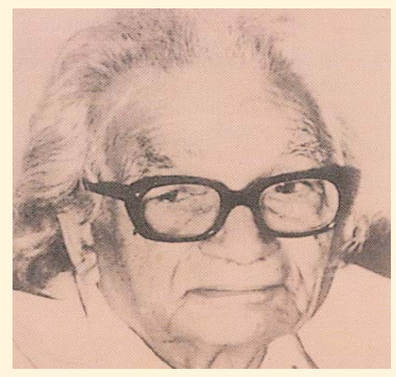
Weekly Technology Times

Price Rs.45 6 Pages ID-363 Vol: II No: 11 www.technologytimes.pk ABC CERTIFIED MARCH 14 - 20, 2011

HERO

The scientist who painted:

(October 19, 1897 - April 14, 1994) Dr Salimuzzaman Siddiqui (HI, MBE, SI, D.Phil) was a leading Pakistani scientist in natural products Chemistry. As the founder director of H.E.J. Research Institute of Chemistry, he revolutionised the research on pharmacology of various ...



INSIDE

INVENTCORNER PG5

The Golden Era.....

ABBAS IBN Firnas (810–887 A.D.), was the inventor of an early metronome.

A metronome is any device that produces regular, metrical ticks (beats, clicks) — setta-

ble in beats per minute. These ticks represent a fixed, regular aural pulse; some metronomes also include synchronized visual motion (e.g. pendulum-swing).

BIOTECH PG2

PCR and its applications in...

THE POLYMERASE Chain Reaction (PCR) is a scientific technique in molecular biology to amplify a single or a few copies of a piece of DNA across

several orders of magnitude, generating thousands to millions of copies of a particular DNA sequence. The method relies on thermal cycling, consisting of cycles of repeated heating and cooling of the reaction for DNA melting and enzymatic replication of the DNA. Primers ...

ENERTECH PG2

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ENERTECH PG2

Coping with energy crisis in Pakistan

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switching off billboards and street lights at power demand peak hours are being implemented. Government provided Rs.116 billion to retire circular debt of IPPS and ...

Floods caused surge in farm sector's loans

STAFF REPORT KARACHI: The Non-Performing Loans (NPLs) of agricultural sector has surged by Rs 21 to Rs 34 billion during the last calendar mainly due to the last year's flash flood across Pakistan.

"NPLs under head of agriculture financing have surged by 6.56 percent to peak level of Rs 34.1 billion or 18 percent of the outstanding loans as on December 31, 2010 compared with Rs

32 billion or 17.7 percent of the outstanding loans as on December 31, 2009," the State Bank of Pakistan revealed.

The Agricultural Credit Advisory Committee (ACAC) had set an indicative agricultural credit target of Rs 270 billion for current fiscal year (2010-11). The target was 8.8 percent higher than the disbursement of Rs 248 billion in last fiscal year (2009-10). Out of the total target, Rs 181.3 billion were allocated to commercial banks, Rs 81.8 billion to ZTBL and Rs 6.9 billion to Punjab Provincial Cooperative Bank Limited.

According to the SBP, NPLs of five leading commercial banks and PPCBL has witnessed some decline, while domestic private banks and ZBTL NPLs have gone up.

Ozone depleting substances must die to save earth

Pakistan launches Hydro-chlorofluorocarbons Phase-out Management Plan

SPECIAL REPORT ISLAMABAD: Pakistan has reiterated its commitment to adhere to all conventions and protocols regarding protection of Ozone Layer as well as reduction of Ozone Depleting Substances (ODS) including HCFC and said that it would take all initiatives to achieve this goal as per the Montreal Protocol.

"Protection of Ozene Layer is a collective responsibility of the world states as it involves the very survival of the Earth and the life on it. Pakistan has shown seriousness towards implementing the protocols and conventions in this regard," said Federal Secretary for Environment Khawaja Muhammad Naeem while addressing the launching ceremony of Hydro-chlorofluorocarbons (HCFCs) Phase-out Management Plan here last week.

He said that as the world environmentalists are regularly expressing concerns over the protection of Ozone Layer for the safety and survival of the Earth, all the states need to comply with these protocols and conventions especially the HCFC Phase-out Management Plan.

The Montreal Protocol layer is a landmark international agreement designed and signed in 1987 to protect the stratospheric ozone layer. Scientific theory and evidence suggest that, once emitted to the atmosphere, chlorofluorocarbons (CFCs), halons, carbon tetrachloride, and methyl chloroform could significantly deplete the stratospheric ozone layer that shields the planet from damaging UV-B radiation.

Ozone is the only major atmospheric constituent that absorbs the harmful UV B light significantly. For every 1 per cent depletion in the ozone layer 2 per cent more UVB radiation reaches the surface of the earth.

The Ozone depleting substances include Chlorofluorocarbon (CFC) Refrigerant, Carbon Tetra Chloride CTC Cleaning Solvent, Halon Fire Extinguishing, Hydrochlorofluorocarbons (HCFC) Refrigerant and Methyl Bromide Quarantine. While the use of Ozone depleting substances include refrigerants in air conditioners, production of foam, inhalers for asthma (mdi), fire extinguishers and pre shipment disinfection.

The launching ceremony was also addressed by Milen Demko, the representative of UNIDO, Atul Bagai from UNEP, UNDP Country Representative, Abid Ali, Joint Secretary IC Wing, Asif Khan, NPM Ozone Cell, and Additional Secretary Environment Kamran Ali Qureshi.

In his address, the secretary revealed that according to the new phase-out schedule, the 10 per cent reduction is to be achieved by 2015, 35 per cent reduction in 2020, 67.5 per cent reduction in 2025 and 100 per cent reduction in 2030 with a service tail of 2.5 per cent annual average during the period 2030-2040.

He said that the initiation of this plan in Pakistan would go a long way towards depleting the Ozone Depleting Substances including HCFC.

It is an encouraging point, he mentioned, that 23 years after the signing of the Montreal Protocol, the Ozone Layer has got substantially stabilized. "The debilitating effect of Ozone depletion are not visible but are lethal and take effect over a period of time," he said.

The secretary cautioned that more UV-B radiation means more skin cancers, more diseases and eye cataracts, less yield from plants, less productivity from oceans, damage to plastics. "If the ozone layer depletes, more harmful UV-B radiation will reach the earth through the damaged ozone layer," he said.

It is to be mentioned here that Pakistan neither produces nor exports HCFC to other countries. The common HCFCs are HCFC 141b and HCFC 22.

Microsoft BizSpark Camp promotes new entrepreneurs

STAFF REPORT KARACHI: The Microsoft Pakistan has recently organized two BizSpark Camps at Microsoft Innovation Centre where 9 technology products, developed by 6 startup companies, were showcased.

The showcasing event was attended by 80 professionals including developers, IT pros, bloggers and students, and executives from Microsoft.

The first camp was based on Windows Phone 7 Development and the second one was on Windows Azure Development. The projects were diversified from a game to live score updates. There were also solutions related to e-banking, e-commerce and personal security.

"This is the first initiative of its kind where the ideas of young entrepreneurs have been actually transformed into a mature product," Kamal Ahmed, Country General Manager Microsoft, said.

