Tan Kah Kee Young Inventors' Award 2016

Tan Chuan Fu, former student of Engineering Science Programme (ESP) together with Zhu Liangliang, ECE research team of Associate Professor Ho Ghim Wei have clinched the Tan Kah Kee Young Inventors' Merit Award in the Open category. The award was given out by Mr. Ng Chee Meng, Acting Minister for Education and Senior Minister of State, Ministry of Transport on the 28th May 2016 at Science Centre Singapore. The award, which is given to outstanding inventors, seeks to inspire creativity among youths and to promote an innovative and inventive culture. Being a prestigious and well-established invention award in Singapore, the Tan Kah Kee Young Inventors' Award has attracted 810 entries this year.

Utilizing sustainable solar energy and material for environmental and energy remediation have always commanded great interest. For their award entry, they have created highly absorbent and solar-mediated carbon aerogel photocatalytic foam. The invention encompasses intricate functional material design to achieve both elevated absorbent and photocatalytic performances with unprecedented practicality, in providing clean energy and air/water resources.

For air/water purification, its ultra-lightweight and compressible properties, allow straightforward and portable deployment. Its ability to absorb air/water pollutant readily into the photocatalytic-active cells, adds on to its ease for use and adaptability to multiple scenarios. This is especially useful in a water-scarce environment with limited stagnant water bodies. Moreover, its porous and compressible nature allows tailorable permeability levels, to act as a versatile filtration system. With its photocatalytic capabilities, it offers much higher reusability, compared to conventional filtration systems, by degrading absorbed organic impurities.

ECE NUS research team at the awardee exhibition, Science centre. Mr. Ng Chee Meng, Acting Minister for Education and Senior Minister of State, Ministry of Transport visiting the exhibition booth.