum Molecular Sciences. He became Assoc. Prof. in 1960 and Full professor in 1962. In 2005, he received the ICS Gold Medal. His highly recommended autobiography (<https://doi.org/10.1021/acscentsci.7b00182>) is humbly titled "Many Handicaps and a Lot of Good Luck."

His most important contributions include the spectra of linearly condensed aromatic hydrocarbons, two-dimensional homologous series of aromatic compounds, the use of perturbation method for the quantum chemical investigation of systems built up from identical units, calculation of the inverse of the overlap matrix in cyclic systems, the electronic correlation problem and the alternant molecular orbital method, general energy expression for alternant systems with closed-shell structure, generalization of the method for states with different multiplicities, many parameter energy expression, spin degeneracy problem, theoretical explanation of Hund's rule, a simple algorithm for the construction of genealogical spin eigenfunctions, branching diagram for elementary particles with arbitrary spin, generalized branching diagram, combinatorial aspects of the Downward-Robb algorithm, the concept of quasispin for alternant conjugated hydrocarbons, and many more.

Pauncz published highly influential books: Alternant Molecular Orbital Method (W.B. Saunders, 1967), Spin Eigenfunctions, Construction and Use (Plenum Press, 1979), The Unitary Group in Quantum Chemistry (Elsevier, 1968), The Symmetric Group in Quantum Chemistry (CRC Press, 1995), The Construction of Spin Eigenfunctions (Kluwer Academic, 2000).

The ICS and the global chemistry community mourn the loss of a great scientist.

*Ehud Keinan*