UNIVERSITI TEKNOLOGI MARA

CELEBRATING COMMERCIALISATION YEAR 2014

iideX 2014

invention innovation & design exposition 2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

INNOVATEUR wannabe! 2014

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DEWAN AGUNG TUANKU CANSELOR (DATC)
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MALAYSIA

"Bridging the valley of death : advancing the commercialisation of research"

RESEARCH BOOK

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AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

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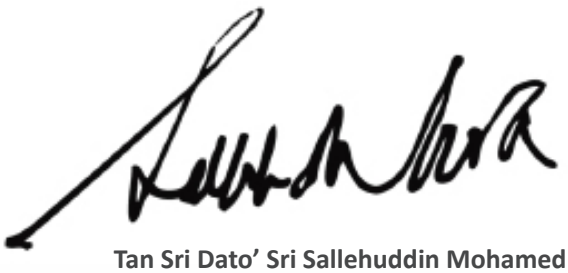


FOREWORD

The Honourable Minister of Science, Technology and Innovation (MOSTI) has launched 2014 as Malaysia Commercialisation Year 2014 (MCY2014) with the theme Science Technology and Innovation (STI) for Wealth Creation. In line with this theme, Invention, Innovation, Design & Exposition 2014 (iidex2014) is an annual exposition organized by UiTM and is the ultimate platform to highlight and commercialise new inventions and innovations. Researchers and inventors will exhibit their products which cater to the needs and wants of the community and the country.

The iidex2014 creates a new dimension by fusing two competitive concepts, a competition among innovative products and a competition to invite Innovateur Wannabes to perform live pitching of their products to the audience. The iidex2014 focuses on comprehensive commercialization and creating opportunities for entrepreneurs to carry out R&D as well as to provide avenue to commercialise their products. Through expositions such as iidex2014, MOSTI hopes to inculcate the culture of commercialisation of new technology designed and created by Malaysians.

I wish to congratulate all the participants of the iidex2014 and this is the opportunity for all researchers to show their ideas and exhibits their products and creativity. Apart from showcasing their products, innovators will have the opportunity to provide a window to the industry for business matching during the exposition.



Tan Sri Dato' Sri Sallehuddin Mohamed
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LITTE KIDDO BOTTLE

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There are a lot of bottles that have been designed to attract parents to buy their babies. The bottles are just same and do not have any additional function. Parents often take time to prepare infant formula, especially when they are on a long journey. Sometimes the children are whining and crying because they cannot get the milk within a short time. In the meantime, parents are forced to carry containers of milk powder preparation if the children wanted milk. Improper storage may cause spillage. Therefore, this study attempts to create innovative design named Little Kiddo Bottle with several types of features that are useful for parents and babies. Our main objective in making this product is to save the time of parents in providing the milk for the children. In addition, parents do not have to bring any milk powder container. This design has its own functions and privileges. Little Kiddo Bottle has two safe containers at the bottom of the bottle as a place to put milk powder. Parents can measure the milk powder directly from home and put into the two containers without bringing any milk container. In addition, parents just have to turn around the container and pour the water. With this, parents no longer need to carry containers of milk powder. Furthermore this invention is also designed with a rubbery holder at the side of the bottle to tighten the grip of the baby while drinking the milk. Other than that, this bottle design is a modern and futuristic concept while easily held by the baby. With this bottle, parents can make twice as much milk. We want to produce a product that can give convenience to parents and baby. With all the features and benefits above, we believe that this product, Little Kiddo Bottle will facilitate parents in providing milk for the kids. Our team leader is Nur Aina Nabilah bt Hanapi. While the others are Anis Azira bt Rosli, Noorshahira Azwa bt Mohd Shah and Nayli Nazira bt Hilmi. We are representing our school MRSM Tun Abdul Razak Pekan Pahang.

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WASTE FROM COCONUT PLANTATION-COCONUT HUSK FOR MAKING BIODEGRADABLE COMPOSITE

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Waste from coconut plantation such as coconut husk can be effectively utilized for the making of biodegradable composite material. The effect of fiber content varying from 10% (by weight) to 30% on the strength properties and physical properties of the coconut husk-poly lactic acid (PLA) composite was investigated. The effect of alkali treatment on the properties such as tensile and flexural modulus was also studied. Results indicated that the best strength properties were achieved at 20% coconut husk fiber content. Both tensile and flexural modulus of the composite increased with increasing fiber content. Compared to treated coconut husk fiber, untreated composite exhibited high value of 3.5MPa for FMOR, 14998.76 N/mm for FMOE, 2075.13 N/mm for TMOE and 23.64 MPa for TMOR when 20% coconut husk fiber content was used. Meanwhile treated composite showed much higher values for the physical properties. Water absorption increased as the coconut husk fiber content increased.