Dr. Gaanty Pragas Receives Award from IKM

DEC 9, KUALA LUMPUR: The Tan Sri Datuk Ong Kee Hui Postgraduate Chemistry Medal is given annually to the most outstanding chemistry postgraduate thesis by Institut Kimia Malaysia (IKM) since 1974. For the year 2011, the sole recipient of the medal is Dr. Gaanty Pragas A.F. Maniam from Faculty of Industrial Sciences and Technology (FIST), Universiti Malaysia Pahang (UMP) for his PhD thesis. The medal also carries an Award Certificate and a cash prize.

The award ceremony was during the Malam Kimia 2011 at the Sime Darby Convention Centre, Bukit Kiara, Kuala Lumpur on Friday, December 9, 2011. The Honourable Minister of Science, Technology and Innovation, YB Datuk Seri Panglima Dr. Maximus Johny Ongkili, attended the event as the Guest of Honour.

Dr. Gaanty’s PhD thesis is on ‘Biodiesel Production via Heterogeneous Transesterification of Palm Olein and Waste Oils’ under the supervision of Prof. Dr. Boey Peng Lim of Universiti Sains Malaysia (USM). His research is on renewable energy materials (biodiesel), a relevant area under the national agenda of Energy and Water Security. During his doctoral research, he has published nine papers in highly reputed international journals published by The American Oil Chemists’ Society, Springer and Elsevier and presented these results in national and international conferences. He is a reviewer for over ten international scholarly journals in the area of Renewable Energy and Catalysis.

Signing of Letter of Intent (LOI) between FIST, UMP, FRIM and TPM

OCT 12, MARAN: To strengthen research collaboration on herbs in Malaysia, the Faculty of Industrial Sciences & Technology (FIST), Universiti Malaysia Pahang (UMP) has signed a Letter of Intent (LOI) with Forest Research Institute Malaysia (FRIM) and TPM Biotech Sdn. Bhd. at the FRIM station in Kampung Ulu Luit, Maran on 12th October 2011.

The LOI was signed by Deputy Dean (Academic and Student Development Affairs) of FIST, Dr. Saiful Nizam Tajuddin while FRIM was represented by Director-General, Dato’ Dr. Abdul Latif Mohmod and TPM Biotech Sdn. Bhd. by Senior Manager, Mr. Fadzthairi Abd Jabar.

The event was witnessed by Pahang State Information, Science, Technology and Innovation Committee Chairman YB Dato’ Mohd Sharkar Shamsudin.

FIST’s Postgraduates During the 6th UMP Convocation

OCT 10, GAMBANG: UMP’s 6th Convocation was held on 1st October 2011 at UMP’s Sports Complex which witnessed 1,290 graduates receiving their doctoral, master and bachelor degrees and diplomas. The ceremony marked a history for FIST when a pioneer batch of Doctoral and Masters students graduated. His Royal Highness the Crown Prince of Pahang Tengku Abdullah Al-Haj ibni Sultan Haji Ahmad Shah Al-Musta’in Billah, Tuanku Chancellor of UMP conferred FIST’s first Doctoral Degrees to two recipients, Dr. Saiful Nizam Tajuddin and Dr. Nurul Husna Ab Hamid. Liu Meng, Chia Keh Leong, Ade Chandra Iwansyah and Aini Norhidayah Mohamed were conferred Masters degrees.
Gene therapy is the use of DNA as a pharmaceutical agent to treat disease. New genes can be introduced to a patient's cells to replace missing or malfunctioning genes. Gene therapy is a promising treatment option for a number of diseases which include inherited disorders, some types of cancer, and certain viral infections.

**Correlation**

- **Strong Positive**
- **Strong Negative**
- **Weak Positive**
- **Moderate Negative**
- **None**
- **Weak Negative**

Correlation is a statistical measurement of the relationship between two variables. For example, is there a relationship between hard work and exam results? A positive correlation means that high values of one variable are associated with high values of the other variable. The more hours of work a student puts into revision, the higher their exam score. A negative correlation means that high values of one variable are associated with low values of another variable. The more hours spent playing video games, the lower the exam results. If there is no relationship, the variables are said to be uncorrelated or that there is no correlation.

**Bachelor of Applied Sciences (Hon.) Material Technology**

Universiti Malaysia Pahang is committed to developing new and innovative programs to ensure our graduates are equipped with the skills and knowledge relevant to today's market demands. The Faculty of Industrial Sciences & Technology (FIST) will be offering the new MQA-accredited Bachelor of Applied Sciences (Hon.) Material Technology.

The program integrates theoretical and hands-on approaches where students are taught through lectures, tutorials, laboratory, single and group presentations, fieldwork, industrial visits, final year projects, and practical training in actual industry settings. The first cohort of students will begin classes in September 2012. The faculty expects to enrol 50 students in the first year with annual enrolments growing to 200 students by year four. Students will undertake a total of 125 units of credit during 4 years of full-time enrolment. The program structure includes core courses, faculty thrusts, electives and university courses. This program concludes with a 6 months industrial training. Graduates will be able to fill job vacancies in any organization or industry related to material technology.

