

# PENCIPTA'19

22<sup>nd</sup> September 2019

Dewan Sultan Ibrahim, Tun Hussein Onn of University, Malaysia (UTHM)

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Pencipta'19 was a science and innovation exhibition that held at Dewan Sultan Ibrahim, Tun Hussein Onn University of Malaysia (UTHM) during 22<sup>nd</sup> to 23<sup>rd</sup> of September 2019. The exhibition was organized by Ministry of Education Malaysia (KPM) with the collaboration of Department of Higher Education (JPT) and UTHM. It's a pleasure for the organizer to invite YB Dr. Maszlee Malik, the Minister of Education Malaysia and YB Yeo Bee Yin, Minister of Energy, Science, Technology, Environment and Climate Change to host the opening ceremony for the exhibition.

Throughout the exhibition, we found that the trend of the exhibition was "Innovation Beyond Imagination and Towards Digitalize Future.", which suits the trend of our nation development project. Based on our observation from the exhibition, there was a booth that introduced a device called "Bioflame" that can convert biodegradable kitchen wastes from our daily life such as banana peels and unwanted peels from vegetables to cooking gas. The device only takes 24 hours for the biochemical process to be happened and then supplies cooking gas that enough for 2 hour supplies. The device is designed into a few parts, which are the cap, container to held the kitchen wastes and cooking gas, channel for input of kitchen wastes and output for the residue which can be used as fertilizer afterwards. Then the biochemical process is finished, the cap will be arisen and the cooking gas is ready to use. One of the benefits of the device is no odor. Last but not least, it is environmental friendly as it reduces the usage of natural gas, a type of finite resource.

Next booth we visited is the "Self-Healing MRE Tire". This invention is not the tire but the sealing layer inside a normal tire. The application of magnetorheological elastomer (MRE) is the core of this invention. Magnetorheological elastomers (MREs) are a type of soft magneto-active rubber-like material, in which its physical or mechanical properties can be changed upon the application of a magnetic field. This allows the sealing layer which made out of MRE can immediately repair itself after being punctured by sticking together again. Thus the holes and pores on the normal tire are sealed and the airs inside the tire are kept. The process of the sealing layer repairing itself can be catalyzed by pressure and temperature presence in the tire. The benefits of this invention are it lengthen the lifespan of the tire and reduce road accident caused by a tire blowout.

Finally, the last discovery we found is "Organic Biosintok Prowash". It is a fruit and vegetable wash which we use it to spray onto the fruits to keep its freshness. The main ingredient of this wash is sintok, a plant that can be found in tropical forest and its extract is anti-microbial activity fluid. This prowash only contain of the sintok's extract and water with the ratio of 1:9. This organic fluid absolutely safe to human as it is free of chemical substances. What amazing about this prowash is that it can keep the freshness of fruits and vegetables better than most other wash we can found in the market. Since the sintok plant can be found quite commonly around Malaysia, the production cost is low and this product is environment friendly as well.

Creativity and innovation have always been the utter most important element in contributing to our country's progress and development. This exhibition is a great platform and opportunity for both inventors and innovator to share and exchange their ideas. Our imagination is our only limits, nothing is impossible if we can think of. As we saw at the exhibition, most the invention were just made out of simple things or materials that can be obtained and access easily in our daily life. So is important to pay attention to every detail in our daily life that might potentially be applied into our creations.