

Chemist and Educator Dr. William A. Lester Jr. to be Featured on CUTV News Radio

OAKLAND, CALIFORNIA, UNITED STATES, January 25, 2019 /EINPresswire.com/ -- The driver of scientific study is to continuously shine new light on natural phenomena.

Dr. William A. Lester Jr. is a chemist and educator who has dedicated his life to the study of theoretical chemistry. Having served in roles with the National Bureau of Standards in Washington DC, as well as IBM's San Jose Research Laboratory, Dr. Lester concluded his career as a professor in the Department of Chemistry at UC-Berkeley.

Now retired after nearly 60 years devoted to the field, Dr. Lester reflects on his contribution to the evolution of chemistry in the 20th century.



"I always had a predisposition towards chemistry after initially listening to DuPont Company radio commercials when I was quite young," recalls Dr. Lester. "The DuPont commercial 'Better Things for Better Living Through Chemistry' intrigued me."

As a high school senior, Dr. Lester took a part-time job typing for a professor of molecular physics at the University of Chicago for \$1.09 an hour in 1953.

"I had the opportunity when I was young to see what life was like in a field of science, the nature of that lifestyle and a broader sense of a field," says Lester.

Dr. Lester would later win a scholarship to the University of Chicago, where he pursued his B.S. and M.S., subsequently earning his PhD from The Catholic University of America in 1964.

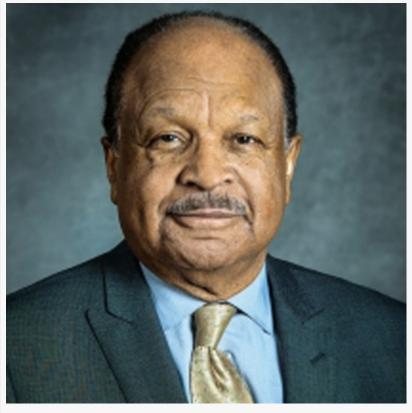
As a chemist, Dr. Lester's research efforts focused primarily on theoretical studies of the electronic structure and nuclear motion of molecules, extending to a range of chemical problems that form the domain of quantum chemistry and beyond.

"There were major questions regarding molecules that we wanted to answer and resolve," says Dr. Lester. "With the capabilities we had developed, we brought the tools to the table to provide some insight regarding these issues."

Depending upon the conditions, an electron can behave both as a particle and as a wave. The major equation in quantum mechanics for molecules is the Schrödinger Equation, which provides information on the reactivity of a molecule and its equilibrium structure. The equation itself can be separated into two components: the nuclear Schrödinger equation describes the motion of the nuclei of a molecule; the electronic Schrödinger Equation, brings into the calculation the motions of the electrons, which dictate to a great extent its chemical behavior.

"Historically, the way these calculations were done is you fixed the nuclei at certain geometries then computed the electronic energy," explains Dr. Lester. "In the case of the nuclear Schrödinger





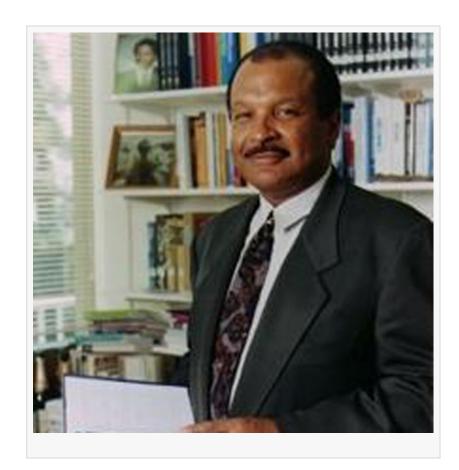
Equation, one computed the internal (rotational and vibrational) energy levels. That was what I was engaged in for my career, and I was quite successful at the latter because my calculations were sufficiently accurate as to define a standard against which to test new methods for computing such values."

CUTV News Radio will feature Dr. William A. Lester in an interview with Jim Masters on January 29th at 3pm EST.

Listen to the show on BlogTalkRadio

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