

## CONFERENCE PROCEEDINGS



**Scientific and Technical Research Association**

10th International Conference on Envirotech, Cleantech and Greentech  
(ECG),  
21-22 Feb 2017, Dubai, United Arab Emirates

February 21-22, 2017

Conference Venue

Flora Grand Hotel, Near Al Rigga Metro Station, Deira, Dubai, United Arab  
Emirates

**KEYNOTE SPEAKER**



**Dr. Rita Tareq Aljadiri**

**Senior lecturer, Emirates Aviation University, Dubai, UAE**



Meraj Ahsan Qureshi  
GICECG1701051

**Development of Energy Management System for Beverage Industry: A Case Study of Pakistan**

MerajAhsanQureshi,  
LSE, Department of Environmental Science & Policy, Main Campus, City Campus,  
Intersection Main Boulevard Phase VI DHA, Burki Road Lahore 53200, Pakistan.

Dr. Muhammad Nawaz Chaudhry  
Lahore School of Economics (LSE), Lahore, Pakistan

**ABSTRACT**

Energy is an important parameter in the emergence of the developing countries. Due to the ever increasing demand of Energy, there is a great demand of fossil fuels which degrades Environment. Industrial processes consume nearby 51% of world total energy. In order to conserve energy, the International Organization of Standardization (ISO) introduced Energy Management System (EnMS) ISO: 50001 in 2011. This system aims to reduce the overall energy consumption of an organization through systematic audits.

In this study EnMS was developed for a beverages industry which includes the development of baseline studies, development of checklists, energy manual, procedures and thermographic analysis. The main sources of energy used are electricity, LPG and Diesel oil. Baseline data shows that 60% of the energy, mainly electricity, is consumed by the production lines while remaining 40% is utilized by the utilities. Electricity distribution panels were physically sound but thermographic analysis shows losses of energy in the form of heat. The rating of the system was found to be 87.6%.

Keywords: Energy management, Thermography, Energy usage, Efficiency, Energy management system.



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Yarimtepe  
GICECG1701052

**Application of Electrohydrolysis Process for Vinegar Wastewater and Municipal Wastewater Mixture**

FarukHakan CANBAZ,  
ÇanakkaleOnsekiz Mart University, Department of Environmental Engineering,  
Çanakkale/Turkey

Canan Can YARIMTEPE,  
ÇanakkaleOnsekiz Mart University, Department of Environmental Engineering,  
Çanakkale/Turkey


Rabia ERARSLAN,  
ÇanakkaleOnsekiz Mart University, Department of Environmental Engineering,  
Çanakkale/Turkey


Elif ERDOGAN,  
ÇanakkaleOnsekiz Mart University, Department of Environmental Engineering,  
Çanakkale/Turkey

NilgunAyman OZ,  
ÇanakkaleOnsekiz Mart University, Department of Environmental Engineering,


	<p style="text-align: center;"><b>Çanakkale/Turkey</b></p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>In this study, mixture of vinegar wastewater and municipal wastewater was subjected to different DC voltages (4-8 V) for hydrogen gas production and COD removal by using two different type of electrodes (aluminium and copper) . Effects of applied DC voltage and type of electrodes on hydrogen gas production and COD, sCOD, turbidity, Total Suspended Solids and Color removals were investigated. Vinegar fermentation wastewater was obtained from a Fermentation Company in Izmir and municipal wastewater was obtained from Kepez WWTP in Turkey. Electrohydrolysis process was carried out in a lab-scale 1 L glass reactor with consists a cover supporting two parallel aluminum or copper electrodes. A direct current with different voltages including 4, 5, 6, 7 and 8 voltages were tested by using a power supply. For electrodes comparison, applied DC voltage was constant at 4 V. The highest cumulative hydrogen production (200 ml) for 75 min and hydrogen content of gas (88%) was obtained with the aluminium electrode. The highest cumulative hydrogen production (470 ml) for 75 min and hydrogen content of gas (90%) were obtained with 8 V DC voltage. Net energy production efficiency (consumed energy/produces energy) also reached the highest level (54%) with 8 V DC voltage application. COD removal from wastewater mix with 8 DC voltage application was the most effective voltage with 36%. In the most effective conditions; sCOD, Turbidity, TSS and Color removal efficiencies was determined as 32%, 82%, 44% and 92%, respectively. The results indicated that Hydrogen gas production from electrohydrolysis of vinegar wastewater/municipal wastewater mixture was found to be a fast and effective method with high energy production and pollutant removal efficiencies in terms of turbidity and color.</p> <p><b>Key words:</b> Electrohydrolysis, vinegar wastewater, municipal wastewater, treatment, hydrogen production.</p>
<p><b>Chang-Hyun Kim</b> <b>GICECG1701053</b></p>	<p style="text-align: center;"><b>Catalytic CF<sub>4</sub> hydrolysis with HF sorption over calcium hydroxide</b></p> <p style="text-align: center;"><b>Chang-Hyun Kim,</b> Advanced Materials and Devices Laboratory, Korea Institute of Energy Research (KIER), 152 Gajeong-Ro, Yuseong-Gu, Daejeon 34129, South Korea</p> <p style="text-align: center;"><b>Jae-Yun Han,</b> Department of Chemical and Biological Engineering, Korea University, 5-1, Anam-dong, Sungbuk-ku, Seoul 136-701, Republic of Korea</p> <p style="text-align: center;"><b>Shin-Kun Ryi,</b> Advanced Materials and Devices Laboratory, Korea Institute of Energy Research (KIER), 152 Gajeong-Ro, Yuseong-Gu, Daejeon 34129, South Korea</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>PFCs (Perfluorinated compounds) have a huge impact on the greenhouse effects because they are very chemically stable and have very high global warming potential (GWP) with long lifetime. These PFCs are usefully suitable for specialized applications such as etching and cleaning agent in semiconductor industries. To reduce and eliminate PFCs emissions, many research groups proposed various processes such as incineration, plasma treatment, and catalytic decomposition as</p>

	<p>simple and practical methods. Among these conversion methods, the catalytic decomposition has been considered as a more practical and economical process [1, 2]. In this study, we developed a new reactor concept for the decomposition of CF<sub>4</sub>, i.e. the most stable compound in PFCs, using a catalytic hydrolysis reaction. An adsorbent bed (calcium hydroxide, Ca(OH)<sub>2</sub>) followed a catalyst bed to remove hydrogen fluoride, HF, i.e. one of the products and a very toxic compound. Three consecutive catalyst-adsorbent beds were connected in series leading to the enhancement of the hydrolysis reaction and elimination of a scrubber to dissolve HF in water at the same time. With a 10wt.% Ce/Al<sub>2</sub>O<sub>3</sub> catalyst prepared by the incipient wetness method using boehmite and a granular calcium hydroxide as an adsorbent, the CF<sub>4</sub> conversion in our newly proposed three-bed series reactor was 7-23% higher than the one in a conventional single-bed catalytic reactor at the temperature range of 923-1023 K. In addition, comparative studies of experimental and numerical simulation (Aspen HYSYS®) results showed a reasonable trend of increased CF<sub>4</sub> conversion with the adsorbent added and these results can be used as a useful design guideline for our newly proposed three-bed reactor system.</p>
<p>S.Benatmane GICECG1701055</p>	<p>A magnetic semiconductor in binary carbon-based compounds XC (X = Rb, K, Cs)</p> <p>S.Benatmane, Department of physics Faculty faculty of sciences DjillaliLiabes University of Sidi Bel-Abbes, 22000, Algeria</p> <p>B.Bouhafs, Department of physics Faculty faculty of sciences DjillaliLiabes University of Sidi Bel-Abbes, 22000, Algeria</p> <p><b>ABSTRACT</b></p> <p>The Magnetic semiconductors are materials that exhibit both ferromagnetism (or a similar response) and useful semiconductor properties. If implemented in devices, these materials could provide a new type of control of conduction. Whereas traditional electronics are based on control of charge carriers (n- or p-type), practical magnetic semiconductors would also allow control of quantum spin state (up or down). This would theoretically provide near-total spin polarization (as opposed to iron and other metals, which provide only ~50% polarization), which is an important property for spintronics applications, eg. spin transistors.</p> <p>The structural properties of MC where M is the alkali metals have been evaluated by the first principles density functional theory through total energy calculations at 0 K by the full potential linearized augmented plane wave (FP-LAPW) the method as implemented in WIEN2K code. The local spin density approximation (LSDA) and the Modified Becke-Johnson (mBJ) potential were used to study the electronic, and magnetic properties. We find that the spin magnetic moment in the compounds is mainly contributed by the spin polarized p-orbitals of carbon. and we found that the KC, RbC and CsC are magnetic semiconductors, we concluded that the mBJ gives the most accurate predictions. The Wien2k (mBJLDA) code is slightly less precise, in general. The Hybrid functionals are less accurate, on the overall. The mBJ is definitely the most precise existing method nowadays In 88% of the semiconductors considered the error was less than 10%. themBJLDA potential, reproduce the band gap of 15 of the 27 semiconductors considered with a 5% error or less. An extra factor to be taken into account is the computational cost. The spin-polarized calculations indicate that these materials are magnetic semiconductors and exhibit</p>

	<p>an integer magnetic moment of 3 <math>\mu_B</math>. Keywords: magnetic semiconductors.compounds ;Density functional theory ;mBJ-LDA</p>
 <p>Isah Saidu GICECG1701056</p>	<p><b>ALGAL BIOFUELS: CURRENT TRENDS AND FUTURE PROSPECTS</b></p> <p>Saidu, Isah, Department of Science Laboratory Technology, The Polytechnic of Sokoto State, Sokoto-Nigeria</p> <p>Shuaibu, Malami Department of Science Laboratory Technology, Umaru Ali Shinkafi Polytechnic of Sokoto, Sokoto-Nigeria</p> <p>Aminu Muhammad Lawal Department of Pure and Applied Chemistry, Federal University, Gusau-Nigeria</p> <p>Garba, Bashir Department of pure and Applied Chemistry, Usmanu Danfodiyo University, Sokoto- Nigeria</p> <p><b>ABSTRACT</b></p> <p>Increasing industrialisation, mechanisation and motorization in the world has led to a steady and consistent increase in energy demands. Global energy demands are provided by fossil fuels. Oil, coal and natural gas accounting for 35%, 29% and 24% respectively, proved to be the main fuels, while nuclear provides about 5% and hydropower 6% made up the total of the primary energy consumption. Depletion of fossil fuels, progressively, in addition to associated greenhouse gas emissions and projected climatic changes could have adverse effects on the environment and human systems. Research has established that, technically, viability of biofuels production from algal biomass exists at present, the technologies are still being developed and improved; there is however, a lot to do for their products to be able to compete favourably with fossil fuels especially in finding stable and realisable energy balance between production and output. Overall, with the commitment of researchers, technical viability, successes in bioengineering of the biomass and development of chemical routes to achieve higher yields and energy efficiency, the future prospects of algal biofuels are bright.</p> <p>Keywords: Biofuels, Algae, Biomass, renewable energy</p>


