2013-J845

LEGISLATIVE RESOLUTION honoring Ming Ma, recipient of a Lemelson-Rensselaer Grant to develop a more efficient design for LEDs

WHEREAS, This Legislative Body is pleased to honor Ming Ma, a Rensselaer Polytechnic Institute (RPI) doctoral student who received a Lemelson-Rensselaer Grant to develop a more efficient design for LEDs; and
WHEREAS, Ming Ma developed a more efficient design for light emitting diodes (LEDs) which more than doubles the output of traditional designs, an invention which could reduce the overall cost, energy use, and environmental impact of producing light; and
WHEREAS, Most of the LEDs on the market only emit 25 percent of the light they produce; Ming Ma's design would allow them to emit 70 percent of the light produced by creating thousands of minute star-shaped pillars on the LED surface composed of five nanolayers specifically engineered to help carry the light into the surrounding air; and
WHEREAS, These nanoscale structures, which Ming Ma dubbed "graded-refractive index (GRIN) structures" are produced using a method she invented; her more efficient design is scalable to commercial levels without a severe increase in costs and could reduce the overall cost of producing light and would allow greater control over emission patterns; and
WHEREAS, Furthermore, because Ming Ma's LED design creates more light using the same amount of energy as traditional LEDs, it is also less taxing on the environment; and
WHEREAS, Ming Ma, who is from Jiangxi Province in southeast China, came to RPI after earning the equivalent of a bachelor's degree from Fudan University in Shanghai, China; and
WHEREAS, Ming Ma began researching LEDs three years ago on the Lemelson-Rensselaer Grant first awarded in 2007; and
WHEREAS, The award is offered through a partnership between Rensselaer Polytechnic Institute and the Lemelson-MIT Program at the Massachusetts Institute of Technology, a non-profit organization which recognizes outstanding inventors, encourages sustainable new solutions to real-world problems, and enables and inspires young people to pursue creative

lives and careers through invention; now, therefore, be it

RESOLVED, That this Legislative Body pause in its deliberations to honor Ming Ma, a Rensselaer Polytechnic Institute (RPI) doctoral student who received a Lemelson-Rensselaer Grant to develop a more efficient design for LEDs; and be it further

RESOLVED, That a copy of this Resolution, suitably engrossed, be transmitted to Ming Ma.