He said, "We want to do everything through which we can equip the young talent in Pakistan. Through BizSpark, Microsoft has tried to facilitate these young startups with the knowledge and tools they need to harness the magic of software, which will help improve lives, solve problems and become a catalyst for economic growth in Pakistan."

Jehan Ara, President P@SHA, said on the occasion that BizSpark camps have been instrumental in nurturing startups and encouraging entrepreneurs to transform their ideas into market ready products.

USF goes fully operational

STAFF REPORT ISLAMABAD: The Universal Service Funds (USF) has started its operation with accelerated pace again as couple of new broadband and optic fiber projects and audit of funds and survey study tenders has been made public since last month.

The operation got resumed in the Fund after a gap of more than 10 months due to shelving of its management by then the minister-Incharge.

"The USF has recently invited biddings for two broadband projects based in Punjab and Khyber-Pakhtoonkhawa. Also, bidding proposals on optic fiber projects have been sought for Khyber-Pakhtoonkhawa under-served areas," revealed an official of the Fund.

The board of directors also gave green signal to increase the annual budget of USF from Rs 140 million in order to meet the expense required to run its expanding projects in different parts of the country.

Scientists develop software to digitise Urdu

MONITORING REPORT BUFFALO (NEW YORK): Computer scientists at the University at Buffalo and at Janya Inc. have developed the first software system that will allow for computational processing of documents in Urdu, Pakistan's national language and one of the world's five most-spoken languages.

The system provides a foundation for data mining in Urdu and allows for more accurate transliteration, converting from Urdu's writing system into English. It also is helping the computer scientists develop sophisticated ways to begin to do sentiment analysis of social media content.

"This is the first comprehensive, natural language processing system for Urdu," says Rohini Srihari, PhD, UB Associate Professor of Computer Science and Engineering and co-author of "An Information-Extraction System for Urdu.

"The system we developed provides the first full pipeline of electronic language processing capabilities in Urdu," Srihari said. "It facilitates electronic tasks ranging from the simplest keyword search to sentiment analysis of social networks, where you use computational methods to analyze opinions in a country or culture."

It is a joint project between the UB Department of Computer Science and Engineering and Janya Inc., an Amherst, N.Y., company founded by Srihari that is a leading provider of information extraction technology in languages that include Chinese, Arabic, Pashto and Russian.

Weekly Technology Times

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Vol. II, No. 11

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No.8444/2 (100) Press - 2009
Published and Printed by S.A. Mustafa at Khursheed Printers (Pvt) Ltd.
Aabpara, Islamabad for Mediaventures (Pvt) Ltd.

Ed.tweet

Water security through scientific approach

In the age of scientific developments, effective policies could lead to proper water management in the wake of extreme variability. Policymakers need better information about the regional impact of climate change on water supplies, and on ways of adapting to it. For centuries, food production remained depended heavily on access to water needed for agriculture. Having enough water is only part of the issue, however, it must also be available when and where it is most needed. In the present age, the balance between water supplies and human needs has come under increasing threat from growing populations, urbanization and climate change. The increased emission of greenhouse gases in the atmosphere may cause rainfall variability like droughts and floods. Pakistan can be the worst example where extreme situations like droughts or floods are witnessed and climate change is being widely blamed for these extreme situations. In both the situation, the main sufferers are the agriculture and the livestock. Unless national policymakers and local communities in these regions adequately anticipate and adapt to such shortages, the result could be starvation for millions. This approach would provide scientists and technologists robust tools for predicting and planning to effectively meet regional and local shortages. Uncertainty with which scientists can predict changes at the regional or local level is spelt as a major obstacle in implementing such strategies. There should be multiple options on water management to cope with major variations in water supply. Presently, these options are hardly available with the policy makers especially in South Asia. They lack potential in developing their capacity to manage rainfall variability, which is the biggest challenge facing the world's poorest people. Water storage can help but only if it is customized to local contexts. This is a key to improving water security and increasing agricultural productivity in the face of climate change. However, formation of an exact policy needs to improve the regional accuracy of predictions about how climate change will affect water supplies. Similarly, technology, needed to address the related threats, must be designed to take local conditions and capacities into account. In fact, good science communication is pivotal for these tasks. The media clearly has a key role in interpreting the work of climate scientists into language that regional policymakers and local communities can understand, enabling them to see the relevance of the scientists' conclusions. Similarly, journalists and other science communicators also have an important role in providing both reliable information helping to empower local communities to take the technical, social and political action needed to minimize disruption to food production.

BIOTECH

PCR and its applications in research and forensic sciences


Sabir Hussain Shah

THE POLYMERASE Chain Reaction (PCR) is a scientific technique in molecular biology to amplify a single or a few copies of a piece of DNA across several orders of magnitude, generating thousands to millions of copies of a particular DNA sequence. The method relies on thermal cycling, consisting of cycles of repeated heating and cooling of the reaction for DNA melting and enzymatic replication of the DNA. Primers (short DNA fragments) containing sequences complementary to the target region along with a DNA polymerase (after which the method is named) are key components to enable selective and repeated amplification. As PCR progresses, the DNA generated is itself used as a template for replication, setting in motion a chain reaction in which the DNA template is exponentially

amplified. PCR can be extensively modified to perform a wide array of genetic manipulations.

Brief History:

In 1971 Kleppe and his co-workers first described a method using an enzymatic assay to replicate a short DNA template with primers in vitro. However, this early manifestation of the basic PCR principle did not receive much attention, and the invention of the polymerase chain reaction in 1983 is generally credited to Kary Mullis. Mullis has written that he conceived of PCR while cruising along the Pacific Coast Highway one night in his car. He was playing in his mind with a new way of analyzing changes (mutations) in DNA when he realized that he had instead invented a method of amplifying any DNA region through repeated cycles of duplication driven by DNA polymerase. He was awarded the Nobel Prize in Chemistry in 1993 for his invention.

The discovery in 1976 of Taq polymerase — a DNA polymerase purified from the thermophilic bacterium, Thermus aquaticus, which naturally lives in hot (50 to 80 °C (122 to 176 °F)) environments such as hot springs — paved the way for dramatic improvements of the PCR method. The DNA polymerase isolated from T. aquaticus is stable at high temperatures remaining active even after DNA denaturation, thus obviating the need to add new DNA polymerase after each cycle. This allowed an automated thermocycler-based process for DNA amplification.

Research applications:

PCR has been applied to many areas of research in molecular genetics; PCR allows rapid production of short pieces of DNA, even when nothing more than the sequence of the two primers is known. This ability of PCR augments many methods, such as generating hybridization probes for Southern or northern blot hybridization.

The task of DNA sequencing can also be assisted by PCR. Known segments of DNA can easily be produced from a patient with a genetic disease mutation. Modifications to the amplification technique can extract segments from a completely unknown genome, or can generate just a single strand of an area of interest.

PCR has numerous applications to the more traditional process of DNA cloning. It can extract segments for insertion into a vector from a larger genome, which may be only available in small quantities. Using a single set of 'vector primers', it can also analyze or extract fragments that have already been inserted into vectors. Some alterations to the PCR protocol can generate mutations (general or site-directed) of an inserted fragment.

An exciting application of PCR is the phylogenic analysis of DNA from ancient sources, such as that found in the recovered bones or from frozen tissues. In some cases the highly degraded DNA from these sources might be reassembled during the early stages of amplification.