 <p>Malami Shuaibu GICECG1701057</p>	<p><b>Current Trends In The Control And Preventive Measures Of Non-Point Source Pollution Of Rivers</b></p> <p><b>SaiduIsah</b> 1Department of Science Laboratory Technology, Umaru Ali Shinkafi Polytechnic Sokoto-Nigeria.</p> <p><b>MalamiShuaibu</b> 1Department of Science Laboratory Technology, Umaru Ali Shinkafi Polytechnic Sokoto-Nigeria shuaibumalami@gmail.com</p> <p><b>ABSTRACT</b></p> <p>The presence of nutrients, chemicals, sediments in an agricultural runoff flowing in to the rivers becomes an obstacle to many rivers in the UK to attain the goals of Water Framework Directive. Agriculture is one of the major contributors of phosphorus and nitrate in to the surface waters and even ground water. Most of these nutrients and sediments Reaches Rivers via drain flow and overland flow while that of underground though percolation. Current trends in managing diffuse water pollution from agriculture are mainly concerned with trapping of nutrients and sediments, reducing flow intensity, construction of wetlands, construction of buffer strips and attenuation surfaces, reducing the transport and mobilization of nutrients, and reducing the nutrient inputs.</p> <p><b>Keywords: Eutrophication, Pollution, Nutrients, Non-point sources, Sediments.</b></p>
<p><b>Ricky</b> PeriabrasLaureta GICECG1701059</p>	<p><b>Household adaptation strategies in mitigating the effects of Natural risks and hazards in partido</b></p> <p><b>Dr. Ricky P. Laureta</b> Partido State University, Caramoan Campus, Camarines Sur, Philippines</p> <p><b>ABSTRACT</b></p> <p>This study is focused on the household adaptation strategies in mitigating the effects of natural risks and hazards in Partido. Areas covered in the study are Nato, Sagñay, Camarines Sur; Patitinan, Sagñay, Camarines Sur; Sta. Maria, Presentacion, Camarines Sur; and Maangas, Presentacion, Camarines Sur ,which are considered geologically hazardous and vulnerable areas.Key Informant Interview ( KII), Focused Group Discussion (FGD) and Participatory Rural Appraisal (PRA) were used as method of data gathering. The researcher was able to identify the household adaptation strategies in mitigating the effects of natural risks and hazards. Likewise, this study revealed the Local Government Unit (LGU)planned intervention to address such hazards. Further, this study looked into the comparison of the adaptation strategies of men and women across sites along with the identified risks and hazards. Findings revealed that residents in the sites most commonly secure their houses and prepare for evacuation as adaptive strategies. Local officials and the Barangay Disaster Risk Reduction Management Council (BDRRMC) also do the mitigation, preparedness, response and recovery especially when typhoons devastate the area. Findings revealed that typhoon is the most hazardous risk encountered by residents, hence, along with it comes other hazards like landslide, flooding, drought, La Nina and even storm surge.</p>



 <p><b>Joo Il Park</b> GICECG1701054</p>	<p><b>Keywords: Adaptation Strategies, PRA (Participatory Rural Appraisal), Partido</b> <b>Advanced Characterization of Heavy Petroleum Fractions</b></p> <p><b>Joo-II Park,</b> <b>Petroleum Research Center, Kuwait Institute for Scientific Research</b></p> <p><b>Adel Al-Mutairi</b> <b>Petroleum Research Center, Kuwait Institute for Scientific Research</b></p> <p><b>ABSTRACT</b> Detail characterization of highly complex production (Atmospheric Residue) has been studied by using the various analysis tools with conventional and novel methods. The former such as HPLC, NMR, XRD ICP-MS etc provided roughly the physicochemical information of target petroleum fractions. The latter analytic methods have been supported by GC-AED with (high temperature injection system) and GPC connected with ICP-MS (GPC-ICP/MS), from which more detail molecular map or information was indentified, even if being still limitations. GPC-ICP/MS results indicate that there is a tri-modal molecular weight distribution of V-species in ARs in the medium and low M.W. ranges, possibly due to single porphyrins and/or porphyrins linked with relatively smaller aggregates, while there is a bimodal molecular weight distribution of Ni-species in ARs in high M.W. region, surmising the porphyrin-type linked with larger aggregated complexes. Metal distribution in both asphaltenes and resins was clearly distinguished. Vanadium complexes in the asphaltenes show bimodal profiles, whereas Ni complexes appear to be mostly in the range of high molecular weight, indicating easy aggregation to form larger species. Vanadium and nickel complexes in the resins from different ARs show very similar distribution in a relatively lower M.W. range. In the case of product ARs, HD-V of asphaltene in the AR showed more difficult than that in resin, probably due to the metal attached or incorporated in much higher molecular size of asphaltene. In addition, The HDM reactivity of the vanadium species, especially those with lower molecular weight, is higher than that of Ni species, probably due to the higher polarity of the former. <b>Keywords: LCO, AR, GC-AED, GPC-ICP MS</b></p>
<p><b>SouadDjerad</b> GICECG1701058</p>	<p><b>Pyrometallurgical Method for the Recovery of Aluminum from Fe<sub>2</sub>O<sub>3</sub>/α-Al<sub>2</sub>O<sub>3</sub> Catalyst</b></p> <p><b>S. Djerad</b> <b>Laboratory of Environmental Engineering, Department of Chemical Engineering,</b> <b>University of Annaba, P. O. Box 12, 23000 Annaba, Algeria</b></p> <p><b>ABSTRACT</b> In this study we report an investigation on the recovery of iron and aluminum in soluble form by roasting Fe<sub>2</sub>O<sub>3</sub>/Al<sub>2</sub>O<sub>3</sub> catalyst with KHSO<sub>4</sub>. Different operation conditions were tested such as temperature, KHSO<sub>4</sub>/catalyst mass ratio (K/C) and reaction time. The results show that the maximum of dissolution efficiencies were 79.67% of Al<sub>2</sub>O<sub>3</sub> and 96.94% of Fe<sub>2</sub>O<sub>3</sub> obtained at 600°C and K/C= 36 after 7h. After dissolution in water, Fe(III) and Al(III) ions were separated by a pH-controlled precipitation method. The resulting Al(OH)<sub>3</sub> was dehydrated to γ-AlOOH (pseudo-boehmite) by hydrothermal treatment at 105°C. γ- η and α-Al<sub>2</sub>O<sub>3</sub> were obtained after calcinations at 500-950 and 1200°C respectively.</p>



	<p><b>Keywords: Pyrometallurgy; Fusion; Dissolution; Alpha-alumina; Iron oxide; Recovery</b></p>
<p><b>Kishore Kumar Reddy. N.G GICICRST1701051</b></p>	<p><b>Estimation of Durability Of Rice Grains Using Sensors And Mobile Technology</b> <b>K.Rajeshwari</b> <b>Department Of InformationTechnology,</b> <b>EaswariEngineering College,Chennai,India.</b></p> <p><b>Kishore Kumar Reddy.N.G</b> <b>Department Of InformationTechnology,</b> <b>EaswariEngineering College,Chennai,</b> <b>India.</b></p> <p><b>ABSTRACT</b></p> <p><b>Abstract: Ensuring the dryness of Rice Granules is essential for the storage of Rice. The moisture content present in the rice granules deteriorates the quality and toughness that is expected from the the final produce. Existing systems that were put forth to find the moisture content of rice granules are not efficient enough. Their throughput is influenced by a variety of factors such as material density and packing.The official oven method consumes more time .The moisture content present in the rice granules is calculated using the equilibrium relative humidity technique [ERH]. The equilibrium relative humidity, and temperature, of rice granules were measured by using temperature and relative humidity sensors. Sensors are calibrated to improve accurateness and precision. The moisture content was calculated by using an equilibrium moisture content model. The data collected from the sensors are sent to the user which gives intimation about the prevailing conditions in the storage place as a message. According to the message, the prevention methods are listed. The error of the moisture content determined with this method was within 0.5% w.b. at moisture.</b></p> <p><b>Keywords: Rice Granules, Equilibrium Relative Humidity, Moisture Content, Storage.</b></p>
<p><b>K. Rajeshwari GICICRST1701052</b></p>	<p><b>Estimation of Durability Of Rice Grains Using Sensors And Mobile Technology</b> <b>K.Rajeshwari</b> <b>Department Of InformationTechnology,</b> <b>EaswariEngineering College,Chennai,India.</b></p> <p><b>Kishore Kumar Reddy.N.G</b> <b>Department Of InformationTechnology,</b> <b>EaswariEngineering College,Chennai,</b> <b>India.</b></p> <p><b>ABSTRACT</b></p> <p><b>Abstract: Ensuring the dryness of Rice Granules is essential for the storage of Rice. The moisture content present in the rice granules deteriorates the quality and toughness that is expected from the the final produce. Existing systems that were put forth to find the moisture content of rice granules are not efficient enough. Their throughput is influenced by a variety of factors such as material density and packing.The official oven method consumes more time .The moisture content present</b></p>

	<p>in the rice granules is calculated using the equilibrium relative humidity technique [ERH]. The equilibrium relative humidity, and temperature, of rice granules were measured by using temperature and relative humidity sensors. Sensors are calibrated to improve accurateness and precision. The moisture content was calculated by using an equilibrium moisture content model. The data collected from the sensors are sent to the user which gives intimation about the prevailing conditions in the storage place as a message. According to the message, the prevention methods are listed. The error of the moisture content determined with this method was within 0.5% w.b. at moisture.</p> <p><b>Keywords:</b> Rice Granules, Equilibrium Relative Humidity, Moisture Content, Storage.</p>
 <p><b>Deniz Hara</b> GICICRST1701053</p>	<p><b>Investigation Of Customer Perception Of Vehicle Door Closing Sound Quality</b></p> <p><b>Deniz Hara</b> TofaşTürkOtomobilFabrikası A.Ş., Bursa, Turkey,</p> <p><b>AyhanYağcı</b> TofaşTürkOtomobilFabrikası A.Ş., Bursa, Turkey,</p> <p><b>ArdaGürarda</b> TofaşTürkOtomobilFabrikası A.Ş., Bursa, Turkey,</p> <p><b>HalukErol</b> Istanbul Technical University, Istanbul, Turkey,</p> <p><b>ABSTRACT</b></p> <p>The perception of vehicle door closing quality is one of the most important criteria that a customer pays attention while buying a vehicle in a sales gallery. The quality perception gives a customer a clue about the general quality of the vehicle. A high quality closing sound of a vehicle door, has a potential of increasing admiration and attractiveness of the vehicle and sales volume of it. However, the quality perception has been a parameter that isn't calculated, measured or evaluated in the design phase yet. Within this study, closing sounds and physical and acoustical parameters of the doors of a group of B and C segment vehicles are investigated and compared by handling some NVH and bench tests and jury evaluations. With the help of these study, acoustical and thus physical design parameters of a door that has high quality closing sound will be determined and will show the path to design doors that has better door closing sound quality in the further vehicle projects.</p> <p><b>Keywords</b> Door Closing Sound, Door Slam Noise, Acoustical Performance, Customer Perception, Psychoacoustics</p>
<p><b>Radhikachelamalla</b> GICICRST1701054</p>	<p><b>Molecular docking studies and ADMET predictions of pyrimidine coumarin scaffolds as potential IDO inhibitors</b></p> <p><b>RadhikaChelamalla,</b> Centre for Pharmaceutical Sciences, Jawaharlal Nehru Technological University, Kukatpally, Hyderabad-500085, TS, India cradhika8@gmail.com</p>