**Passages**

Latest additions to the FIST family

Siti Mariam Mohd Ariff
Lecturer DS45
03 Oct 2011

Masnah Sharif
Clinical Staff N17
04 Oct 2011

Nor Aflita Md Omar
Lecturer DS45
05 Oct 2011

Nurul 'Azizah Sabri
Lecturer DS45
25 Oct 2011

Ishakuddin Waini
Lecturer DS45
18 Nov 2011
Four Rare Earth Elements That Will Only Get More Important

Rare earth elements are neither rare, nor earth, and they tend to be things that are added, in small doses, to composites and alloys. Rare earths have really unique chemical and physical properties that allow them to interact with other elements and get results that neither element could get on its own. Rare earth elements are crucial to the way we live now, responsible for miniaturizing computers and headphones, powering hybrid cars and more. Rare earth elements—a set of 17 related metals, mostly shunted off to a tucked—on lower line of the periodic table—are crucial to the way we live now, responsible for miniaturizing computers and headphones, powering hybrid cars and more. The time has come to get better acquainted with the molecules that make our modern world run.

[2] Europium

Europium was the first isolated, high-purity rare earth element to enter the public marketplace, in 1967, as a source of the color red in TV sets. There had been color TV before europium, but the color quality was weak. Today, most europium is used in white LED-based lights, which could someday be an energy-efficient replacement for both incandescent and compact fluorescent bulbs.

[3] Erbium

The applications of erbium are both deeply important, and a little silly. For instance, adding erbium to glass is about the only way to create a stable pink shade. So erbium-doped glass pops up in novelty sunglasses and decorative vases. A little erbium added to the optical fiber that carries data in the form of light pulses cause those pulses to get amplified. It can also be used as part of the gain medium that amplifies light in a laser which can be used for dental surgery and skin treatments because it does not heat up much heat in the human skin it is pointed at.

[4] Neodymium

In the late 1970s, Sony introduced the Walkman, a (relatively) small, (relatively)odable music player. The key is magnets made from the rare earth element samarium, which were smaller and stronger than anything available then. Today, the samarium-based magnets have largely been replaced by neodymium magnets, which are even smaller and even stronger. They are also used in turbines that turn wind into electricity, and the drills that search for oil deep below the surface of the Earth.
Spotlight on Faculty Member

Prof. Dr. Jose Rajan, Physicist

Jose was born on 23 May 1971 as the first of two children of V. K. Rajan and B. K. Susheela in Kerala State of India. He received a B.Sc. degree from the University of Kerala and M. Sc. Degree from the Andhra University, India.

“Knowledge is power”

In 1995, he started his career as an academic and industrial researcher at the Council of Scientific and Industrial Research (CSIR), India and receiving a PhD degree from the Mahatma Gandhi University for his pioneering work on nanostructured materials for microwave and superconductivity applications. After submission of his PhD thesis, he was awarded the prestigious Dr. K. S. Krishnan Research Associateship from the Govt. of India, which enabled him to work for India’s first fast breeder nuclear reactor at the Indira Gandhi Centre for Atomic Research.

In 2003, he joined the National Institute of Advanced Industrial Sciences and Technology (AIST) in Japan where he worked on luminescent quantum dots for energy and healthcare. He published pioneering articles on the relationship between structure and properties of popular II-VI semiconducting quantum dots which was highlighted in Japanese newspapers and televisions. In 2005, he joined the Toyota Technological Institute at Nagoya, Japan where he continued to work on nanomaterials as well as glasses and glass ceramics as optical waveguides and signal processing devices and developed new materials system characterized by high optical gain and large optical gain bandwidth. In 2007, he joined at the National University of Singapore and started working on nanostructured materials for renewable energy.

He joined the Faculty of Industrial Sciences & Technology (FIST) of Universiti Malaysia Pahang in March 2010, where he is presently a Professor of Materials Science and Engineering. He holds 15 patents including US, European, Japanese, and Indian. He has published nearly 100 papers in science citation indexed journals which are cited about 1000 times. He has a family of four: Sushanthry (wife); Malekaya (Daughter born on March 2000) and Shravan (Son born on November 2005).

Spotlight on Graduate Student

Azhar Fakharuddin, PhD (Advanced Materials)

Azhar Fakharuddin originates from Azad Kashmir, Pakistan. He has Bachelor and Masters degrees in electronic engineering. The decision to change to science and technology field was one of the most difficult decisions he has ever made. It can never be easier until he met a professor, who happens to be his current PhD supervisor. The first question from the professor was, “What is your intention of switching to nanotechnology?”. He paused and after deep thinking; he answered “I am looking for a place that could offer me a platform to make differences and a thrust to do something non-existing which one should dream of”. The professor answered, “You have come to the right place”.

“We all have ability. The difference is how we use it”

After one semester, he confronted the hurdles which he faces with smiles. The teamwork, co-operation from the team members, a real research environment in the lab and motivation from his supervisor have made him stronger and confident of his path. He is working on charge transport phenomena in dye sensitized solar cells, under supervision of Prof. Dr. Jose Rajan. He is actively involved in publications, presenting research papers in conferences and the International Conference on Nanotechnology 2012 (ICON 2012) committee as Secretary. His final remark at the interview was “I have finally discovered a place where my heart feels it belongs to. I am proud to be a part of the family”.

Eureka!

Universiti Malaysia Pahang,
Lebuhraya Tun Razak,
26300 Gambang, Parit Durai Mahmur

Phone: 09 – 549 2767
Fax: 09 – 549 2766
e-Mail: info@ump.edu.my
http://fst.ump.edu.my

Chief Editor
Masahid Mohd. Yusoff

Reporters

Layout and Design
Mohd Fazli Farida Asras & Nurul Nadia Abd Razak

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