A common application of PCR is the study of patterns of gene expression. Tissues (or even individual cells) can be analyzed at different stages to see which genes have become active, or which have been switched off. This application can also use Q-PCR to quantitate the actual levels of expression.

The Human Immunodeficiency Virus (or HIV), responsible for AIDS, is a difficult target to find and eradicate. The earliest tests for infection relied on the presence of antibodies to the virus circulating in the bloodstream. However, antibodies don't appear until many weeks after infection, maternal antibodies mask the infection of a newborn, and therapeutic agents to fight the infection don't affect the antibodies. PCR tests have been developed that can detect as little as one viral genome among the DNA of over 50,000 host cells.

Forensic applications:

The development of PCR-based genetic (or DNA) fingerprinting protocols has seen widespread application in forensics:

(1) In its most discriminating form, Genetic fingerprinting can uniquely discriminate any one person from the entire population of the world. Minute samples of DNA can be isolated from a crime scene, and compared to that from suspects, or from a DNA database of earlier evidence or convicts. Simpler versions of these tests are often used to rapidly rule out suspects during a criminal investigation. Evidence from decades-old crimes can be tested, confirming or exonerating the people originally convicted.

(2) Less discriminating forms of DNA fingerprinting can help in Parental testing, where an individual is matched with their close relatives. DNA from unidentified human remains can be tested, and compared with that from possible parents, siblings, or children. Similar testing can be used to confirm the biological parents of an adopted (or kidnapped) child. The actual biological father of a newborn can also be confirmed.

ENERTECH

Towards energy security?

By Akhter Ali

PLANNING COMMISSION of Pakistan prepared an Energy Security Plan (ESP) in 2005, and presented it with much fanfare to the then PM and the President. The Plan still remains operative in the books of the government departments, and is quoted and discussed annually in the Economic Survey. In practical terms, ESP was a non-starter. It was not implemented even by the previous government .By 2010, an additional 7880 MW of Electrical Power capacity was to be installed .Only a few hundred MW was installed and consequently we have a deficit of 4000 MW today. Why the "conscientious" Musharraf government was so derelict in meeting its responsibilities in this respect, is a serious question. Equally serious question is what the relevant bureaucracy was doing. Prime Minister Gilani fired the previous MD of Private Power and Infrastructure Board (PPIB) on this account, despite intense lobby in the favor of the latter's extension of the contract. More heads should have rolled and a serious review of official practices in power sector ordered.

What is known can be visualized by one single example. A veritable Chinese company spent two years in Thar Coal field, prepared a feasibility study, offered to make the investment and supply electricity at the rate of 5.5 cents per unit. The then military commander holding charge of WAPDA for the reasons best known to him opposed and rejected the offer. We are buying electricity today at twice the Chinese offer and Thar Coal remains unexploited. It so incensed the Chinese that despite many requests the Chinese do not return to Thar.

Returning to the Energy Security Plan (ESP), there is hardly any possibility that it would be implemented as per its projections and estimates. The Plan was so grandiose and unrealistic which could have only pleased a fascist agenda and ruling culture. One gets nervous on our Planning Commission's ability to become so frivolous in its planning practices. I will discuss the details a bit later in these passages, suffice it is to state here to support my contention that the ESP provided 4860 MW of generation capacity based on Natural Gas. Shortage of gas is in the country now for many years. It was known even in 2005, when the Plan was made. One may fail in long term projections, but what to term this kind of outright frivolity.

Long term projections can falter at the altar of reality especially in Pakistan's boom-bust type economy and polity, reversing it in seven years cycles. ESP projected requirements of 72,270 MW by 2020, by the way of installing an additional 50,000 MW in the period 2010-2020, and again half of it to come on Natural Gas. Realistically speaking, only half of that would materialize. We should be thankful and happy, if half of that is achieved. There is no way that the demand could reach a level of 72,270 MW by 2020 in a matter of ten years. ESP predicts an electrical demand of 162,590 MW by 2030, again half of which to come from natural gas: very grotesque and unrealistic projection. Where are they seeing the gas from? Even if both the projects of LNG and the Iran-Pakistan pipeline were implemented and more of the same are added, this kind of gas wouldn't be available.

Electricity demand in Pakistan has grown at a rate of 5% per year , and even at higher assumed rate of 7 % per annum ,the demand is to double every ten years , unless we become Chinese by some magic. By that robust formula, the demand would be 50,000 MW by 2020 , and 100,000 MW by 2030 , most of which should be planned to come from Thar Coal, Hydro ,renewables and nuclear and not from gas , as has been proposed in the ESP. There is, however, a potential of gas discoveries in Balochistan, if sufficient exploration effort and

We are buying electricity today at double the Chinese offer and Thar Coal remains unexploited. However, the Chinese are unwilling to return to Thar despite repeated requests by the GoP

investment is directed. The prospects of such effort appear to be minimal in current political and law and order situation prevailing in that province. This may remain a much desired dream, and robust planning should not be based to depend so heavily on a break-through in that respect.

The problem with frivolous planning is that plans are not respected and a careless atmosphere ensues which results in shortfalls and other problems and inadequacies that we are facing today in energy sector. It is high time that ESP is buried with the kind of condemnation it deserves and a more realistic plan put into place and diligently implemented. Ironically, ESP was one of the rare indigenous planning efforts and failed miserably. Let us involve multi-lateral institutions in this as they do in all the other sectors to the chagrin of many nationalists and conspiracy theorists among us.

INFOTECH

Branchless banking: UBL Omni or EasyPaisa

By Umer Kayani

BRANCHLESS BANKING is growing rapidly in Pakistan because it is more customers friendly and easy to use. Giving customers a broader range of channels through which they can access financial services, like Bill Payment and Money Transfer, and customers can open their own Mobile Account.

Customers can send/receive money by visiting Omni Dukaan or if they want to pay their bill, they can open their own mobile account. Even they can avail all these services from their cellphone

In Pakistan there are two Branchless Banking license holder from the State Bank of Pakistan brands 'EasyPaisa' was launched in Oct 2009 and UBL Omni, both offering the same kind of services.

EasyPaisa:

Telenor Pakistan has partnered with Tameer Micro Finance Bank to introduce branchless banking for the first time in Pakistan. EasyPaisa is not just limited to Telenor subscribers; it's available for all mobile users. In fact people without mobile phones can equally enjoy. So now everyone can use services from anywhere and anytime. EasyPaisa is the easiest way to conduct your financial transactions whether they are related to paying your utility bills, sending/receiving money within Pakistan, receiving money from abroad etc.

Customers can avail multiple services by visiting any EasyPaisa shop and they can also open their own mobile account and can avail services any time anywhere. EasyPaisa account can be accessed from menus which are easy to use. All transactions available on *786# are also available through the EasyPaisa Mobile Account website, although the website provides the subscriber with additional tools to manage their accounts more efficiently.

UBL Omni:

UBL Omni is the only competitor of EasyPaisa and offering almost the same services.UBL Omni now brings a host of banking services to your nearest "Dukaan". UBL Omni Dukaans are located in more than 350+ cities and towns across Pakistan.UBL Omni account holder will subsequently be able to deposit and withdraw cash, make utility bill payments, send or receive money, purchase mobile card vouchers, make postpaid mobile bill payment and much more by using diversified array of convenient channels which includes UBL Netbanking/ WAP, SMS, Contact Centre or ATM.