	<p style="text-align: center;"><b>AjithaMakula,</b> Centre for Pharmaceutical Sciences, Jawaharlal Nehru Technological University, Kukatpally, Hyderabad-500085, TS, India</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>Indoleamine 2,3-dioxygenase (IDO) is emerging as an important new therapeutic drug target for the treatment of cancer. IDO catalyzes the rate-limiting step of tryptophan degradation through kynurenine pathway. Reduction in local tryptophan concentration and the production of immunomodulatory tryptophan metabolites contribute to the immunosuppressive effects of IDO. Presence of IDO on dendritic cells in tumor-draining lymph nodes leading to the activation of T cells results in formation of immunosuppressive microenvironment for the survival of tumor cells, shows the importance of IDO as a novel anticancer immunotherapy drug target. Pyrimidine has the unique ability to act through many different mechanisms and its multiple biological activities make it an ideal therapeutic agent in treating cancer. In this effort directed towards the discovery of novel, potent IDO inhibitors for the treatment of cancer. In the present study a library of pyrimidine derivatives has been designed and evaluated for their anti-cancer activity targeting IDO using various computational approaches. Twenty new pyrimidine series of compounds were designed and docking studies were performed. All of them have found to be successfully docked inside the active binding domain of IDO with a binding energy in a range of -4.59 to -9.53 Kcal/mol with predicted IC50 value range of 4.72 micro molar to 456.19 nano molar. On the other hand, calculated 2DQSAR molecular descriptor properties of the compounds showed promising ADME parameters and found to be in compliance with Lipinski's rule of five. Among all the twenty compounds tested, compound 14 (N'-(6-chloro-2-oxo-chromene-3-carbonyl)-4-(4-methoxyphenyl)-6-methyl-2-thioxo-3,4-dihydro-1H-pyrimidine-5-carbohydrazide) was found to be the best lead like molecule with a binding energy of -9.53 kcal/mol. Conclusively, newly designed compound 14 of the present study have shown promising anti-cancer potential worth considering for further evaluations. <b>Keywords:</b> IDO domain, pyrimidine, coumarin, docking, ADME, QSAR, anti-cancer.</p>
 <p><b>Radhika chelamalla</b> GICICRST1701055</p>	<p style="text-align: center;"><b>Design, Synthesis and In silico studies of new 5-substituted-2-(2-(5-aryl-1H-1,2,4-triazole-3-ylthio)acetyl) hydrazine carbothioamide/ carboxamides for anticonvulsant activity</b></p> <p style="text-align: center;"><b>RadhikaChelamalla,</b> Centre for Pharmaceutical Sciences, Jawaharlal Nehru Technological University, Kukatpally, Hyderabad-500085, Telangana, India</p> <p style="text-align: center;"><b>AjithaMakula,</b> Centre for Pharmaceutical Sciences, Jawaharlal Nehru Technological University, Kukatpally, Hyderabad-500085, Telangana, India</p> <p style="text-align: center;"><b>VenkateshamAkena,</b> University College of Pharmaceutical Sciences, Kakatiya University, Warangal, Telangana, India</p> <p style="text-align: center;"><b>SarangapaniManda,</b> University College of Pharmaceutical Sciences, Kakatiya University, Warangal,</p>

	<p style="text-align: center;">Telangana, India</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p><b>Purpose:</b> To synthesize series of 5-substituted-2-(2-(5-aryl-1H-1,2,4-triazole-3-ylthio)acetyl) hydrazine carbothioamide/ carboxamides and evaluate their anticonvulsant activity and in silico properties.</p> <p><b>Methods:</b> Derivatives of 5-substituted-2-(2-(5-phenyl-1H-1,2,4-triazol-3-ylthio)acetyl)hydrazine carboxamides/carbothioamides were obtained by condensation of Ethyl-2-(5-aryl-1H-1,2,4-triazol-3-ylthio)acetates with thiosemicarbazide or semicarbazide. The synthesized compounds were characterized by Fourier transform infrared spectroscopy (FTIR), nuclear magnetic resonance spectroscopy (1H NMR) and mass spectrometry (MS) while their anticonvulsant activity was screened against pentylenetetrazole-induced seizure (PTZ) against phenytoin and diazepam as reference standards. Molecular docking (in silico) studies were performed using 4-aminobutyrateaminotransferase in order to predict possible protein-ligand interactions.</p> <p><b>Results:</b> Among the target compound 3f exhibited lower activity with 50% protection. The compounds 3e and 3h showed good to moderate levels of anticonvulsant activity with 83.3% protection at 100 mg/kg. The compounds 3g and 3i afforded most significant anticonvulsant activity with 100% protection at a dose of 30 mg/kg. In silico results also revealed maximum binding affinity to GABA-AT protein which was higher than other compounds.</p> <p><b>Conclusion:</b> The synthesized compounds showed potent anticonvulsant activity. Molecular docking results should give an insight into how further modification of lead compound can be carried out for higher inhibitory activity.</p> <p><b>Keywords:</b> Anticonvulsant, 1,2,4-triazole, carbothioamides, pentylenetetrazole, In silico studies, Molecular docking.</p>
 <p>Ogbuewu Ifeanyi Princewill GICICRST1701056</p>	<p style="text-align: center;"><b>Neem seed kernel as poultry feed: effect on growth performance, organ anatomy and haemato-biochemical characteristics</b></p> <p style="text-align: center;">Ogbuewu+, I.P., Department of Animal Science and Technology, Federal University of Technology, P.M.B. 1526, Owerri, Imo State, Nigeria.</p> <p style="text-align: center;">Iwuji, T.C., Department of Animal Science and Technology, Federal University of Technology, P.M.B. 1526, Owerri, Imo State, Nigeria.</p> <p style="text-align: center;">Etuk, I.F., Department of Animal Science and Technology, Federal University of Technology, P.M.B. 1526, Owerri, Imo State, Nigeria.</p> <p style="text-align: center;">Okoli, I.C. Department of Animal Science and Technology, Federal University of Technology, P.M.B. 1526, Owerri, Imo State, Nigeria.</p> <p style="text-align: center;">Iloeje, M.U. Department of Animal Science and Technology, Federal University of Technology, P.M.B. 1526, Owerri, Imo State, Nigeria.</p>

	<p style="text-align: center;"><b>ABSTRACT</b></p> <p>The Nigerian poultry industry in the last two decades has been severely affected by high cost of feed. The provision of feed alone has been reported to account for 60 - 80% of the total cost in most poultry production in developing countries of the world and this emphasize the interest to develop local feedstuffs. In view of this, there is increased interest by Nigerian poultry farmers to harness unconventional feed ingredients such as neem kernel seeds. Neem is a drought resistant tree species of the family Meliaceae. Its agronomic characteristics include appearance of first flowers between 2 - 3 years after planting and production of first fruits when the tree is between 3 - 5 years old. The tree matures in 10 years and produces between 30 - 100kg of seeds per annum. Neem seed kernel cake (NSKC) is a by-product resulting from processing of neem seeds for pharmaceutical use and other purposes. This waste is used for feeding poultry. The use of NSKC as cheap alternate energy and protein source for poultry production has been reported. Neem seed kernel has been reported to contain basically carbohydrates (42.21%), protein (15.86%), fibre (18.43%) and ash (9.02%). Neem seed kernel has amino acid profile similar to soybeans that are commonly used as protein supplying feedstuff on broiler production. However, neem seed kernel contains a variety of toxic substances that are harmful to broilers. Research to date has studied the effects of neem seed kernel cake on growth performance, blood characteristics and organ anatomy of poultry. Numerous research efforts have been made to process neem seed kernel in broiler diets and this paper will attempt to review the history of these research efforts.</p> <p><b>Keywords:</b> Broilers, neem seeds, nutrient, performance</p>
<p><b>Aminu Surajo Usman</b> GICICRST1701057</p>	<p style="text-align: center;"><b>Assessment of Spatial Changes in Metal Element Concentrations in Cole Mere Lake</b></p> <p style="text-align: center;">AminuSurajoUsman Jigawa State College of Education, P. M. B. 1002, Gumel – Nigeria</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>Spatial changes in metal element concentrations were investigated in Cole mere during the month of June; 2013. Samples from 10 selected sites were collected and analyzed using Inductively Coupled Plasma analysis. Result obtained from ICP showed that metals elements of major concern were below detection limits as such not reported. Element detected includes Sulphur (S), Sodium (Na), Potassium (K), Calcium (Ca), Magnesium (Mg), Silicon (Si), Strontium (Sr) and Beryllium (Be). Minimum concentration of S detected was 3.2 ppm at site 3 (canal) with maximum concentration detected being 13.3ppm at site 9 (inlet). The highest Na concentration detected from all the sites was 15.61ppm from site 5 (inlet) and the lowest was 9.0ppm at site 3 (canal), remaining sites were similar in concentration. Maximum concentration of K detected was 14.1ppm at site 9 (inlet) and the minimum 0.9ppm at site 3 (canal). High concentration of Ca 144.1ppm was detected at site 5 (inlet) and then followed by (110.53 ppm) at site 9 (inlet). Mg concentration was detected at below 1 ppm in all the sites except at site 5 (inlet) and 9 (inlet). Maximum Si detected was 3.97ppm at site 9 (inlet) and the lowest was negative value at site 3 (canal). Sr concentration was below 0.1ppm in the entire site with the exception of site 5 (inlet) and 9 (inlet). For Be concentration detected, site 1 to 4 were all below 0.1ppm and site 5-10 was detected at slightly above 1 ppm. The result obtained shows that Cole mere lake is free from metal Pollution.</p> <p><b>Key words:</b> Spatial changes Cole Mere, Metal elements, Pollution,</p>



**Hamman Tukur  
Gabdo  
GICICRST1701058**

**Geological Background As A Factor In Uranium And Thorium Concentrations In  
River Water: A Case Study Of Pahang State Malaysia**

**Gabdo H.T,  
Department of Physics, School of Sciences  
Federal College of Education Yola, Nigeria.**

**Ramli A.T,  
UniversitiTeknologi Malaysia (UTM).**

**Saleh M.A,  
UniversitiTeknologi Malaysia (UTM).**

**Sanusi M.S,  
UniversitiTeknologi Malaysia (UTM).**

**Garba N.N,  
UniversitiTeknologi Malaysia (UTM).**

**ABSTRACT**

Studies were carried out to determine the geological effect of uranium and thorium concentrations in rivers with Pahang state, Malaysia as a study area. Water samples were collected from major rivers in the state. The concentrations of uranium and thorium were analyzed using inductively coupled plasma mass spectrometer (ICP-MS). The samples were found to contain permissible levels of the radionuclides, which vary with the type of geological formation in the area. The mean activity concentrations in the rivers were found to be  $8.49 \pm 0.34$  mBq L<sup>-1</sup> and  $1.74 \pm 0.27$  mBq L<sup>-1</sup> for uranium and thorium respectively. Highest concentration of uranium and thorium in the rivers with values 31.54 mBq L<sup>-1</sup> and 6.17 mBq L<sup>-1</sup> respectively, were obtain from rivers underlain by acid intrusive geological formation or due to continuous flow of water over acid intrusive formations. Lowest concentrations of uranium and thorium with values 1.36 mBq L<sup>-1</sup> and 0.40 mBq L<sup>-1</sup> respectively were obtain from rivers underlain by Carboniferous geological formation.

