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SENATE JOINT RESOLUTION NO. 88

Offered January 10, 2014

Celebrating the life of Dr. Jerome Karle.

Patrons—Saslaw, Alexander, Barker, Black, Carrico, Colgan, Cosgrove, Deeds, Ebbin, Edwards, Favola, Garrett, Hanger, Herring, Howell, Locke, Lucas, Marsden, Marsh, Martin, McDougale, McEachin, McWaters, Miller, Newman, Norment, Northam, Obenshain, Petersen, Puckett, Puller, Reeves, Ruff, Smith, Stanley, Stosch, Stuart, Vogel, Wagner and Watkins; Delegate: Howell, W.J.

WHEREAS, Dr. Jerome Karle, a brilliant chemist who won the 1985 Nobel Prize in Chemistry for his work in the development of a method to determine the structure of crystals, died on June 6, 2013; and

WHEREAS, a native of New York, Jerome Karle received a bachelor's degree from the City College of New York and a master's degree from Harvard University before working briefly for the New York State Department of Health in Albany; and

WHEREAS, while with the New York State Department of Health, Jerome Karle made his first contribution to science when he developed a procedure to determine the amount of fluorine in water supplies that continues to serve as the standard today; and

WHEREAS, Jerome Karle continued his studies at the University of Michigan, where he met his partner in life and work, Isabella Lugoski, at the adjoining laboratory desk in his first physical chemistry class; and

WHEREAS, Dr. Karle completed his doctoral studies and embarked on a distinguished career with the federal government as a member of the Manhattan Project at the University of Chicago, where he worked on extracting and purifying plutonium; and

WHEREAS, Dr. Karle then joined the U.S. Naval Research Laboratory, working first at the institution's facility at the University of Michigan before relocating to Washington, D.C., in 1946; he became Chief Scientist of the Laboratory for the Structure of Matter in 1968; and

WHEREAS, Dr. Karle focused his research on diffraction theory and its application to structure determination; his work led to the development of methods for crystal structure analysis that significantly condense the amount of time it takes to determine molecular structure—from years to days—resulting in far-reaching advances in science and medicine; and

WHEREAS, Dr. Karle's work on crystal structure has been used in the research on the structure of DNA; the development of painkillers, antibiotics, and drugs to treat cancer and heart disease; and the study of propellants and explosives; and

WHEREAS, throughout a long and remarkable career, Dr. Karle took part in the development of new methods and applications and created new areas of study known as quantum crystallography and kernel method; and

WHEREAS, an admired leader in his field, Dr. Karle served in various capacities with numerous professional associations, including as president of the International Union of Crystallography and chair of the chemistry section of the National Academy of Sciences; and

WHEREAS, the recipient of numerous prestigious awards and accolades, Dr. Karle, jointly with Dr. Herbert Hauptman, received the 1985 Nobel Prize in Chemistry for his "outstanding achievements in the development of direct methods for the determination of crystal structures"; and

WHEREAS, in 2009 at the age of 91, Dr. Karle retired from the U.S. Naval Research Laboratory along with his wife, Dr. Isabella Karle; together, the couple served the federal government an astonishing 127 years; and

WHEREAS, a man of extraordinary accomplishment and intellect, Dr. Karle profoundly shaped the advancement of science and medicine in the 21st century; and

WHEREAS, Jerome Karle leaves behind to cherish his memory his beloved wife, Isabella; children, Louise, Jean, and Madeleine, and their families; numerous other family members and friends; and colleagues from the scientific community; now, therefore, be it

RESOLVED by the Senate, the House of Delegates concurring, That the General Assembly hereby note with great sadness the loss of admired Nobel laureate and esteemed scientist Dr. Jerome Karle; and, be it

RESOLVED FURTHER, That the Clerk of the Senate prepare a copy of this resolution for presentation to the family of Dr. Jerome Karle as an expression of the General Assembly's deep respect for his memory and his significant contributions to science.