Customers can avail UBL Omni services by visting any UBL Omni Dukaan and they can also open their own mobile account and can avail their services. Customers can send/receive money by visiting Omni Dukaan or if they want to pay their bill they can open their own mobile account, even they can avail all these services from their cellphone.

Which Mobile Account Should You Open?

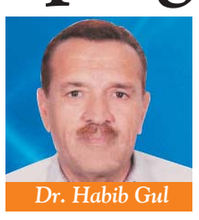
Now where should you go for mobile account Omni or EasyPaisa, both offering the same services and both have pros and cons. Omni is charging less as compared to EasyPaisa and if you have UBL account and you open Omni you can avail these services free for limited time period. And the thing which i like in EasyPasia is there ussd service, you can access your account just by dialing*786# and everything is on your screen, but for this you need Telenor number and suppose if you like EasyPaisa and want to open EasyPaisa mobile account but you don't use Telenor for calls SMS etc in this way you need to carry two cells or Telenor SIM in your wallet .But Omni account can be open on any number which you are using.

In Omni you have to remember sms commands and then send it to 8257 here EasyPaisa have edge over Omni. If you want to buy jazz 100 card your command for this will be < Buy J100> and send it to 8257 and you can also avail all these services by using internet.

ENERTECH

Part -II

Coping with energy crisis in Pakistan


Dr. Habib Gul

THE GOVERNMENT has taken certain measures for conservation. Fifty percent reduction in power consumption at official residences, switching off billboards and street lights at power demand peak hours are being implemented. Government provided Rs.116 billion to retire circular debt of IPPS and the three power generation company's which were up graded earlier, will increase 400 MW power to the country power network.

The Water and Power Development Authority is insisting on judicial use of electricity which was accepted by the industrial sector and would help in saving 100 MW power. Pakistan has 1.10 million tube wells, consuming 3,000 MW power from national grid. Agriculture sector has been offered 25 percent tariff discount if they operate between 10 pm and 6 am which would result in saving 50 MW of electricity only in Lahore jurisdiction. 1,100 tube wells are being upgraded country over. The WAPDA has increased its capacity by adding 3,000 MW of IPPs and utilizing idle production of the Authority's thermal stations.

Pakistan will get the dividends of US $ 1.5 billion per annum in shape of cheap hydropower. Till the repayment of loan, according to Shakil Ahmad Durrani, Chairman WAPDA, "the hydro generation cost will be hovering between 6-7 cents per unit and after retirement of the entire loans, the cost will drastically tumble to just 2 cents per unit".

Solar Energy

Sun is the biggest source of light and heat energy. For Example, clear sky radiation is 2500-3000 hours/annum and average solar radiation is 5 KWH/m2/day. It is reported that if land based solar collectors are used for collecting direct solar energy, it would be around 4,500 times more than the current needs of man. A fractional part of this energy is converted through solar collectors. In practice it is not possible to harness all the solar energy falling on earth, but it shows the importance of appropriate technology.

There are two systems of solar energy utilization i.e. the thermal and the photovoltaic cells. The thermal system is simple and comparatively easy to operate and maintain. Mankind is aware of this system ever since the very beginning of his life on Earth. Here we discuss solar cells in which photovoltaic or photoelectric cells are used to convert sun light directly into electricity. The importance of solar energy is increasing with the passage of time. "A clear example can be seen in Kenya, where it is estimated that roughly 30,000 small solar power units with a capacity of 20 to 100 watts are sold every year" [International Energy Agency].

The harnessed solar energy is used in various sectors such as running of TVs and lighting purposes etc. Nowadays the space engineers are planning to build huge power stations in space, using photovoltaic panels to convert its output into microwaves, to be beamed down to receivers on Earth. The microwaves would then be converted into electricity. Solar cells are costly but its prices are decreasing with the passage of time.

If households are energized through silicon solar cells, it will save Rs. 1,000/ family/month. However, photovoltaic (PV) and solar thermal has negligible use and application due to absence of significant market of roof-top PV or household and commercial thermal system. It is estimated that Pakistan can produce 3,000,000 MW power from solar system.

Biomass

Biomass is mass of living material and releasing energy, called bio power. Bio fuels come either from plants such as fuel wood, twigs, grasses and wastes. According to an estimate, with the energy of these plants trapped energy, we can meet our energy requirements for several times but we uses only one-tenth of it. Bio power can be regenerated i.e., is renewable but trees depletion in Pakistan are very high than the sustainable cultivation.

Urban Pakistan produces

55,000 tones of solid waste/day. A plant of producing energy from this source is expected to be commissioned in Rawalpindi in near future. Its success will open new era for producing energy from solid waste.

BIOGAS TECHNOLOGY

Biogas technology can apply for producing methane gas as a fuel purpose and enrich manure for agriculture farms to increase crops produces. Small biogas plants feed by cow dung, agriculture wastes and water needs installation in those households where cattle exist to feed these to meet some of households fuel demands.

As per livestock census 2000, there are 46.69 million of animals (buffaloes, cows, bullocks) in the country. On the average, the daily dung dropping of medium size animal is estimated at 10 Kg/per day. This would yield a total of 466.9 million Kg dung per day. Assuming, 50% collectability, the availability of fresh dung comes to be 233.45 million Kg/per day. Thus 11.67 million M¬3 biogas per day can be produced through bio-methanation. Since 0.4 M3 gas could suffice the cooking needs of person per day, therefore, 11.67 million M3 of biogas could meet the cooking needs of 29.2 million people. Besides producing gas, it will produce 33.62 million Kg of biofertilizer per day or 12.3 million tons per year, which is an essential requirement for sustaining the fertility of agricultural lands.

Wind Energy

Wind turbines may have some, undesired effects. It is unattractive and noisy but wind turbine could produce power from watts to Megawatts. In the coastal areas, where wind velocity consists for most of the time, wind mills can serve energy requirements of households, water for drinking and irrigation, commercial and industrial purposes. The scientists, in this connection, are working at all dimensions, as installing small weights wind mills at roofs of houses for meeting households lighting and small apparatus requirements. A small number of wind mills of micro, small and large sizes have been installed in different parts world over to suck water for drinking and irrigation purposes and lighting households. It is reminded that China has used wind energy for power pumping.

Wind mills have some negative effects. When there is no wind, power will be not available. It also generate power, mostly near the coastal area, tall tower destroy beauty of the land. Wind mills affect television and radar reception, kill birds and cannot be predicted. Pakistan has the potential of producing 350,000 MW wind power from 1100 Km coastal area in Sindh and Balochistan. Alternate Energy Development Board (AEDB) and Pakistan Council of Renewable Energy Council (PCRET) are the focal points of Government of Pakistan for big and small sizes wind mills respectively. Both the Organizations are busy in performing their functions to avail of this source of energy for coping with energy crisis and electrify far flung areas.

Tidal/Wave Current

Tidal power can be generated with waves and current on the surface of the sea through tidal barrage, a dam like structure built across an estuary. Developed world, at small level, is using this technology of energy for human services, particularly in coastal towns for desalination plants, household and commercial uses. It is reminded that in coastal areas, potable water is a great problem. The technology is costly and complicated. At current, the technology is beyond the capacity of developing countries, needing finances besides technical assistance from donors.