**Keywords;** river water; uranium and thorium concentrations; activity concentrations



**Roger Nakad  
GICICRST1701059**


**Rigidity results for spin manifolds with foliated boundary**

**Fida El Chami: Lebanese University, Faculty of Sciences II, Department of  
Mathematics, P.O. Box 90656 Fanar-Matn, Lebanon,**

**Nicolas Ginoux: IUT de Metz, D'epartementinformatique, Ile du Saulcy, CS 10628,  
57045 Metz Cedex 01, France,**

**Georges Habib Lebanese University, Faculty of Sciences II, Department of  
Mathematics, P.O. Box 90656 Fanar-Matn, Lebanon,**



	<p>Roger Nakad: Notre Dame University-Louaize, Faculty of Natural and Applied Sciences, Department of Mathematics and Statistics, P.O. Box 72, Zouk Mikael, Lebanon,</p> <p><b>ABSTRACT</b></p> <p>In this talk, we consider a compact Riemannian manifold whose boundary is endowed with a Riemannian flow. Under a suitable curvature assumption depending on the O'Neill tensor of the flow, we prove that any solution of the basic Dirac equation is the restriction of a parallel spinor field defined on the whole manifold. As a consequence, we show that the flow is a local product. In particular, in the case where solutions of the basic Dirac equation are given by basic Killing spinors, we characterize the geometry of the manifold and the flow.</p> <p><b>Key words:</b> Manifolds with boundary, Riemannian flows, second fundamental form, O'Neill tensor, Basic Dirac equation, Basic Killing spinors, mean curvature, special vector fields.</p>
<p>Hafiz Awofe AKINYELE GICICRST1701060</p>	<p>Isolation of thermostable-cellulase producing bacteria from sawdust</p> <p>Hafiz AwofeAkinyele, Department of Microbiology, Federal University Oye-Ekiti, Ekiti, Nigeria</p> <p>Abiodun A. Onilude, Department of Microbiology, University of Ibadan, Ibadan, Nigeria</p> <p><b>ABSTRACT</b></p> <p>Twenty (20) cellulases producing bacteria were isolated from sawdust samples. They were identified as <i>Actinomycesnaeslundii</i> (4), <i>Pseudomonas aeruginosa</i> (12), <i>Thermoactinomyces vulgaris</i> (1), <i>Roseomonas sp. A1</i> (1), and <i>Anoxybacillusrupiensis</i> (2). <i>Roseomonas sp. (A1)</i>, <i>Anoxybacillusrupiensis E1</i> and <i>Anoxybacillusrupiensis 5H</i> were the best three thermostablecellulase producing bacteria. Their extracellular enzymes were stable at 600C to 650C for 1hour, and 500C to 550C for 2hour. These isolates exhibited significant differences in cellulase production in the presence of carbon and nitrogen sources at 0.5% to 2.5% (w/v) concentration. <i>Anoxybacillusrupiensis (5H)</i> in medium supplemented with 1% carboxymethylcellulose produced 9.22 U/mL of cellulase while <i>Anoxybacillusrupiensis (E1)</i> produced 3.0 U/mL of cellulase in medium supplemented 1% (w/v)tryptone. Optimum production of cellulase was at 50oC and pH of 7, while optimum activity of the enzyme was at 600C for A1 and pH of 9 for 5H</p> <p><b>Key words:</b> Thermostable, Cellulase, <i>Anoxybacillusrupiensis</i>, <i>Thermoactinomycesvulgaris</i>,Tryptone</p>
 <p>V Vishal GICICRST1701064</p>	<p>Removal of toxic dye from wastewater using a newly designed three phase three dimensional electrode reactor</p> <p>P. Senthil Kumar<sup>1</sup>, Department of Chemical Engineering, SSN College of Engineering, Chennai 603 110, India.</p> <p>V. Vishal<sup>2</sup> Department of Chemical Engineering, SSN College of Engineering, Chennai 603 110,</p>




	<p style="text-align: center;"><b>India.</b></p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>In the present research work, the dye wastewater was effectively removed by using a newly designed three phase three dimensional electrode reactor which works under the combined mechanism of adsorption and electrochemical oxidation. The surface modified agricultural waste was utilized as particle electrodes in the electrode reactor with an optimum quantity of 15 g. This makes the system to be three dimensional in nature. The FT-IR characteristics of the particle electrode were discussed. The operating parameters such as wastewater pH, contact time, initial dye concentration and applied voltage were optimized for the maximum removal of dye molecules from the wastewater. The performance of the system was compared based on with or without the presence of power supply to ensure the importance of the combined effect for the dye degradation. The different kinetic models such as Langmuir-Hinshelwood, pseudo-first order and pseudo-second order kinetic models were applied to the kinetic data. The results indicated that the present system that can be effectively adopted for the removal of the pollutants from the industrial wastewater.</p> <p><b>Keywords:</b> Dyes; electrode reactor; L-H kinetics; Removal; COD</p>
<p style="text-align: center;">Shiv Rekhi GICICRST1701065</p>	<p style="text-align: center;"><b>Application of Photocatalysis in Specific and Effective Treatment of Textile Dye Wastewater</b></p> <p style="text-align: center;"><b>DurgaKalaivani,</b> Department of Chemical Engineering, SSN College of Engineering, Chennai 603 110, India,</p> <p style="text-align: center;"><b>P. Senthil Kumar,</b> Department of Chemical Engineering, SSN College of Engineering, Chennai 603 110, India,</p> <p style="text-align: center;"><b>Shiv Rekhi,</b> Department of Chemical Engineering, SSN College of Engineering, Chennai 603 110, India,</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>In this study, the degradation of methylene blue (MB) dye was done using prepared titanium dioxide under visible light radiation. MB dye was used in medicine, chemistry, textile and printing industries. Advanced oxidation technology was a promising technology capable of transforming the pollutants into harmless substances. The titanium dioxide was prepared through sol-gel process. Various samples (1-4) were prepared and characterized. The characterization of prepared catalyst (TiO<sub>2</sub>) using SEM, FTIR and XRD were applied to characterize the surface, functional groups and phase transformation of prepared samples, respectively. Among the four samples, the sample 4 results excellent photocatalytic reactivity before used in the experiment. The sample 4 shown Ti-O groups well developed in the catalyst which is characterized by FTIR. The SEM morphology shown crystalline surface for the prepared samples. The XRD result showed that the anatase structure formed completely in the sample 4. So the characterization shows that the sample 4 was used for the experiment. The degradation of MB dye was studied under different</p>

	<p>conditions such as initial dye concentration, catalyst dosage, exposure of time. The advanced oxidation technology photocatalysis resulted well and converted the toxic into non toxic. Also the prepared titanium dioxide catalyst was well suited for the MB dye and for the experiment. Keywords: Wastewater; Photocatalysis; Nanocatalyst; Dye; Removal</p>
<p>Hiremath Suresh Shivarudrappa GICICRST1701066</p>	<p>Metric Space Structure on Power set of X on the grounds of D-Metric Space (X, D)</p> <p>Hiremath Suresh Shivarudrappa, Brahmdevdada Mane Institute of Technology, Solapur(Maharashtra)</p> <p>KakdeRameshkumarVishwambharrao, ShriShivajiMahavidyalaya, Kandhar, Nanded(Maharashtra)</p> <p><b>ABSTRACT</b></p> <p>In this paper we have defined the metric on power set of X on the basis of D-metric space on X along with examples. Using this metric we have obtained Triangle contraction principle. The comparison of this principle with Banach contraction principle is also given. Finally we have obtained expansive condition for two mappings along with some fixed point theorems. Keywords: Metric space, Power set, contractions, Fixed point theorems, multivalued mappings, Fixed points.</p>
<p>Umar Farooq GICICRST1701067</p>	<p><b>STEVIA AS VALUE ADDED FOOD INGREDIENT</b></p> <p>Umar Farooq , Institute of Food Science &amp; Nutrition, University of Sargodha, Sargodha, Pakistan</p> <p>KashifAkram, Institute of Food Science &amp; Nutrition, University of Sargodha, Sargodha, Pakistan</p> <p>AfshanShafi, Muhammad Nawaz Shareef University of Agriculture, Multan, Pakistan</p> <p>Zafar Hayat, Department of Animal Sciences, University of Sargodha, Sargodha, Pakistan</p> <p><b>ABSTRACT</b></p> <p>Value-addition is the process of taking a raw commodity and changing its form to produce a high quality end product. In other words, value-addition can be defined as the addition of time, place, and/or form utility to a commodity in order to meet the health consciousness, taste and acceptability preferences of consumers. Development of low calorie food products gaining research attentions throughout the world wide. Stevia rebaudiana is a natural sweetening plant with 300-350 times more sweetness with zero calories as compared to sugar. By the use of stevia or its components as sugar replacer could be an auspicious source for the development of low calorie food products like jam, jellies, juices, cake, cookies, biscuits etc. Case Study: Low calorie mango jam by the addition of Stevia leaf extract as sugar replacer has been developed. In this study sweetening effect of Stevia rebaudiana on the processing of mango jam was examined. Physico-chemical, microbial and sensory</p>

	<p>analysis results showed its suitability and acceptability by the consumer. It is concluded from the results of study that addition of stevia leave extracts as sugar replacer could be an auspicious source for the development of low calorie food products. <b>Key words: Low calorie food products, Stevia rebaudiana, Mango jam</b></p>
<p><b>Afshan Shafi</b> <b>GICICRST1701068</b></p>	<p><b>EXPLOITATION OF AGRO-INDUSTRIAL WASTE AND HEALTH</b></p> <p><b>AfshanShafi,</b> <b>Muhammad Nawaz Shareef University of Agriculture, Multan, Pakistan</b></p> <p><b>Umar Farooq ,</b> <b>Institute of Food Science &amp; Nutrition, University of Sargodha, Sargodha, Pakistan</b></p> <p><b>KashifAkram,</b> <b>Institute of Food Science &amp; Nutrition, University of Sargodha, Sargodha, Pakistan</b></p> <p><b>Zafar Hayat,</b> <b>Department of Animal Sciences, University of Sargodha, Sargodha, Pakistan</b></p> <p><b>ABSTRACT</b></p> <p>Agricultural commodities serve as the backbone and locomotive machinery for the national economy. During the processing of these agricultural commodities (fruits and vegetables) by the food industries, a large quantity of agro-industrial waste is produced. Agro-industrial waste (seeds and peels) are rich source of many biologically active components and other valuable nutrients like amino acids, fatty acids, vitamins and minerals. Whereas the deficiency of these components can cause severe health problems to the humans like digestive disorders, metabolic diseases and other chronic diseases. Natural treatments particularly through bioactive components from fruit and vegetable sources are becoming popular worldwide and are broadly accepted because of no side effects and cost effectiveness. Bioactive compounds present in fruit wastes have the strong preventive potential. On the other hand, the utilization of such waste in a proper manner is becoming the global issue. So the extraction of these valuable compounds from the agro-industrial waste and their incorporation in the food products can be useful in the up gradation of better-quality of human diet, minimize waste disposal concerns and also helpful in the maintenance of human physiology.</p> <p><b>Keywords: Agro-industrial waste, Bioactive compounds, Health benefits, Food products</b></p>
<p><b>KashifAkram</b> <b>GICICRST1701069</b></p>	<p><b>Utilization Of Fruits And Vegetable Wastes</b></p> <p><b>KashifAkram,</b> <b>Institute of Food Science and Nutrition, University of Sargodha, Sargodha, Pakistan</b> <b>kashifakramft@gmail.com</b></p> <p><b>Umar Farooq,</b> <b>Institute of Food Science and Nutrition, University of Sargodha, Sargodha, Pakistan</b></p> <p><b>AfshanShafi,</b> <b>Muhammad Nawaz Shareef University of Agriculture, Multan, Pakistan</b></p>

