ENROLLED

SENATE JOINT RESOLUTION NO. 89

Commending Dr. Isabella Karle.

Agreed to by the Senate, January 16, 2014
Agreed to by the House of Delegates, January 17, 2014

WHEREAS, Dr. Isabella Karle, a renowned physical chemist, is commended for her groundbreaking contributions to science; and

WHEREAS, a native of Michigan, Isabella Karle earned a bachelor's, master's, and doctoral degree from the University of Michigan, where she met her future husband, Jerome Karle; the couple married in 1942 and had three children; and

WHEREAS, upon completing her doctoral studies, Dr. Karle joined the Manhattan Project at the University of Chicago, where she developed a procedure to produce pure plutonium chloride from a mixture; and

WHEREAS, Dr. Karle returned to the University of Michigan and became the first female member of the chemistry faculty before moving with her husband to Washington, D.C., and embarking on an illustrious career with the United States Naval Research Laboratory; and

WHEREAS, a pioneer in small molecule structural biology, Dr. Karle focused her early research on analyzing the structures of molecules in the vapor state by using electron diffraction; and

WHEREAS, Dr. Karle, whose husband developed theoretical work about the determination of crystal structure, created practical procedures to determine the three-dimensional structure of crystal structures using x-ray diffraction; and

WHEREAS, a few years later, Dr. Karle played a pivotal role in the development of the symbolic addition procedure, which broadened the type of crystals whose structure could be determined; and

WHEREAS, Dr. Karle's procedures led to the explosion of crystal structure determinations, which allowed breakthroughs and advances across multiple disciplines and formed the basis for computational chemistry, conformational analyses, and the prediction of folding for new substances; and

WHEREAS, Dr. Karle was the first person to publish the structure of such substances as toxins, steroids, and particularly peptides; she worked to develop inexpensive synthetic materials that served the same purpose as natural chemicals; and

WHEREAS, Dr. Karle served as head of the X-Ray Diffraction Section in the Structure of Matter Laboratory at the United States Naval Research Laboratory for several decades; and

WHEREAS, an admired leader in her field, Dr. Karle published more than 350 papers, served on the editorial boards of numerous journals, was a consultant to the Atomic Energy Commission, and worked with the Massachusetts Institute of Technology; and

WHEREAS, Dr. Karle was a member of the National Committee on Crystallography of the National Academy of Science and the National Research Council and served as president of the American Crystallographic Association; and

WHEREAS, the recipient of numerous awards and accolades, Dr. Karle was elected to the National Academy of Sciences, became the first woman awarded The Franklin Institute's Bower Award and Prize for Achievement in Science, and received the National Medal of Science, The Royal Swedish Academy of Sciences Gregori Aminoff Prize in Crystallography, and the R. Bruce Merrifield Award from the American Peptide Society; and

WHEREAS, in July 2009, Dr. Karle, along with her husband, Dr. Jerome Karle, retired from the United States Naval Research Laboratory; together, the couple served the federal government an astonishing 127 years; and

WHEREAS, a brilliant scientist, Dr. Karle's work has transformed science and medicine, allowing unprecedented advances in a wide variety of disciplines; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the General Assembly hereby commend Dr. Isabella Karle on her extraordinary contributions to science and longtime service to the nation; and, be it

RESOLVED FURTHER, That the Clerk of the Senate prepare a copy of this resolution for presentation to Dr. Isabella Karle as an expression of the General Assembly's deep admiration and respect for her keen intellect, significant achievement, and trailblazing career.