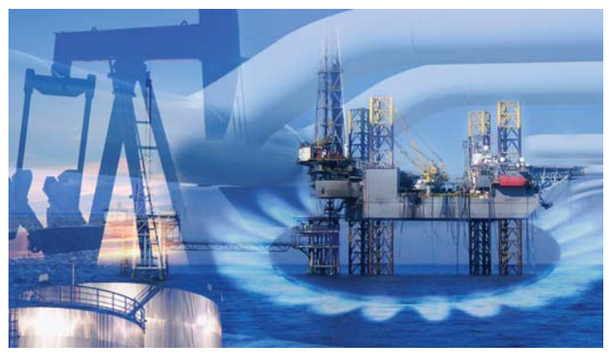
Pakistan, roughly estimated has very small potential in tidal/wave energy. AEDB has collected basic information, almost all renewable technologies which can help our researchers and planners for awareness and planning of a Project such as tidal and geothermal.

To be continued...

Weekly Technology Times

Pakistan's First Ever Newspaper on Science & Technology

Rabi-II 08 - 14, 1432
MARCH 14 - 20, 2011



HERO

The scientist who painted: Dr. Salimuzzaman Siddiqui

(October 19, 1897 - April 14, 1994) Dr Salimuzzaman Siddiqui (HI, MBE, SI, D.Phil) was a leading Pakistani scientist in natural products Chemistry. As the founder director of H.E.J. Research Institute of Chemistry, he revolutionised the research on pharmacology of various domestic plants found in South Asia to extract novel chemical substances of medicinal importance. In addition to his scientific talents, Dr. Siddiqui was also an avid painter, a poet, and a great connoisseur of music

Dr Salimuzzaman with fellow scientists Dr Nazir Ahmed and Prof Raziuddin Siddiqui

By Mohammad Ayaz Abdal

IT WAS in the wee hours of morning that the telephone rang. I am talking about the late 50s when having the landline telephone was a sign of luxury. My grandfather picked up the phone waking up from deep sleep and with a fear in his heart that something has gone wrong somewhere.

The voice on the other side pleaded to him, "Salam, for God's sake bring him back from the lab. He is there for the past four days."

Within five minutes, my grandfather was in his Morris Minor driving down to Karachi University. The person on the other line was the German wife of Dr. Salimuzzaman Siddiqui. When all things fail, she used to call my grandfather to practice his fine arts of persuasion to bring Dr. Siddiqui out of his lab where he was totally immersed in his work and losing all context of time.

This story has been narrated to me by my late grandmother. I was just a twinkle in my father's eyes.

I was reading an interview of Dr. Siddiqui where he mentioned the importance of hard work and research and narrated an event when one of the scientist was disheartened as he/she was doing research for over one year on a certain assignment which was not going anywhere. Dr. Siddiqui explained his own experience when he worked for years and finally found out his original premises was not correct. The job of the scientist, he argued, is to dedicate himself to pure research and hard work. Nobody can control the results.

His life was a true embodiment of this principle.

Born in a well known family of Subeha (Barabanki District) near Lucknow on 19 October 1897, he received his early education in Urdu and Persian. He also developed interest in literature, poetry and calligraphy from his father Sheikh Mohammad Zaman. His elder brother Choudhry Khaliq-uz-Zaman was a famous leader of the Pakistan Movement. The young Salim uz Zaman and his family have been mentioned affectionately by QuratulAin Hider in her autobiography "Kar-e-jahan Daraaz Hai" as they were quite known in Lucknow society. After getting his graduation in Persian and Philosophy (a very interesting choice for one of the brightest minds of chemistry), he proceeded to England to pursue medicine.

However upon the advice of his elder brother to study Chemistry in Germany as they were the best in Chemistry, he later decided to go to Germany to study Chemistry and completed his PhD in 1927. In 1924, he married his German classmate, Ethel Wilhelmina Schneeman (who changed her name to Talat and was nicknamed Tilly). One of the interesting facts of that stay is that Ch. Khaliquzzaman provided him Rs. 10,000 for his expenses and when they were eaten up by inflation, Hakim Ajmal Khan arranged Rs. 400 per month for him to complete his studies.

Upon his return to India, he established and became the first Director of Ayurvedic and Unani Tibbi Research Institute at the Tibbia College Delhi, under the guidance of Hakim Ajmal Khan. He was able to observe the various plants and herbs being used by the great Hakim as medicine for various ailments.

He observed that Hakim Ajmal Khan used snakeroot for ailment of mental disorders. He started his research and his first breakthrough came when he successfully isolated an antiarrhythmic agent in 1931 from the roots of Rauwolfia serpentina. He named the newly discovered chemical compound as Ajmaline, after his mentor Hakim

Ajmal Khan. Later on, Siddiqui also extracted other alkaloids from Rauwolfia. Many of these are still used worldwide for treatment of mental disorders and cardiovascular ailments, especially as antiarrhythmic agents in Brugada syndrome. After the death of Hakim Ajmal, he joined Indian Council of Scientific and Industrial Research and later migrated to Pakistan in 1951 upon the request of Prime Minister Nawabzada Liaquat Ali Khan.

He later shifted his focus to Neem. Salimuzzam Siddiqui was the first scientist to bring the anthelmintic, antifungal, antibacterial, and antiviral constituents of the Neem tree to the attention of natural products chemists. In 1942, he extracted three bitter compounds from Neem oil, which he named as nimbin, nimbinin, and nimbidin respectively. From 1942 to the end of his career, he was able to identify and isolate 50 chemical compounds (patented in his name) from Neem just as a result of his own research in addition to those discovered as a result of his joint research with other colleagues and students. Most of these discoveries still remain vital natural ingredients of various medicines as well as biopesticides. In acknowledgement of these revolutionary discoveries, he was awarded the Order of the British Empire (OBE) in 1946.

Dr. Salimuzzaman was given the task of fostering scientific research activities in Pakistan. In 1953, he founded the Pakistan Academy of Sciences as a non-political think tank of distinguished scientists in the country. He also served as one of the founding member of Pakistan Atomic Research Commission in 1956 and established Pakistan Council of Scientific and Industrial Research (PCSIR) in Karachi. He was awarded various medals by the Government and the Frankfurt University for organizing scientific activity in Pakistan. An interesting point to note is that both Dr. Salimuzzaman and Ch. Khaiquzzaman are perhaps the only brothers in the history of Pakistan to have received Hilal-e-Pakistan medal.

In 1967, Siddiqui was invited by University of Karachi to set up a Postgraduate Institute of Chemistry in affiliation with the Department of Chemistry. He was designated as the institute's Founder Director, whereas the additional research staff was provided by PCSIR. In 1976, the institute was offered a generous donation from Hussain Jamal Foundation, as a result of which it was renamed as Hussain Ebrahim Jamal (HEJ) Research Institute of Chemistry.

In due time, Siddiqui transformed the institute into a distinguished centre of international excellence in the field of chemistry and natural products. In March 1975, he headed the National Commission for Indigenous Medicine. His tireless efforts for the promotion of science and technology earned him Hilal-e-Imtiaz, Sitara-i-Imtiaz, Hilal-i-Pakistan and Pride of Performance from the Government of Pakistan in 1980. In 1983, he played a major role – along with Dr. Abdus Salam – in the establishment of the Third World Academy of Sciences and became one of its Founding Fellow. He remained the director of the HEJ Research Institute of Chemistry until 1990 when he turned the reins to Dr. Ata Ur Rehman. However, he continued research in his personal laboratory.