	<p style="text-align: center;"><b>ABSTRACT</b></p> <p>Fruits and vegetables are vital component of human diet because of containing minerals, sugars, carotenoids, vitamins and dietary fibre. During the processing of fruits and vegetables by the food industries, a large quantity of waste is produced. Seeds and peels are rich source of many biologically active components and other valuable nutrients like amino acids, fatty acids, vitamins and minerals. Therefore, fruits and vegetables are considered as “functional foods”. Among the plant’s constituents, abundant attention are given to phytochemicals of fruits and vegetable’s wastes because of their various biological functions. To reduce the land solid waste pollution, the utilization of such waste in a proper manner is becoming the global issue. So the extraction of these valuable compounds from the agro-industrial waste and their incorporation in the food products can be useful in the up gradation of better-quality of human diet, minimize waste disposal concerns and also helpful in the maintenance of human physiology.</p> <p><b>Key words:</b> Fruits and vegetable waste, waste utilization, bioactive components</p>
 <p><b>Zainab Ibrahim Rafindadi</b> GICICRST1701070</p>	<p style="text-align: center;"><b>Measurement of doppler shift of sound with the observer in motion</b></p> <p style="text-align: center;"><b>Zainab Ibrahim Rafindadi.</b> Department of basic and applied sciences College of science and technology Hassan usmankatsina polytechnic Pmb 2052, katsina state, nigeria.</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>Doppler effect is the apparent variation in frequency of any emitted wave, such as wave of light or sound, as the source of the wave approaches or move away, relative to an observer (Kashimbila, 2004). Doppler shift is found useful in Astronomy, Medical imaging, satellite communication etc. In this research the study of Doppler effect was conducted in order to determine the Doppler shift of sound waves. The Doppler shift measurements were made by a sound receiver fixed on a turning disc in motion relative to a stationary source. The study describe measurement of the Doppler shift of sound waves under the less than the ideal conditions found in classroom or laboratory, using simple available materials. The signal sent out by the source is received by the microphone (observer) periodically as the disc turns and an FM radio receives the signal at about 104 MHz and transmits it to the oscilloscope after amplification. The frequency appears to increase when the observer is moving towards a stationary source and decreases when the observer is moving away from the source.</p> <p><b>Key Words:</b> Oscilloscope, Frequency, Waves, Observer and Signal</p>
 <p><b>Nikhil Rastogi</b> GICICRST1701071</p>	<p style="text-align: center;"><b>Analysis and simulation of organic photovoltaic device by electrical method</b></p> <p style="text-align: center;"><b>Narender Singh</b> Department of Physics, School of Sciences, IFTM University, Moradabad, UP, India, 244001.</p> <p style="text-align: center;"><b>Nikhil Rastogi</b> Department of Physics, School of Sciences, IFTM University, Moradabad, UP, India, 244001.</p>

	<p style="text-align: center;"><b>ABSTRACT</b></p> <p>In the present study, the bulk heterojunction organic photo voltaic device has been simulated by OPVDM software model via electrical method. The simulation has been performed at different series resistances i.e. 1Ω, 2Ω, 3Ω, 4Ω and 5Ω. It is found that current-voltage characteristics are affected by applying different series resistances and the best current-voltage characteristics is found at 1Ω series resistance. Therefore, it is concluded that short circuit current decrease with increase in the series resistance at 1Ω, where as the short circuit current is maximum and decrease with increase in resistance and minimum at 4Ω.</p> <p><b>Key words:</b> OPVDM software, organic photovoltaic device, current-voltage characteristics, series resistance.</p>
<p><b>ImperiykaMahamed GICICRST1701074</b></p>	<p style="text-align: center;"><b>Hydrogen Production Using Mediterranean Sea Water, Ground water and Sewage of Libya</b></p> <p style="text-align: center;"><b>Imperiyka M. H.,</b> Faculty of Arts and Sciences, Alkufra, University of Benghazi</p> <p style="text-align: center;"><b>Rahuma, M. N.,</b> University of Benghazi department of chemistry</p> <p style="text-align: center;"><b>Eman B.A.,</b> The Libyan Academy Benghazi, Department of Energy Technology</p> <p style="text-align: center;"><b>Adriaa M,</b> Faculty of Arts and Sciences, Alkufra, University of Benghazi</p> <p style="text-align: center;"><b>Ali A,</b> Faculty of Arts and Sciences, al-Jawa, University of Benghazi</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>Hydrogen production has attracted large attention due to depletion of fossil fuels and the threat of global warming, society. This research is concerned with overcoming the problem of efficient production of hydrogen at room temperature and uses it as energy storage and clean fossil fuel alternatives. The hydrogen production was measured from chemical solution such as sodium chloride and natural solution as sea water. Hoffmann voltmeter was used to estimate the production of hydrogen on sea water, ground water and sewage at different applied potential. The following techniques pH meter and conductivity meter were used to investigate the effect of concentration of aqueous solution on volume of hydrogen gas produce of samples.</p> <p><b>Keyword:</b> hydrogen, sea water, groundwater, sewage, Hoffmann voltmeter.</p>
 <p><b>Laraib Liaquat GICICRST1701075</b></p>	<p style="text-align: center;"><b>Flavonoids induced enhanced antioxidant defense system and increased cholinergic neurotransmission consolidates memory in male rats.</b></p> <p style="text-align: center;"><b>LaraibLiaquat,</b> Neurochemistry and Biochemical Neuropharmacology Research Unit, Department of Biochemistry, University of Karachi, Karachi-75270, Pakistan.</p> <p style="text-align: center;"><b>SaidaHaider,</b> Neurochemistry and Biochemical Neuropharmacology Research Unit, Department of</p>

	<p style="text-align: center;"><b>Biochemistry, University of Karachi, Karachi-75270, Pakistan.</b></p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>Free radical mediated neurotoxicity is known as a leading cause of neurodegenerative disorders. Neuronal degeneration due to oxidative stress can produce cognitive dysfunctions. Flavonoids are naturally occurring polyphenolic compounds that display a variety of pharmacological and therapeutic importance against oxidative stress. The present study was designed to assess potential role of flavonoids in neurocognitive functions and prevention against oxidative stress at basal level. For this purpose, young rats were orally treated with naringenin, curcumin and quercetin at a dose of 50mg/kg, 200mg/kg and 50mg/kg respectively for 16 days. At 4th day of drug administration cognitive functions were monitored by the Morris water maze test in terms of memory acquisition (1h after training), retention (24h after training), extinction (4 days after training), and reconsolidation (8 and 12 days after training). Biochemical analysis was done for evaluation of antioxidant defense system and oxidative stress in terms of lipid peroxidation (LPO). Acetylcholine (ACh) levels, acetylcholinesterase (AChE) activity, serotonin and its metabolite was also estimated in whole brain. Treatment of flavonoids significantly improved memory acquisition, retention and reconsolidation and prevented extinction of memory. Brain LPO was markedly decreased in test rats. Treatment of flavonoids prevented alteration of neuronal antioxidant defense system by improving activities of antioxidant enzymes that include superoxide dismutase, catalase, glutathione peroxidase and antioxidant substance such as reduced glutathione. Serotonergic improvement was also found in test rats compared to control rats. Cholinergic functions were improved through inhibition of AChE activity and significant increase in ACh levels in test rats. The present study therefore provides biological evidence supporting the usefulness of these flavonoids in daily life for improvement of cognitive abilities and hence may have a potential role in the management of dementia and related disorders. <b>Keywords:</b> Flavonoids, oxidative stress, cognitive functions, antioxidant enzymes, cholinergic neurotransmission.</p>
 <p><b>Bello Yusuf Idi</b> GICICRST1701078</p>	<p style="text-align: center;"><b>Mapping Naturally Occuring Radioelements Concentration And External Hazard Level Of Kajuru Area, North Central Nigeria</b></p> <p style="text-align: center;"><b>Bello Yusuf Idi</b> Department of Pure and Applied Physics, Adamawa State University Mubi, Nigeria</p> <p style="text-align: center;"><b>Lazarus GayusNdatuwong</b> Department of Pure and Applied Physics, Adamawa State University Mubi, Nigeria</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>The use of airborne gamma ray spectrometry has proved to be very efficient in mineral exploration, environmental monitoring and assessment of terrestrial nuclear hazard. In this work, a preprocessed aero radiometric survey data was used to map the spatial distribution of ground level concentration of the three radioelements that</p>



contributes significantly to the emission of gamma rays, notably potassium (K), thorium (Th) and uranium (U). The study area in a 55km by 55k area within the basement complex of north central Nigeria, enclosing Kajuru town and its environs. The work is aimed at mapping the spatial distribution of radioelements and estimating the external hazard associated with human exposure to the elements. The acquired data showed average elemental concentration of 1.3749% K, 24.5297ppm Th and 5.5491ppm U. Except for K, the values were found to be above the global crustal abundance ranges of 2 - 2.5% K, 8 – 12 ppm Th and 2 – 3 ppm U. The mean ground level external dose rate was found to be 213.1631nGyh-1. This is about four times higher than the global average terrestrial dose rate of 55nGyh-1. The computed external hazard index however gives an average value of 0.3288, which is within the acceptable limit (<1). External hazard index above this limit were however recorded at three points, spanning a small area of about 0.096km<sup>2</sup>. In situ and ground geophysical measurements are therefore recommended to ascertain the cause and possible consequences of the anomaly.

