

INNOVATION PITCH & BUSINESS MATCHING (IPBM 2019) - CHEMICAL, ADVANCED MATERIAL AND PLASTIC

NO	MAIN RESEARCHER	UNIVERSITIES	NAME OF INVENTIONS	DESCRIPTION OF INVENTIONS	TECHNOLOGY CATEGORY	INVENTION STATUS
1	MOHD AMINUDIN JAMLOS	Universiti Malaysia Perlis (UniMAP)	HYBRID GRAPHENE-COPPER ANTENNA FOR BRAIN TUMOR DETECTION	Hybrid grapheme-copper antenna is successfully identifying tumor in human brain using improved delay and sum algorithm technique. The antenna consists of graphene as patch and conventional copper for the rest radiating element parts as well as Taconic as the substrate. The sensor operated within ultra-wide band radiation frequency (2.5 GHz-12.2 GHz) with high energy produced (5.5dB-14.5dB) in order for the signal to reach tumor located inside human head phantom. The image produces indicated tumor present with the highest intensity spot (reddish orange in colour).	Chemical, Advanced Material and Plastic	READY TO COMMERCIALISED
2	Ts. Dr. Mohd Natashah Bin Norizan	Universiti Malaysia Perlis (UniMAP)	STEM DSSC Kit - From Juice to Power	STEM DSSC Kit. Students will be guided step by step to fabricate a dye sensitized solar cell (DSSC) on their own. The kit is equipped with a booklet of solar cell basic theory, materials to create and measurement	Chemical, Advanced Material and Plastic	PATENT/READY TO COMMERCIALISED

INNOVATION PITCH & BUSINESS MATCHING (IPBM 2019) - CHEMICAL, ADVANCED MATERIAL AND PLASTIC

				tools to relate science in life and how interesting the science is. Unlike industrial DSSCs which only used Titanium Dioxide, this kit introduce Zinc Oxide for better efficiency. The kit is environmental friendly since it will use fruit as the light absorber to generate electricity. The target users for this kit are students from primary/secondary school, matriculation, vocational technical college, and university.		
3	Mohammed Alias Yusof	UNIVERSITI PERTAHANAN NASIONAL MALAYSIA (UPNM)	Blast Resistant Concrete	The blast resistant concrete was developed through some modifications made on the normal concrete with additional steel hybrid fibers. This material is considered as a new innovative construction material. Moreover, this material has a compressive strength of 37 MPa and can resist to the pressure of 14.5 MPa from 1 kg of military explosive namely Plastic Explosive (PE4) with a stand off distance of 300 mm. With these proven	Chemical, Advanced Material and Plastic	READY TO COMMERCIALISED

INNOVATION PITCH & BUSINESS MATCHING (IPBM 2019) - CHEMICAL, ADVANCED MATERIAL AND PLASTIC

				<p>results, this material has a potential to be used for military, government buildings, commercial shopping complex, hotels and high risk terrorist threat environments. In addition, the blast resistance concretes can also be used in the construction of bridges, airport runways, highways, and other infrastructure applications wherever there are requirement on protection against blast loading.</p>		
4	<p>BRIG JEN PROF. IR. DR. NORAZMAN BIN MOHAMAD NOR</p>	<p>UNIVERSITI PERTAHANAN NASIONAL MALAYSIA (UPNM)</p>	<p>BAMBOOCRETE MULTI-PURPOSE PANEL</p>	<p>Bamboocrete multi-purpose panel is made from lightweight concrete reinforced with bamboo with minimum steel reinforcement that can be connected through welding process. It acts as the new alternative in achieving affordable and sustainable building materials in construction industries. The replacement of steel bar with bamboo in concrete helps in improvement to the economical aspect and benefits ecologically. The</p>	<p>Chemical, Advanced Material and Plastic</p>	<p>READY TO COMMERCIALISED</p>

INNOVATION PITCH & BUSINESS MATCHING (IPBM 2019) - CHEMICAL, ADVANCED MATERIAL AND PLASTIC

				use of waste product from oil palm mills, palm kernel shell (PKS), as the alternative to coarse aggregate can minimise waste and contribute to the development of the sustainable and affordable structural components.		
5	Assoc. Prof. Dr. Kesaven A/L Bhubalan	Universiti Malaysia Terengganu (UMT)	PHABead: A Biodegradable Solution to Microplastic Applications	PHABead is a potential substitute to the commonly used polypropylene or polystyrene based microbeads in toiletries, cosmetics or detergent. PHABead is produced from biodegradable bacteria-derived polymer. Agro-industrial by-products and waste are used as carbon feedstock for the polymer production. The size of PHABead can be tailored to fit its applications. PHABead is non-toxic, biocompatible and completely biodegradable in the environment. The success of PHABead as dermal exfoliant agent in scrub is a testimony of its effectiveness compared to common plastic	Chemical, Advanced Material and Plastic	PROTOTYPE

INNOVATION PITCH & BUSINESS MATCHING (IPBM 2019) - CHEMICAL, ADVANCED MATERIAL AND PLASTIC

				microbeads.		
6	PROF IR DR SRIMALA SREEKANTAN	Universiti Sains Malaysia (USM)	PHOTOCATALYST FOR HYGIENE ENVIRONMENT	Hazardous substance are emitted from buildings, construction materials, indoor equipment and human activities. Such contaminants id detrimental to the human health and affect the productivity instigating a significant impediment to socioeconomic development. To address these, hybrid photocatalyst (HP) is invented. HP is translucent, water based solution that is coated on building and materials surface to form a protective layer. HP decomposes biological and chemical contaminants. It effectively inhibit fungus growth, decomposes VOC, remove odour, kills bacteria and virus. Application of HP has been proven effective in	Chemical, Advanced Material and Plastic	READY TO COMMERCIALISED

INNOVATION PITCH & BUSINESS MATCHING (IPBM 2019) - CHEMICAL, ADVANCED MATERIAL AND PLASTIC

				healthcare segment, hospitality, transportation, office and buildings		
--	--	--	--	---	--	--