Dr. Salimuzzam Siddiqui, in the tradition of many other great scientists, was interested in more than just science. He was a refined poet, musician, and a painter. In August 1924, he held his first international exhibition of paintings in Frankfurt. Later in 1927, his works of art were exhibited at the Uzielli Gallery, Frankfurt. During his stay in Germany, he also translated Rainer Maria Rilke's poetry into Urdu, which was published in the journal of Jamia Millia Islamia. Though, his passion for arts was superseded by the enthusiasm in scientific research, he continued to patronize arts and culture. In 1966, he was at the forefront for setting up the Central Institute of Arts and Crafts in Karachi. He also compiled a selection of poetry of Mir Taqi Mir into Intekhab-e-Meer. In 1983, he published a portfolio collection of charcoal drawings from 1920 to 1950s.

I still remember when he attended a literary program of PTV where he spent about half an hour just explaining the meaning of the first line of Ghalib's Divan Naqsh Faryadi hai kis ki shauqi-e-tehreer ka (About whose mischievousness of writing is the image a plaintiff). He traced the origin of this line to the first couplet of Misnavi Maulana Raum. He also related this to the Sufi philosophy of Wahdatul Wajood, that we are all part of the same light and we all feel unhappy as in our physical form we are being separated from the great light or Noor. His method of explanation was so simple that it is still fresh in my memory after quarter of a century.

Dr. Siddiqui breathed his last on April 14, 1994 at the age of 97. His continuing legacy, perhaps are his great students who are continuing the fine traditions of research and service to humanity taught to them by this great scientist and human being. Perhaps Sadequein's rubayi hold true in Dr. Salimuzzaman case too.

Chalo es baar Saahiri kar kay dekhoon
Kia farq hai shyari kar kay dekhon
Tasweeron mein ashaar kahen hein mein nay
Shayari mein mussawari kar kay dekhon.

The author blogs at Ayaz Abdal's blog

MUSLIM INVENTIONS' CORNER

The Golden Era.....

Metronome

ABBAS IBN Firnas (810–887 A.D.), was the inventor of an early metronome.

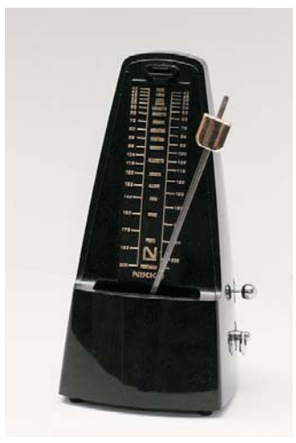
A metronome is any device that produces regular, metrical ticks (beats, clicks) — settable in beats per minute. These ticks represent a fixed, regular aural pulse; some metronomes also include synchronized visual motion (e.g. pendulum-swing). The metronome dates from the early 19th century, where it was patented by Johann Maelzel in 1815 as a tool for musicians, under the title "Instrument/Machine for the Improvement of all Musical Performance, called Metronome".

Today the metronome is generally positively regarded in Europe and Western culture. The metronome is used by some musicians for practice in maintaining a consistent tempo with steady regular beats and it can be used by composers, as an approximate way of specifying the tempo.

Yet in stark contrasting with this postivistic view, research on the history of the metronome and its influence on performance practice, reveals criticisms of metronome use, and highlights differences of "performance practice" and cultural perception/values between the current modern European/Western society (which values the metronome), and the same society during previous times (beginning of the 19th century and earlier: classical/romantic/baroque eras etc.).

Accordingly, some musicians consider the metronome to be a highly controversial tool in regard to music, with some rejecting the metronome altogether. Some composers considering metronome-tempo-marks to have only little value, or to hinder creative musical interpretation: Johannes Brahms said: "I am of the opinion that metronome marks go for nothing. As far as I know, all composers have, as I, retracted their metronome marks in later years.

The clicking sounds of mechanical metronomes have been sometimes used to provide a soft rhythm track without using any percussion. Paul McCartney did this twice:Once on "Blackbird" in 1968 & once in 1989 on "Distractions" (Flowers in the Dirt) , where McCartney, following the metronome's regular beat, performed the whole rhythm track by hitting various parts of his own body. Also, in Ennio Morricone's theme "Farewell to Cheyenne" (featured on Once Upon a Time in the West), the steady clip-clop beat is provided by the deliberately distorted and slowed-down sound of a mechanical metronome.



Ed. mail

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The opinion and views expressed in these letters are purely of the public and do not necessarily reflect the policy of the newspaper.

Solution to gas shortage

WE all know that during winter months gas loadshedding starts all over the country in a big way. This is a time when gas is used in excess for water heaters and room gas-heaters running 24 hours a day.

A solution is to provide solar water heaters that also work as room heaters, through radiator technology, by passing hot water through them to every home in Pakistan.

These solar water heaters are cheap and cost about Rs20,000 a piece and, if produced or bought in bulk, would be even cheaper.

The SNG and the SSG should offer the same on easy interest-free loan to all its customers, with installation, and adjust the cost through loans that could be deducted over two years.

With this source of solar water-heater commonly adopted and used, we would do away with gas loadshedding in winter for good. And would have a surplus of gas to provide to CNG and all other industries in Pakistan in winter.

This technology is sustainable and eco-friendly. Pakistan can become more self-reliant on its power production, with a cleaner environment.

With excess liquidity cash reserves in both SNGL and SSGL, they could easily implement solar water heaters for a million domestic customers in six months to make a sizable impact. By next winter, there would be no gas loadshedding in Pakistan.

Also this would make available cheaper gas power for electricity consumers, and will also reduce the fossil fuel import bill cost that will help save foreign exchange for Pakistan.

The relevant companies and departments should manage the implementation of such policies and improvements on a fast track basis.

I would also urge commerce and finance departments to make all solar panels duty-free for two years to fully support such a programme in the better long-term interest of Pakistan. @Z.H. EFFENDI—Karachi

Training: Opportunities versus nepotism

I AM an employee of the Technical Education and Manpower Training, Khyber Pakhtunkhwa. The department has issued a new set of rules for promotion. The previous rules were based on promotion on a seniority basis.

According to the new rules, one-year on-the-job-training is a prerequisite for promotion.

We all are in favour of this rule because we also want to improve our skills and knowledge and it will be in the interest of students and teachers as well. But the problem is that the heads of the institutes or departments have the powers to nominate for the training programme.

The directorate general of Technical Education and Manpower Training, Peshawar, sends letters every year to the heads of the institutes, asking them for the nomination of employees for training. But majority of the heads of institutes do not nominate the staff.

We have spent five years in the department, hoping for getting a chance for a promotion but in vain. Besides the apathy of the heads of institutes, the employees also face injustice as the authorities concerned nominate their near and dear ones and sometimes even nominate a junior officer.

Although those nominated are given daily and travel allowances, we do not wish to receive them and only want to have training for the sake of enhancing our skills.