**Keywords:** Airborne gamma ray spectroscopy, activity concentration, dose rate, external hazard index, Kajuru.



**Dr. Azita Haddadi**  
GICICRST1701079

#### Novel Approaches for Cancer Treatment

**Dr. Azita Haddadi,**  
Associate Professor  
University of Saskatchewan  
Canada

**Tasnim Sheikh Jahan,**  
Associate Professor  
University of Saskatchewan  
Canada

**Pedram Rafiei,**  
Associate Professor  
University of Saskatchewan  
Canada

**Sams MA Sadat,**  
Associate Professor  
University of Saskatchewan  
Canada

**Mehran Yarahmadi,**  
Associate Professor  
University of Saskatchewan  
Canada

**Ayat Zagzoog,**  
Associate Professor  
University of Saskatchewan



	<p style="text-align: center;"><b>Canada</b></p> <p style="text-align: center;"><b>RashaElhasade</b> Associate Professor University of Saskatchewan Canada</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p><b>Research Objectives:</b> In spite of significant advances in recent years towards the development of new therapies, cancer is still a largely unmet medical need and the leading cause of death in industrialised countries. The main challenge in cancer therapy is the patients' immune suppression leading to tumor relapse and therapeutic failure. Chemotherapy agents are often accompanied by various side effects and poor pharmacokinetics profile. Advancements in nanoparticles as novel drug carriers are rapidly progressing and offer exciting promises. <b>Methodology:</b> Polymeric nanoparticles have been developed, characterized and applied to enhance the efficacy of the immunotherapy and chemotherapy of cancer. <b>Findings:</b> The nanoparticles showed significantly superior efficacy compared to conventional treatments. <b>Research Outcomes and Future Scope:</b> The drawbacks and challenges of the current cancer treatments and different strategies to overcome the issues will be presented and discussed.</p> <p><b>Keywords:</b> Cancer, Nanorechnology, Vaccines, Chemotherapy, Polymeric Nanoparticles</p>
 <p><b>Novaldy Pratama Putra</b> GICICRST1701080</p>	<p style="text-align: center;"><b>Application Of MB/M/1 Bulk Arrival Queueing System To Evaluate Key-In System In Islamic University Of Indonesia</b></p> <p style="text-align: center;"><b>NovaldyPratama Putra1,</b> 1Student Department of Statistics Islamic University of Indonesia</p> <p style="text-align: center;"><b>RavanelYosandi Lail1,</b> 1Student Department of Statistics Islamic University of Indonesia</p> <p style="text-align: center;"><b>Atina Ahdika2</b> 2Lecturer Department of Statistics Islamic University of Indonesia aldy.comment@gmail.com</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>According to queueing theory, customers arrive randomly follow to a Poisson process. In many practical queueing, customers come in batches. This situation can be modeled as queues process with bulk arrivals. The analysis of this paper help the decision maker decide to control arrival rates and service rates to reduce the possibility of key in system would be blocked. This paper also simulated in detail the correlation between performance measurement and traffic intensity for various bulk size</p> <p><b>Keywords—Bulk Arrival, Key in, Stochastic Process, System Evaluation</b></p>
<p><b>Aswan Kadhim Jabber Al-Abboodi</b> GICICRST1701081</p>	<p style="text-align: center;"><b>The Efficacy of Malaria Protein Vaccination Using In situ Porous Hydrogel as a Delivery System</b></p> <p style="text-align: center;"><b>Aswan Al-Abboodi,</b> Department of Chemical Engineering, Monash University, Clayton VIC 3800,</p>

Australia

**Charles Ma,**  
Department of Microbiology, Monash University, Clayton VIC 3800, Australia

**Jing Fu,**  
Department of Mechanical Engineering, Monash University, Clayton VIC 3800,  
Australia

**Peggy Chan,**  
Department of Chemical Engineering, RMIT University, Melbourne VIC 3000,  
Australia

**Ross L. Coppel,**  
Department of Microbiology, Monash University, Clayton VIC 3800, Australia

#### ABSTRACT


The ability to induce an immune response with recombinant *Plasmodium yoelii*, 19-kDa C-terminal fragment of merozoite surface protein 1 (PyMSP119) encapsulated within a Gelatin-hydroxyphenylpropionic acid/carboxymethylcellulose-tyramine (Gtn-HPA/CMC-Tyr) porous hydrogel network and the efficacy of such an immune response was investigated as a new method of improving vaccination against malaria. The theory behind this work is that the slow, sustained release of the malaria antigen may induce and maintain a high level of immune response for a prolonged period. In vitro protein release studies by immunoblot were performed firstly to determine the PyMSP119 release profile for three different concentrations of Gtn-HPA/ CMC-Tyr hydrogel: 10%, 15% and 20%. It was found that the release profile followed biphasic kinetics, with slow, close to first order release for the first 8 hours followed by a faster release. These results showed that Gtn-HPA/ CMC-Tyr hydrogels could be used for the controlled release of antigens. In vivo studies were performed to measure the antibody responses elicited in mice by different hydrogel vaccine complexes which involved flagellin adjuvant (FljB). Higher serum antibody titers against PyMSP119 were observed with the administration of a complex of hydrogel/PyMSP119/FljB in three injections compared to other complexes. Robust IgG1 and total IgG response were observed after 3 injections of the hydrogel/PyMSP119/FljB complex as a result of the combination of the slow sustained release of the antigen from the hydrogel, the presence of the FljB adjuvant and the antigen boost injections. A complex of hydrogel/PyMSP119 in three injections (without adjuvant) generated moderate total IgG responses against PyMSP119 antigen, indicating the role of the hydrogel in maintaining the immune responses that lead to appropriate sustained responses. These findings support the utility of porous hydrogel-based antigen vaccine systems to induce the antibody responses that may be suitable for a diversity of diseases including malaria.

**Key words:** Malaria vaccine, porous hydrogel, PyMSP119 protein, *Plasmodium yoelii*.

 <p><b>Ayhan Yağci</b> GICICRST1701082</p>	<p><b>Investigation Of Customer Perception Of Vehicle Door Closing Sound Quality</b></p> <p><b>Deniz Hara</b> TofaşTürkOtomobilFabrikası A.Ş., Bursa, Turkey,</p> <p><b>Ayhan Yağci</b> TofaşTürkOtomobilFabrikası A.Ş., Bursa, Turkey,</p> <p><b>Arda Gürarda</b> TofaşTürkOtomobilFabrikası A.Ş., Bursa, Turkey,</p> <p><b>Haluk Erol</b> Istanbul Technical University, Istanbul, Turkey,</p> <p><b>ABSTRACT</b></p> <p>The perception of vehicle door closing quality is one of the most important criteria that a customer pays attention while buying a vehicle in a sales gallery. The quality perception gives a customer a clue about the general quality of the vehicle. A high quality closing sound of a vehicle door, has a potential of increasing admiration and attractiveness of the vehicle and sales volume of it. However, the quality perception has been a parameter that isn't calculated, measured or evaluated in the design phase yet. Within this study, closing sounds and physical and acoustical parameters of the doors of a group of B and C segment vehicles are investigated and compared by handling some NVH and bench tests and jury evaluations. With the help of these study, acoustical and thus physical design parameters of a door that has high quality closing sound will be determined and will show the path to design doors that has better door closing sound quality in the further vehicle projects.</p> <p><b>Keywords</b> Door Closing Sound, Door Slam Noise, Acoustical Performance, Customer Perception, Psychoacoustics</p>
<p><b>Norhayati Zakuan</b> GICICRST1701083</p>	<p><b>The Impact of Integrated Management System on Organizational Performance in Malaysia Manufacturing Industry: A Literature Review</b></p> <p><b>Pragash Sopromanen,</b> Faculty of Management Universiti Teknologi Malaysia 81310 Johor Bahru, Johor</p> <p><b>Norhayati Zakuan,</b> Faculty of Management Universiti Teknologi Malaysia 81310 Johor Bahru, Johor</p> <p><b>Mohd Shoki Md Ariff,</b> Faculty of Management Universiti Teknologi Malaysia</p>


	<p>81310 Johor Bahru, Johor</p> <p>Thoo Ai Chin, Faculty of Management UniversitiTeknologi Malaysia 81310 Johor Bahru, Johor</p> <p>ZuraidahSulaiman, Faculty of Management UniversitiTeknologi Malaysia 81310 Johor Bahru, Johor</p> <p>SitiZalehaOmain Faculty of Management UniversitiTeknologi Malaysia 81310 Johor Bahru, Johor</p> <p>MuhamadZameri Mat Saman Faculty of Mechanical Engineering UniversitiTeknologi Malaysia 81310 Johor Bahru, Johor</p> <p><b>ABSTRACT</b> Manufacturing Industry sector is one of the important sectors in Malaysian Economy in which contributed towards Gross Domestic Product (GDP), external Trade and job creation. Meanwhile, adopting Integrated Management System in Manufacturing Industry shall help the organization grow and compete with others. The importance of IMS practices in the achievement of organizational performance has been highlighted in numerous studies. The purpose of this paper is to examine the relationship of IMS practices and organizational performance in the Malaysian Manufacturing industry. The outcome of this writing would be developing of research model. This model will be used to study the relationship between IMS practices and organizational performance in manufacturing industry. <b>Keywords-</b> Integrated Management System (IMS), manufacturing industry in Malaysia, Organizational Performance, Research framework</p>
<p>Nwambu Chidume Nnamdi GICICRST1701085</p>	<p>Structural enhancement of the properties of Aluminum Bronze (Cu-10%Al) Alloy with Titanium and molybdenum</p> <p>Nwambu C.N, Department of Metallurgical &amp; Materials Engineering, NnamdiAzikiwe University, Awka</p> <p>Anyaeche I.M, Department of Metallurgical &amp; Materials Engineering, NnamdiAzikiwe University, Awka</p> <p>Nnuka E.E. Federal College of Education (Technical)Umunze, Anambra State, Nigeria</p>



	<p style="text-align: center;"><b>ABSTRACT</b></p> <p>This paper examines the effect of titanium and molybdenum on the structure and mechanical properties of aluminium bronze. The properties studied were tensile, hardness and impact test, universal testing machine model 50kN were used to test for tensile strength, impact strength using charpy machine model IT-30 and Brinell tester model B 3000 (H). The specimens were prepared by doping 0.5-2.5% titanium and molybdenum into the aluminium bronze (Cu-10% Al) at interval of 0.5 percent. The specimens were prepared according to BS 131- 240 standards. Microstructure analysis was conducted using L2003A reflected light metallurgical microscope. Results obtained shows that tensile strength, impact strength and ductility increased respectively as dopants increased. Microstructure analysis revealed the primary <math>\alpha</math>-phase, <math>\beta</math>-phase (intermetallic phases) and fine stable reinforcing kappa phase and these alterations in phases resulted in the development in the mechanical properties. Aluminum bronze doped with titanium and molybdenum at 2.5% proved to increased tensile strength, ductility, impact strength, hardness and is therefore recommended for applications in engineering field.</p> <p>Keywords - Aluminium bronze, titanium and molybdenum addition, mechanical properties, microstructure.</p>
<p>Hiroshi Imagawa GICICRST1701058</p>	<p style="text-align: center;"><b>Coronary Stent and Prosthetic Heart Valve Information via Smartphone New Applications Improving Health-care Quality of Patients Having Undergone Percutaneous Coronary Intervention and Artificial Valve Replacement</b></p> <p style="text-align: center;"><b>Hiroshi Imagawa</b> Intelligent Medical Application &amp; Yagi Neuro-surgical Hospital, Osaka, Japan, imagawa@m.ehime-u.ac.jp</p> <p style="text-align: center;"><b>Takayoshi Yagi</b> Yagi Neuro-surgical Hospital, Osaka, Japan</p> <p style="text-align: center;"><b>Hirokatsu Taniguchi</b> Yagi Neuro-surgical Hospital, Osaka, Japan</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p><b>Background:</b> There are a huge number of patients who have been treated by percutaneous coronary intervention (PCI) with stenting. Many studies have reported that cessation of antiplatelet medications produces in-stent thrombosis in patients, especially those with drug-eluting stent. Also, patients with mechanical prosthetic valves must not stop the anticoagulant therapy even in the late postoperative period, irrespective of type of the valve or position in the heart. However some people voluntarily abandon taking the antiplatelet or the anticoagulant medicines when they encounter an unexpected emergent medical problem.</p> <p><b>Hypothesis:</b> Smartphone based ubiquitous system of recording coronary stent information and prosthetic heart valve data would be useful in managing patients,</p>

