

LEGISLATIVE RESOLUTION honoring Esther Sans Takeuchi upon the occasion of receiving the National Medal of Technology and Innovation, the nation's top award for technological achievement

WHEREAS, It is the practice of this Legislative Body to publicly commend those outstanding individuals within the State of New York whose life-long dedication to scientific research results in groundbreaking discoveries which improve the lives of the citizens of New York State, as well as those of the entire Nation and World; and

WHEREAS, Attendant to such concern, and in full accord with its long-standing traditions, this Legislative Body is justly proud to honor Esther Sans Takeuchi upon the occasion of receiving the National Medal of Technology and Innovation, the nation's top award for technological achievement; and

WHEREAS, A brilliant scientist, Esther Sans Takeuchi received this most prestigious award at the White House on Wednesday, October 7, 2009, making her only the third woman in 25 years to be named an individual recipient of the National Medal of Technology and Innovation; and

WHEREAS, A University at Buffalo engineering professor, Esther Sans Takeuchi was recognized for her seminal development of the silver vanadium oxide battery that powers the majority of the world's lifesaving implantable cardiac defibrillators and for her brilliant innovations in other medical battery technologies that have greatly improved the health and quality of life of millions of people; and

WHEREAS, The daughter of political refugees from Latvia, Esther Sans Takeuchi's great achievement stands as a testament to the travails and accomplishments of her parents, the late Mary and Rudolf Sans; and

WHEREAS, Once a prominent family in Riga, Latvia, Mary and Rudolf Sans fled to Germany at the end of World War II to escape Russian occupation; they spent several years in a refugee camp before moving to America in 1951; and

WHEREAS, They settled in Kansas City, where Esther Sans was born; her father, also an engineer, first took a job working at a coffin factory, however, he remained undeterred and eventually found employment in his field of electrical engineering in Akron, Ohio; and

WHEREAS, As a young girl, Esther Sans Takeuchi followed her father everywhere wanting to see everything he did as he fixed things around the house, and her father was happy to oblige; as a result, Esther felt as though she could accomplish and achieve anything she set her mind to; and

WHEREAS, After graduating from High School, Esther Sans Takeuchi wanted to continue following in her father's footsteps and pursued her love for science; undaunted by the fact that she was entering a male-dominated field, she attended the University of Pennsylvania where she earned a Bachelor of Arts degree in both Chemistry and History in 1975; and

WHEREAS, Esther Sans Takeuchi then furthered her education and earned her Ph.D., from Ohio State University in Organic Chemistry in 1981; while attending Ohio University, she met her husband, Kenneth Takeuchi, and together, they moved to Buffalo, New York; and

WHEREAS, In 1984, Esther Sans Takeuchi became employed at Greatbatch Inc., the Buffalo-area company founded by Wilson Greatbatch, who won the National Medal of Technology in 1990 for inventing the pacemaker; and

WHEREAS, At Greatbatch Inc., Esther Sans Takeuchi undertook a tremendous but welcoming challenge, developing a strong, durable yet safe battery to power implantable cardiac defibrillators, which jolt the heart so it does not stop beating in a sudden, fatal cardiac arrest; and

WHEREAS, The new battery had to be a million times stronger than the typical pacemaker battery, which merely keeps the heart beating at a

normal rhythm; within just a few years, she and her team had done just that; and

WHEREAS, Esther Sans Takeuchi has been refining the batteries ever since, accumulating at least 140 patents and more importantly, saving countless lives; and

WHEREAS, Prior to her work at Greatbatch, Inc., Esther Sans Takeuchi worked as a Postdoctoral Research Associate at both the University of North Carolina at Chapel Hill and the State University of New York at Buffalo; and

WHEREAS, Today, as the mother of one of medicine's greatest inventions, Esther Sans Takeuchi is a distinguished Professor of Advanced Power Sources at the University at Buffalo, a position she has held since 2007; and

WHEREAS, Throughout her extraordinary career, Esther Sans Takeuchi has received a multitude of awards, some of which include: Astellas USA Foundation Award (2008), Lincoln Gries Distinguished Alumni Award (2006), Inventor of the Year Award, Physical Sciences, 3rd Place (2005), Pioneers of Science Award (2004), Achievement in Health Care Award (2003), Woman of Distinction Award (2003), Inventor of the Year Award, Physical Sciences, 1st and 3rd Place (2000), 68th Jacob Schoellkopf Medal (1998), Visionary of the Year, Wilson Greatbatch Ltd. (1997), Battery Division Technology Award, Electrochemical Society (1995), and Woman of the Year, Category Science (1990); and

WHEREAS, In addition, Esther Sans Takeuchi has been recognized by USA TODAY and, the National Academy of Engineering; she became a Fellow of the American Institute for Medical and Biological Engineering in 1999, and was inducted into the Western New York Women's Hall of Fame in 1998; and

WHEREAS, A pioneering role model, Esther Sans Takeuchi urges women interested in the sciences to never give up their dreams and to stay in the game; she attributes much of her success to just doing it, putting one foot in front of the other every day, something she has been doing for decades now; and

WHEREAS, Individuals such as Esther Sans Takeuchi, who have given so selflessly of their skills and dedication in performing vital scientific research to bring us closer to better understanding and protecting our health, are worthy and due the highest commendation for their contributions to all of humanity; now, therefore, be it

RESOLVED, That this Legislative Body pause in its deliberations to honor Esther Sans Takeuchi upon the occasion of receiving the National Medal of Technology and Innovation, the nation's top award for technological achievement; and be it further

RESOLVED, That a copy of this Resolution, suitably engrossed, be transrnitted to Esther Sans Takeuchi.