I would request the authorities concerned to look into the matter and direct heads of institutes to circulate among the staff all the official letters pertaining to training opportunities. @ABRAR HUSSAIN—Mingora, Swat

INFOMERCIAL

IFTECH Pakistan 2011 – a proven recipe for success

PAKISTAN'S FOOD and beverages processing industry offers a broad spectrum of business opportunities both in public and private sectors. The government is endeavoring to develop the local industry for competing international markets and is also facilitating various domestic projects to expand commercial activities related to food and beverages processing, pharmaceutical and food chemicals across Pakistan.

As a result of these policies, the food industry has attracted foreign direct investment of US$ 108.3 million in 2009-10. Moreover, it contributed 21% to the overall GDP that is more than US$ 37 billion to the national economy. The requirement for cooked and ready food is increasing every year because of the rapid growth in population and fast-paced life style developments.

In this context, the 8th International Food & Technology Exhibition Incorporating Pharmaceutical Technology & Food Chemicals-IFTECH Pakistan 2011 exhibits diversified range of finished food products, chemicals and ingredients in addition to the latest food technology & equipment display. The show serves as the leading platform in the region by providing an impetus towards sustained growth in the industrial sector. It offers top level networking opportunities to its participants and enables them to engage in mutually beneficial agreements.

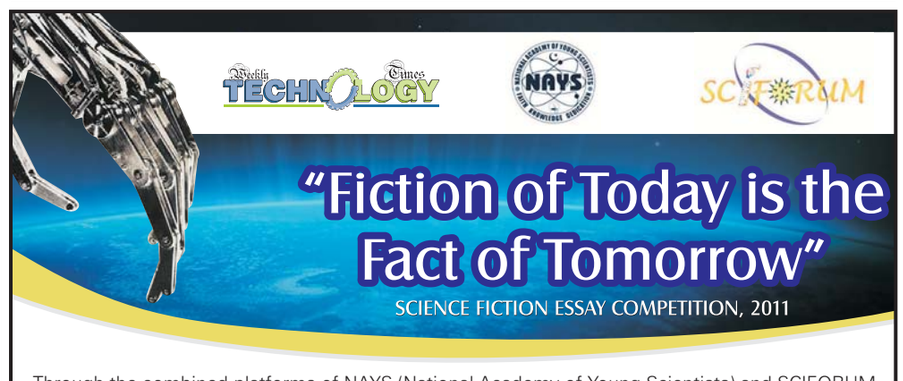
The last edition of the show had the participation of 169 leading companies from 23 countries of the world. Over 11,000 business and trade professionals visited the exhibition to witness the latest technology and equipment put on display. The show was supported by related government bodies & trade associations and received extensive media coverage by print and electronic media, including 27 local and international publications.

The "SECOND FOOD SEMINAR" served as a premier highlight of the event and addressed various issues including food safety concerns, role of Halal Industry and the supply chain solutions.

The 8th edition of IFTECH Pakistan 2011 is scheduled from 5-7 April 2011, at the Karachi Expo Centre. The show will exhibit state-of-the-art pharmaceutical machinery and food chemicals, in addition to the food processing equipment and technology. This year more than 200 companies are expected to participate in the event including Austria, China, France, Germany, Italy, Japan, Korea, Malaysia, Singapore, Spain, Switzerland, Taiwan, Thailand, Turkey, U.A.E., U.K. and U.S.A. The exhibition will feature Chinese, Italian and Turkish Pavilions. The show will ensure the presence of more than 10,000 trade visitors.

The "THIRD FOOD SEMINAR" will be held in concurrence with the exhibition and offer an interactive platform with extensive learning through informative presentations and table-top discussions.

IFTECH Pakistan 2011 will once again emanate additional benefits by synchronizing with another event; the 8th Edition of the International Plastic & Packaging Industry Exhibition-Plasti & Pack Pakistan 2011, which serves to be a comprehensive representation of the plastic, packaging & printing industries. Together the shows will address the issues and challenges related to these sectors and explore prospects for emerging opportunities in this part of the world.



Through the combined platforms of NAYS (National Academy of Young Scientists) and SCIFORUM in collaboration with Technology Times, the youth of Pakistan is being given a wonderful chance to take part in an essay writing competition.

Topic "Science Fiction (Fiction of Today is the Fact of Tomorrow)".

Eligibility Criteria: All the young Pakistani scientists who fall under the age of 35 are eligible to participate in this competition.

General Guidelines for the Participants

- The essay can be attempted in either Urdu or English language with a total length of maximum 1500 words. Participants can attempt in only one language at a time.
- 2 copies of essay should be submitted; one in hard form typed on A4 sized paper and other should be sent via email address given below. It is directed to follow 12 font size, Times New Roman style with line spacing of 1.0 for typing.
- Preference will be given to the work exhibiting good knowledge and understanding of the relevant topic.
- Plagiarism is strictly prohibited and shall lead to disqualification.
- The essay should be well structured, focused with coherent arguments.
- The essay should reflect analytical thinking and critical insight.

Monetary Awards: Cash awards of Rs. 6000/- , 4000/-, 2000/- and a certificate will be given to first three position holders respectively in each language (Urdu & English)
In addition, the prize winner's essays will be published in NAYS e-newsletter and Technology Times newspaper.

Important: The essay should be submitted as per prescribed format as stated above latest by 31st March, 2011 along with one copy of NIC and one page CV indicating contact details of the participant. No essay will be processed after the due date. Results will be announced by 30th April, 2011

Sending Address
Postal Address (for sending hard copies)
Muhammad Qasim, Principal, Falcon Institute of Medical Sciences, opposite Ghazali College, Kiani Road, Bhara Khu, 44000, Islamabad, Pakistan. Phone #: 051-4302529, Email Address: science.essay@hotmail.com, science.fiction@technologytimes.pk

IT talent throngs students' research seminar

STAFF REPORT KARACHI: In order to disseminate knowledge and promote a knowledge culture among the young generation, IEEEP has held a research competition titled "All Pakistan Students' Research Seminar" among the young talent of the country of Pakistan.

The research seminar provided an opportunity for students to bring forward their talent by presenting technical papers. Through this seminar, IEEEP focused on these students by providing them a platform to taste the flavour of research at an early level.

The event was organized in collaboration with Pakistan Navy Engineering College (PNEC) and NUST last week.

On the occasion, technical papers were received from students of almost all the IT universities of Pakistan. After evaluating the papers, 30 papers were selected for presentation at the seminar. Among these papers the best six papers were announced at the end of seminar. Presenters of the best six papers received gold and silver medals and cash awards.

Jehan Ara, President, Pakistan Software Houses Association, appreciated the people of Pakistan on their skills to adapt to change and encouraged the need for ingenuity and zeal.

"The event was a huge achievement and would pave the way for further strengthening the research coordination among the researchers," an official of the IEEEP said.

The chief guest of the session, Commodore Jawwad Hussain SI(M), Commandant PNEC NUST, appreciated the event organizers for organizing an event of great importance in today's world where advancements in science and technology have grown leaps and bounds.

KESC to set up renewable energy project

STAFF REPORT KARACHI: Following the persistent energy crisis in the country, the Karachi Electric Supply Company has established partnerships with local and international companies to ensure the successful launch of the first large scale Bio Gas Project in the country. The project is located in the Landhi area of the city.

"The KESC's Bio Gas Project will utilise gas recovered from cow manure in Landhi and organic waste from the Korangi and Landhi industrial areas," KESC General Manager Strategy Omer Ghaznavi said told the participants of seminar held last week here.