	<p>who underwent PCI or artificial heart valve surgery.  <b>Methods and Results:</b> We developed smartphone applications archiving PCI and prosthetic heart valve data, “Coronary Stent Information” and “Prosthetic Heart Valve Information”, respectively. These simple and free applications run on iOS or Android. More than eighty percent of participants approved one of these applications.  <b>Conclusion:</b> Coronary stent and prosthetic heart valve data recording systems using smartphone technology are simple and valuable methods in managing people suffering from ischemic or valvular heart disease. These ubiquitous applications would improve health-care quality of patients who have undergone PCI and prosthetic heart valve surgery.  <b>Keywords</b>  Heart disease; Cardiac surgery; Percutaneous coronary intervention; Coronary stent; Prosthetic heart valve; Health-care</p>
 <p>Ismail Usman Kaoje GICICRST1701058</p>	<p style="text-align: center;"><b>Urban Flood Vulnerability Mapping of Lagos, Nigeria’</b></p> <p style="text-align: center;">Ismail UsmanKaoje, Department of Geography, Federal University BirninKebbi, Kebbi State, Nigeria.</p> <p style="text-align: center;">Ibrahim Ishiaku, Department of Geography, Federal University BirninKebbi, Kebbi State, Nigeria.</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>Flood is an overflow of water covering the land surfaces that are normally dry. Flooding is the most common occurring natural disaster that affects humans and their surrounding environment. This natural disaster is common in Nigeria and it has been occurring in almost every raining season. The city Lagos is one of the settlements in Nigeria that experiences this disaster in almost every year during raining seasons. So, this research uses GIS and HEC-RAS mapping technology to identify and map areas that vulnerable of flooding in the study area. Flood vulnerability mapping is very important for an appropriate planning to reduce the likelihood of flood occurrence and also reduce the consequences of flood disaster when it happens. Techniques that are used in this research for flood vulnerability mapping of study area are hydrological modelling, hydraulic modelling, and flood inundation mapping and visualization. However, the main objective of this paper is to use GIS and HEC-RAS to identify areas that are vulnerable to flood in an urban area of Lagos.</p> <p><b>Key words:</b> Flood, Mapping, GIS, Flood Vulnerability,</p>
<p>Reem Talal Matbouli GICICRST1701061</p>	<p style="text-align: center;"><b>Dynamical model on the impact of peer-pressure in fast food consumption and obesity</b></p> <p style="text-align: center;">ReemMatbouli Mathematics Department, King Abdulaziz University reem@ymatbouli.com,</p> <p style="text-align: center;">Salma Al-Tuwairqi Mathematics Department, King Abdulaziz University saltuwairqi@kau.edu.sa</p>

	<p style="text-align: center;"><b>ABSTRACT</b></p> <p>In recent years, more chronic diseases have spread around the world, such as high blood pressure, diabetes, heart attacks and cancer. The common factor of being susceptible to one of these diseases is obesity. One reason for excess weight is frequent consumption at fast food restaurants. The aim of this paper is to study the influence of peer-pressure on the consumption of fast food and obesity. A mathematical model is proposed dividing the population into four class compartments: Normal weight, Overweight, Obese, and Quitters. The interaction between these compartments is governed by a system of nonlinear differential equations. A qualitative approach to solving the system is utilized. As a result, Five equilibrium points and a basic reproduction number (<math>R_0</math>) of the system are found. In addition, the local stability is investigated for the free equilibrium, overweight equilibrium, free quitter equilibrium, free obese equilibrium and endemic equilibrium producing three threshold numbers (<math>R_1, R_2, R_3</math>). Furthermore, numerical simulations are illustrated to support the qualitative results. Based on our model, it is found that the free equilibrium is locally asymptotically stable (LAS) when <math>R_0 &lt; 1</math>. Whereas, the overweight equilibrium exists when <math>R_0 &gt; 1</math> and LAS when <math>R_1 &lt; 1</math> and <math>R_2 &lt; 1</math>. However, when <math>R_1 &gt; 1</math> the free quitter equilibrium exists and it is LAS when <math>R_3 &gt; R_1</math>. The free obese equilibrium exists when <math>R_2 &gt; 1</math> and it is LAS when <math>R_3 &lt; R_2</math>. Lastly, the condition for the existence of the endemic equilibrium is <math>R_0 &gt; R_1 &gt; R_3 &gt; R_2</math>. These findings may contribute to the development of obesity control strategies.</p> <p><b>Keywords:</b> obesity, peer-pressure, fast food, mathematical model, equilibrium points, local stability, numerical simulation.</p>
<p><b>Dr. Salma Al-Tuwairqi</b> GICICRST1701063</p>	<p style="text-align: center;"><b>Dynamical model on the impact of peer-pressure in fast food consumption and obesity</b></p> <p style="text-align: center;"><b>ReemMatbouli</b> Mathematics Department, King Abdulaziz University reem@ymatbouli.com,</p> <p style="text-align: center;"><b>Salma Al-Tuwairqi</b> Mathematics Department, King Abdulaziz University saltuwairqi@kau.edu.sa</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>In recent years, more chronic diseases have spread around the world, such as high blood pressure, diabetes, heart attacks and cancer. The common factor of being susceptible to one of these diseases is obesity. One reason for excess weight is frequent consumption at fast food restaurants. The aim of this paper is to study the influence of peer-pressure on the consumption of fast food and obesity. A mathematical model is proposed dividing the population into four class compartments: Normal weight, Overweight, Obese, and Quitters. The interaction between these compartments is governed by a system of nonlinear differential equations. A qualitative approach to solving the system is utilized. As a result, Five equilibrium points and a basic reproduction number (<math>R_0</math>) of the system are found. In addition, the local stability is investigated for the free equilibrium, overweight equilibrium, free quitter equilibrium, free obese equilibrium and endemic</p>




	<p>equilibrium producing three threshold numbers (<math>R_1, R_2, R_3</math>). Furthermore, numerical simulations are illustrated to support the qualitative results. Based on our model, it is found that the free equilibrium is locally asymptotically stable (LAS) when <math>R_0 &lt; 1</math>. Whereas, the overweight equilibrium exists when <math>R_0 &gt; 1</math> and LAS when <math>R_1 &lt; 1</math> and <math>R_2 &lt; 1</math>. However, when <math>R_1 &gt; 1</math> the free quitter equilibrium exists and it is LAS when <math>R_3 &gt; R_1</math>. The free obese equilibrium exists when <math>R_2 &gt; 1</math> and it is LAS when <math>R_3 &lt; R_2</math>. Lastly, the condition for the existence of the endemic equilibrium is <math>R_0 &gt; R_1 &gt; R_3 &gt; R_2</math>. These findings may contribute to the development of obesity control strategies. Keywords: obesity, peer-pressure, fast food, mathematical model, equilibrium points, local stability, numerical simulation.</p>
<p><b>Mohja Saleh Summan</b> GICICRST1701077</p>	<p><b>Investigating Natural Radioactive Elements in Ceramic Tiles Using Laser-Induced Breakdown Spectroscopy</b></p> <p><b>MohjaSalehSumman</b> Master Student In Laser Physics , King Abdul-Aziz University , Jeddah, Saudi Arabia</p> <p><b>Reem Mohammad Altuwirqi</b> Physics Department, Faculty of science, King Abdul-Aziz University , Jeddah, Saudi Arabia</p> <p><b>ABSTRACT</b> Laser-induced breakdown spectroscopy (LIBS) is a powerful elemental analysis technique that is fast and does not require any sample preparation. In this work, the LIBS technique has been used to investigate natural radioactive elements in 28 ceramic floor tiles samples from Jeddah city local market, which were imported from a variety of countries. The importance of detecting natural radioactive elements such as uranium (U-238) and thorium (Th-232) give rise due to their dangers to human health in the event of long exposures. A quantitative analysis of the concentrations of U-238 and Th-232 in the ceramic floor tile samples has been performed using a Q-switched Nd:YAG laser with 1064nm. To achieve this, pellets were fabricated as standards. These standards were used to construct calibration curves for the Th 310.82 nm line and the U 462.655 nm line. Concentrations in ppm for all samples were determined. We aim in this work to demonstrate the effectiveness of using the LIBS technique to quickly monitor the radioactivity of imported ceramic floor tiles for quality control and the improvement of public health safety level. Key words :Laser-induced breakdown spectroscopy, ceramic tiles, natural radioactive elements, thorium, uranium.</p>
 <p><b>Ammar Isam Edress Mohamed</b> YRSICRST1701051</p>	<p><b>Modelling Asymmetric Magnetic Recording Heads With An Underlayer Using Superposition</b></p> <p><b>AMMAR EDRESS MOHAMED,</b> Duhok Polytechnic University, Zakho Technical Institute, Kurdistan Region –Iraq</p> <p><b>MUSTAFA AZIZ,</b> College of Engineering, Mathematics and Physical Sciences, University of Exeter, Harrison Building, North Park Road, Exeter EX4 4QF</p>

	<p style="text-align: center;"><b>DAVID WRIGHT</b> College of Engineering, Mathematics and Physical Sciences, University of Exeter, Harrison Building, North Park Road, Exeter EX4 4QF</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>This paper analyses and calculates the head fields of asymmetrical 2D magnetic recording heads when the soft-underlayer is present using the appropriate Green's function to derive the surface potential/field by utilising the surface potential for asymmetrical head without underlayer. The results follow closely the corners, while the gap region shows a linear behaviour for <math>d/g &lt; 0.5</math> compared with the calculated fields from finite-element.</p> <p><b>Index terms:</b> Magnetic recording heads, Laplace's equation, Karlqvist head, Surface potential, Head field, Finite-element.</p>
 <p><b>Mahmood Reza Sadikhani</b> YRSICRST1701052</p>	<p style="text-align: center;"><b>Study of Physico – Chemical and Morphological Properties of Soils of Kamin Region, SaadatShahr, Fars Province, Iran</b></p> <p style="text-align: center;"><b>Mahmood Reza Sadikhania,</b> Young Researchers and Elite Club, Khorramabad Branch, Islamic Azad University, Khorramabad, Iran</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>Genesis, classification and study of physico-chemical and morphological properties of soil of Kamin, Saadatshahr in the north of Fars Province, carried out. This region has Xeric soil moisture regime and Thermic soil temperature regime and its area is about 10000 hectares. The mean annual rainfall and temperature were 301 mm and 17.3 degrees of Celsius, respectively. Effective factors of soil formation and their genesis and classification, were studied. Five physiographic units namely, mountains, hill, gravelly colluvial fans, piedmont and low lands were identified. Numbers of profiles were excavated and eight profiles were selected as representative profiles. The soil samples of every horizon in these profiles were collected then air-dried and passed it from a 2 mm sieve. And to determine the physico – chemical properties of soils, samples transferred to a laboratory. The soils were highly calcareous with weak development and representative pedons had cambic and calcic diagnostic horizons. Topography and climate were known as the most important factors of soil</p> <p><b>Keywords:</b> Kamin, Xeric, Thermic, classification, physiography</p>
 <p><b>Tefahi Mohamed</b> GICECG1701060</p>	<p style="text-align: center;"><b>Analysis and comparison of the METRIC and TIM models of spatialization of evapotranspiration from remote sensing data on the semi-arid agro-system of Ghriiss in western Algeria.</b></p> <p style="text-align: center;"><b>Teffahi Mohamed</b> Research on Biological Systems and Geomatics, Laboratory, University of Mascara, Mascara, Algeria</p> <p style="text-align: center;"><b>Hamimed Abderrahmane,</b> Bekhtiar Djamel, Hamadi Mohamed, Laounia Nahal, Ouadja Abid1, Khaldi Abdelkader,</p>

