



UNIVERSITI
PENDIDIKAN
SULTAN IDRIS
اونيزرستي قنديديقن سلطان ادريس

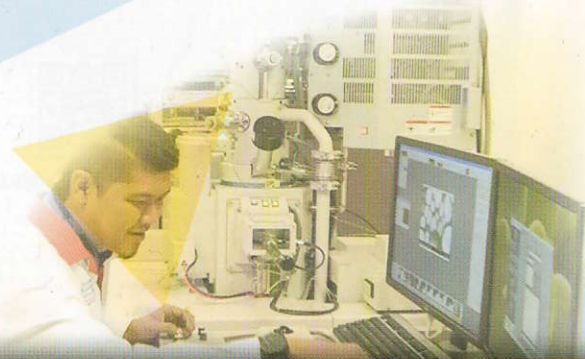
SULTAN IDRIS EDUCATION UNIVERSITY

SKETMA 13

Seminar Kebangsaan Teknologi Makmal Ke-13

**Teknologi Makmal Pemacu
Kelestarian Kecemerlangan Inovasi**

21-23 OGOS 2017 || DEWAN KONVENSYEN, BANGUNAN E-LEARNING, UPSI



MASA	TAJUK	PEMBENTANG
23 OGOS 2017 (RABU)		
10:00 – 10:30	Dari Pembantu Makmal, Juruteknologi Makmal Ke Profesor Madya : Suatu Perjuangan	Pembentang Jemputan Prof. Madya Dr. Mohamed Saad Bin Hj. Ismail Pusat Pengajian Sains Kesihatan USMKK
11:00 – 12:00	Pemantapan Integriti Penjawat Awam Suatu Kewajipan	SPRM, Putrajaya

PEMBENTANGAN POSTER

TAJUK	PEMBENTANG
PP03 Aplikasi Sistem Prabayar Log Kad Dalam Penggunaan Instrumen Di Makmal	Ramlah Binti Hussin Jabatan Kimia Fakulti Sains Universiti Teknologi Malaysia
PP04 Impak Penggunaan Log Kad Untuk Analisis Sampel Pelajar	Hazelinda Binti Mohd Maslan Jabatan Kimia Fakulti Sains Universiti Teknologi Malaysia
PP05 Membina Tapak Sampel (<i>Stub</i>) Yang Ekonomi Bagi Kegunaan FESEM	Mohd Hashimi Bin Ma'ani Jabatan Kimia Fakulti Sains dan Matematik Universiti Pendidikan Sultan Idris

UCAPTAMA DAN PEMBENTANG JEMPUTAN



PROF. MADYA DR. AZLAN BIN KAMARI

- Doktor Falsafah (Ph.D) – Kimia (Kimia Analisis (Kimia Persekitaran: Kajian Pencemaran)) *University of Glasgow, Scotland, UK(2011)*
- Sarjana Sains – Sains Gunaan (Kimia Analisis) *Universiti Sains Malaysia (USM)(2004)*
- Sarjana Muda Sains Gunaan – Kimia (Kimia Analisis) *Universiti Sains Malaysia (USM)(2002)*

Bidang Penyelidikan

1. Sorption of metals and dyes onto low-cost sorbents. 2. Soil stabilisation and metal immobilisation using low-cost materials. 3. Phytoextraction of heavy metals from soil and water. 4. Remediation of water and soil contaminated with heavy metals using waste-based materials.



PROF. MADYA DR. SURIANI BINTI ABU BAKAR

- Doktor Falsafah (Ph.D) - Fizik (Fizik) *Universiti Teknologi MARA(2011)*
- Sarjana Sains - Fizik (Fizik Bahan) *Universiti Teknologi Malaysia(2005)*
- Sarjana Muda Sains dengan Kepujian - Fizik (Fizik Industri) *Universiti Teknologi Malaysia(2002)*

Bidang Penyelidikan

1. Carbon Nanotubes 2. Graphene 3. Vertically Aligned Carbon Nanotubes from Palm Oil/Waste Cooking Palm Oil Using Thermal Chemical Vapor Deposition (TCVD) Method 4. Hydrogenated Amorphous Carbon Thin Films (a-C:H) 5. Diamond-like Carbon Films (DLC) 6. Plasma Enhanced Chemical Vapor Deposition Technique (PECVD) etc.



PROF. MADYA DR. MOHAMED SAAT BIN ISMAIL

- Dip. MLT (USM), BSc. (Hons.)(UPM) Biomedical
- MSc. (USM) Sports Sciences
- Dr. Eng. (Kyushu) Environmental (Exercise)
- Physiology Dip. (Nagasaki)
- Tropical Medicine Exercise and Sports Sciences Programme, School of Health Sciences, Universiti Sains Malaysia

Bidang Penyelidikan

1. Exercise and Environmental Physiology 2. Ergonomics 3. Sports Nutrition

 **ABSTRAK UCAPTAMA 1****ARE WE READY FOR IR 4.0?**

Azlan Kamari

*Department of Chemistry, Faculty Of Science and Mathematics
Univeristi Pendidikan Sultan Idris
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The Industrial Revolution 4.0 (IR 4.0) promises to provide a fundamental transformation of the ways we think, live, work, and relate to one another. In this IR 4.0, we are facing a range of new technologies that combine the physical, digital and biological worlds. These new technologies will impact all disciplines, economies and industries, and even challenge our ideas about what it means to be human. In the context of technological advancement and globalisation, higher education, research and scientific institutions will likely have to review their roles and to change their ways of operation. In order for the aforementioned institutions to face an avalanche of the coming IR 4.0, an imperative question has to be asked, are we really ready for IR 4.0? Believe it or not, the future is happening around us. And we must rise to the challenge to meet it and thrive in the new industrial revolution.

 **ABSTRAK UCAPTAMA 2****NANOTECHNOLOGY AND ITS IMPACT TO OUR FUTURE**

A. B. Suriani

*1 Nanotechnology Research Centre,
2 Department of Physics,
Universiti Pendidikan Sultan Idris, 35900 Tanjung Malim, Perak, Malaysia.*

Nanotechnology is the art and science of manipulating atoms and molecules to create new and useful materials, devices and systems. Nanotechnology is often divided into two parts which are nanoscience, where researchers learn about the chemical and physical properties of materials at the range of 1- 100 nm scale. Materials at 1-100 nm are called nanostructures (nanotextured surfaces (1D), nanotubes (2D) and [nanoparticles](#) (3D)) and they are the smallest things that can be produced. The second part is nanotechnology itself where researchers develop and apply materials at this scale to fabricate new products or methods such as turning nanostructures into useable devices and applications. There are two approaches in nanofabrication which are bottom-up that seek to have smaller components built up into more complex assemblies, meanwhile top-down approaches start with large materials and bring it down to the nanoscale. There are variety of application of nanotechnology in the future, however in the long run, the largest opportunities are expected in medicine and electronics, which are expected to comprise nearly two-thirds of the market by 2030.