He said that the project will generate an estimated 25 Megawatts of renewable energy and is expected to be functional in the next 18 to 20 months.

Brazil to help Pakistan produce bio-fuel

STAFF REPORT ISLAMABAD: Brazil has expressed the interest to produce bio-fuel through sugarcane and its usage in cars and power generation in Pakistan.

Brazilian Ambassador to Pakistan Alfredo Leoni has said a team of experts is scheduled to visit Pakistan in May which will share technical and general information regarding production of bio-fuel through sugarcane and its usage in cars and power generation.

"This cooperation would help Pakistan reduce dependence on petroleum products," Brazilian Ambassador to Pakistan Alfredo Leoni said while addressing the business community at the ICCI here last week.

Leoni offered technical support in social sector development to boost economic ties between the two countries. He said that promotion of commercial and economic ties would further

boost bilateral relations.

Brazil was the first commercial partner of Pakistan in Latin America and bilateral trade between the two countries stood at around $400 million.

NCP to be made world research centre

STAFF REPORT ISLAMABAD: In order to become visible as vibrant research nation at international level, Pakistan needs active, enthusiastic and professional young researchers.

"We are determined to develop National Centre for Physics (NCP) as an international research centre of excellent repute," said Dr. Hamid Saleem, Director General NCP, while addressing the First Scientific Spring organised by the NCP.

Dr. Hamid said that non-availability of experts and limited defined academic manpower in our institutes are main hurdles in academic development and research culture.

The NCP is looking for experts in different areas of physics and related fields that's why we are promoting and encouraging collaborations between Pakistani universities and research institutes.

BitMate brings BitTorrent to developing world

STAFF REPORT ISLAMABAD: Pakistan-based researchers have developed a new BitTorrent client called 'BitMate' that works over dial-up connections, making it possible to share and download torrents in developing countries where few people have access to broadband.

BitMate is based on the popular Vuze BitTorrent client, with a few key changes to the way the application interacts with the network.

According to researchers, BitTorrent is almost unusable in developing countries on the typically low-bandwidth dialup connections. They said that it's impossible to download a Blu-ray rip over a 56k connection. The problem for dial-up users is that BitTorrent is designed to be based on fair and equal exchange of data.

"BitMate is the result of two years of development," the project's lead Umar Saif told the media and added his team has seen download performance improvements of up to 70 percent during the eight months of testing that preceded this week's release.

Muneeb Ali, a PhD student at Princeton University who has been involved with Dritte since its early days, said, "Most of the research in developing regions involves working with greater constraints like unreliable power, slow connectivity, limited computational resources, and so on. The research done in these constrained environments can certainly benefit other areas, where a subset of these constraints exist."

Self-sufficient model homes for flood victims

MONITORING REPORT GAITHERSBURG: The International Centre for Sustainable Development (ICSD) has announced that it would design and construct affordable, self-sufficient housing for disaster relief in Pakistan. With over 30 years' experience in responding to international crises through rebuilding efforts, John Spears, ICSD Founder, and his team have partnered with a Pakistani family to build five Earth Home models, using local materials and local workers.

John and his team had travelled to Pakistan in late January and selected the ideal site in the Punjab for the first demonstration project.

ICSD has stepped in with its Earth Home system, a fully integrated self-sufficient building system. Earth Homes use the sun to heat the home, cook food and generate electricity. Clean rain water is collected and stored for drinking and bathing.

Dr Atta Science Centre to be set up in Malaysia

STAFF REPORT KARACHI: In recognition of the services of former chairman Higher Education Commission Dr. Atta ur Rehman for science and technology and higher education sectors, the University of Technology Mara, Malaysia, (UiTM) has decided to set up a science centre in his name. The Malaysian University will also honour Dr Atta with its DSc degree.

These views were expressed by UiTM VC Prof. Dr Sahol Hamid Abu Bakar, during a meeting at the International Center for Chemical and Biological Sciences (ICCBS), Karachi University, last week.

The UiTM VC applauded the efforts and services of Dr Atta-ur-Rahman for the promotion of higher education in Pakistan. He said that there was a dire need to enhance relations between the two universities, and develop academic exchange in the area of education and research. ICCBS is, no doubt, an excellent scientific institution in the world, he said.

On the occasion, Dr Atta-ur-Rahman stressed the need for further improving scientific collaboration between both the countries, and said that knowledgement was key to advancement. He said that scientists at ICCBS need to further work hard for the rapid progress of science in the country.

Director ICCBS Prof Dr M Iqbal Choudhary said that both the institutions have agreed to enhance relations between the two universities and to develop academic exchange in the area of education and research.

Intel rolls out new Business Processors

STAFF REPORT ISLAMABAD: The Intel Corporation has unveiled its newest family of business processors. The new 2nd generation Intel® Core™ vPro™ processor family features the performance and capabilities of Intel's new micro architecture, enhancements to Intel® vPro™ technology and new security features, including a 3G "poison pill" option to help protect a PC's data. Computer makers around the world, including Dell, Fujitsu, HP and Lenovo, are introducing new laptop, convertible-tablet, desktop and all-in-one PCs for businesses based on the new Intel Core vPro processors.

"Businesses face numerous challenges today, but also opportunities in the wealth of new technologies that are helping workers be more productive, businesses to be more creative and IT to be more innovative," said Naveed Siraj, Country Manager, Intel Pakistan.

Speedy work on Seed Amendment Act stressed

STAFF REPORT ISLAMABAD: The first meeting of the Cotton Committee has proposed to speed up work on Seed Amendment Act, which will entail working on public private partnership basis, introducing virus resistant varieties of cotton and giving incentives and marketing

shares to institutions that introduce new varieties.

The meeting noted that Cotton Leaf Curl Virus (CLCV) and white fly were the main threats to the cotton crop, especially in Punjab and asked the scientists to work on introducing such varieties that resist such viruses.

It was decided that research institutions that introduce new varieties would be given a major share in the marketing rights apart from bonuses for individual scientists for promoting research in the country.

One the other hand, the PARC has been tasked to import germ plasma of different cottonseed varieties from different countries and develop virus resistant varieties locally.

The meeting also advised provinces to adopt better management practices as a short-term measure to increase the per acre production of cotton in the country.

It was also proposed to offer Special Pay Scale (SPS) to the scientists and improve their service structure so that they are looked after financially.

Oil orchards being developed on 1,500 hectares

STARR REPORT ISLAMABAD: The government has allocated Rs 382.15 million to increase production of oilseed by developing olive orchards on 1,500 hectares in three years to reduce edible oil import.

"Achieving self-sufficiency in oilseed production is our priority as we want to lessen burden on imports bill," said Federal Minister for Food and Agriculture Mir Israrullah after the briefing PODB on converting wild olive trees into fruit-bearing plants and establishing new olive orchards.

The olive orchard development has already started at 400 hectares in Khyber-Pakhtunkhwa, 300 hectares in FATA, 500 hectares in Balochistan and 300 hectares in Potohar region. The development is part of the 'Promotion of Olive Cultivation for Economic Development and Poverty Alleviation' project, which will cost Rs 382.153 million by 2013.

Presently, Pakistan is spending more than $1.5 billion every year on the import of palm oil and its products.