	<p style="text-align: center;"><b>ABSTRACT</b></p> <p>The quantification of evapotranspiration from agricultural areas is important for agriculture water management, especially in arid and semiarid regions where water deficiency is becoming a major constraint in economic welfare and sustainable development. Remote sensing based energy balance models are presently most suited for estimating evapotranspiration at both field and regional scales. This study evaluated the performance of two remote sensing-based surface energy balance models for evapotranspiration (ET) estimation over a semi-arid agrosystem in the Ghriss plain in Mascara (western Algeria): METRIC (Mapping EvapoTranspiration at high Resolution using Internalized Calibration) and TIM (Trapezoid Interpolation Model). These two models are qualified as «residual type», because they are based on a physical approach which allows the resolution of energy balance equation, where evapotranspiration is estimated as the residual term when net radiation, sensible and soil heat fluxes are known. TIM allows estimating directly ET by using the Priestley-Taylor equation. It requires few input data, since it is based on a purely graphical method which allows deducing the extreme values of surface temperature from the scatterplots between vegetation index (NDVI) and surface temperature, and then the Priestley-Taylor parameter is calculated. Has been applied for the estimation of actual evapotranspiration in the Ghriss plain, a semi-arid region in Mascara (West of Algeria). The data set consists of five images acquired by the Landsat 7 and Landsat 8 satellite on December 3rd, 2001, February 5th, 2002, April 26th, 2002, July 15th, 2002, March 12th, 2015, and some agrometeorological field measurements. The obtained results concern the validation and comparison of the used models for spatial distribution of ET. In conclusion, the results show that the three models provide comparable outputs and suggest that METRIC and TIM can be considered as an operational approach to predict actual ET from agricultural areas having limited amount of ground information. <b>Mots clés :</b> comparison, evapotranspiration, METRIC, TIM, Landsat, Algeria.</p>
 <p><b>Ravi Jaganure</b> GICECG1701061</p>	<p style="text-align: center;"><b>Improvement of OEE by reducing losses and applying TPM</b></p> <p style="text-align: center;"><b>Ravi Jaganure</b> Department of Industrial and Production, VTU, Belagaum, Hubli, Karnataka.</p> <p style="text-align: center;"><b>Dr. Anil Badiger</b> Head of department, Automobile Engineering Department, BVB. College of Engg. Hubli, Karnataka.</p> <p style="text-align: center;"><b>ABSTRACT</b></p> <p>In the recent era of industrialization, the occurrence of wastages and losses in manufacturing industry has increased. There are many types and reasons found for losses and wastages, non-availability of machines, manpower, raw material in time, operators, tooling problem are some of the main reasons for the waste. The wastes that are related to company are most important as they affect the company at cost of time, reputation of the company as well as the customer belief. Zero oriented concepts are becoming most essential in industries. In this present situation, the concept of TPM has been adopted by many industries to reduce the loss and waste. The main objective is to increase the OEE and productivity of the machine and to reduce the breakdown losses. The study is mainly carried out on CNC machines where the breakdown conditions are checked and analyzed. Fish bone diagram, Pareto chart and why-why analysis has been used for analyzing and inspecting the reasons of break down losses. The primary aim was to reduce idle time and working towards</p>

	<p>optimizing the performance of the machine by reducing the breakdown losses, it was achieved by the best utilization of time for improving the maintenance and inspection, taking into consideration the recommendation and experiences. By implementing this there was reduction in break down loss to some extent, maintenance cost and productivity of the CNC machine is increased. The OEE is found to be increased by 10-12%.</p> <p>Keywords:Waste/Loss, TPM, Breakdown loss, Fish-bone diagram, Pareto chart, why-why analysis, Maintenance, Productivity, OEE.</p>
<p>Ramin Karimi GICECG1701063</p>	<p>Verbal Functions in English Sentences</p> <p>Ramin Karimi Alloy steel company, Iran-Yazd, Iran-Yazd</p> <p>ABSTRACT</p> <p>Mankind needs to have a complete language for global communications with each other, but failed to invent a new language that is fully inclusive and present. English language, as the most practical and the most widespread language in the world, is much world welcomed. If we find formula for how to arrange the words in sentences, we will have great achievements in the field of English language teaching, documentation as well as providing superior algorithms (for Translators). This article is based on various examples and shows that almost all the English language sentences are based on a wide and strong rule (or formula). Application of this equation or formula, like other relations, is bilateral; that is what we have and we mean it (practice-based) or what it means and we want to build sentences (tack inversion).</p> <p>Layout - Formula - Language - Sentence</p>
<p>RaminKarimi GICICRST1701093</p>	<p>The theory of scopes and species</p> <p>RaminKarimi Alloy Steel Company, Iran-Yazd, Iran-Yazd</p> <p>ABSTRACT</p> <p>What is the scope? What is the species? The number of a collection's members is the collection's scope, and the kind of its members is the collection's species. This theory exacerbate and improve our recognition of the collections and members by studying the data about scopes and species. These collections can be biological or physical. This theory also sets the systems contained these scopes and species in a new perspective, which leads to more investigation and study of the phenomena and its related behavior.</p> <p>This theory propounds the new perspectives and questions in the section of physics knowledge and also biology knowledge by its description and interpretation. We can refer to more investigation and challenge in the theory of evolution, inheritance, and live science as one of the operational instances in the section of biology knowledge. Live science can be named as the essence and existence knowledge of the concept of "alive" word (in the biology science). We also can refer to its application in the section of physics knowledge as follows:</p> <ul style="list-style-type: none"><li>• Helping to our recognition of the world's history.</li><li>• How to create the elements and basic particles.</li></ul>

	<p>We can dominate over the biology of physics world by progressing in the recognition of data and their related theories; especially if we can lessen the frontiers between physics and biology, and approximate their scopes.</p>
 <p><b>Mohmmad Zubair</b> GICICRST1701094</p>	<p><b>Radon and thoron levels in hostels and effective doses of Sulaiman hall of Aligarh, India</b></p> <p><b>Mohmmad Zubair</b> Aligarh Muslim University Aligarh, India.</p> <p><b>ABSTRACT</b></p> <p>The environmental radon, thoron and their progeny has been measured in Hostels of Sulaiman Hall of Aligarh of Uttar Pradesh, India. The twin chamber dosimeter cups are used for the study. The concentrations of radon and thoron were found to vary from 24.15 to 197.10Bq/m<sup>3</sup> with an average of 131.29 Bq/m<sup>3</sup> and 11.70 to 63.16 Bq/m<sup>3</sup> with an average of 39.71 Bq/m<sup>3</sup>, respectively. The concentrations of radon and thoron progeny vary from 1.8 mWL to 19.8 mWL with an average of 8.48 mWL and 1.52 to 37.45 mWL with an average of 16.8 mWL, respectively. The effective dose received due to radon, thoron and their progeny by the inhabitants varies from 0.19 to 0.79 mSv/y with an average of 0.5 mSv/y. The effective dose rates due to radon, thoron and progeny were found marginally higher but well below the international recommendations.</p> <p><b>Keywords</b> Radon/thoron and their progeny, Effective dose, Twin chamber, dosimeter cups</p>
<p><b>Aarti Nagpal</b> GICICRST1701096</p>	<p><b>A study of development trends in Rohtak city(Haryana, India) with reference to National Capitol Region(NCR) policies for Haryana sub-region</b></p> <p><b>Aarti Nagpal</b> Assistant Professor (Department of Architecture), School of Planning and Architecture (SPA) New Delhi, India.</p> <p><b>ABSTRACT</b></p> <p>The main emphasis of the N.C.R. plan has been the economic development of the identified REGIONAL CENTRES. Rohtak is a REGIONAL CENTRE of NCR. The city of Rohtak has been the centre of political, educational and cultural activities in Haryana. Rohtak became major educational centre of Haryana during the last two decades. Apart from being part of NCR, Rohtak is now experiencing rapid urbanisation and industrial development in its trunk routes. The pace of development now observing in the Rohtak city is not only attracting the private sector in the urban land development but generated an atmosphere of development towards Delhi as well as southern side of the city. It will increase the Job opportunity, connectivity and demand of land.</p> <p>Economy of Rohtak is predominantly based on trade &amp; commerce but transport and Industrial activities also play an important role in economic profile of Rohtak city.</p> <p>National Capital Region is a result of Regional planning efforts to ensure planned growth of National capital and surrounding settlements. Regional planning in India has been more of an academic exercise, as its implementation involves political and administrative coherence, land being a state subject. The NCR concept, was evolved</p>

	<p>with objectives of decongesting the National Capital and planned development of Delhi and the surrounding region through dispersal of economic, commercial and industrial activities in DMA and priority towns or Regional centres within the NCR and the counter-magnets identified outside the NCR territory.</p> <p><b>Growth Direction:</b> Development trends reveals that Rohtak is developing fast towards North-East and South-East. Major drivers of the development trends in Rohtak are:</p> <ul style="list-style-type: none"><li>• Trends in Demography- Population composition &amp; Migration etc.</li><li>• Development plan acted as a trend-setter document.</li><li>• Private developers bought their land directly from the cultivator because of low land prices in the outskirts of the Rohtak city. It led to rapid residential development as a private township near the city limit but within the planning area of Rohtak.</li></ul> <p>Rohtak has potential to accommodate the future population proposed as per induced economic growth due to ongoing urban development projects like Omaxe city, Suncity and One-city etc townships.</p> <p>With the induced economic momentum in Rohtak city mass employment would be possible and it'll arrest the migration to National Capital. This ultimately will fulfill the aim of NCRPB to decongest the NCT (Delhi) by decentralisation.</p> <p><b>KEY WORDS:</b> NCR,Haryana-sub-region, regional centre, development trends, NCRPB.</p>
 <p>Yu-Hyeon Lee GICICRST1701087</p>	<p><b>Mechanical properties of structural steels at high temperature</b></p> <p>Yu-Hyeon Lee Steel Structure and Structural Dynamics Lab, Kyungpook National University, Daegu, Republic Of Korea</p> <p>Kyung-Jae Shin, So-Yeong Kim, Yu-Hyeon Lee, Da-Som Ch1, Hye-Min Shin.</p> <p><b>ABSTRACT</b></p> <p>This paper presents the test results of the mechanical properties of three types of structural steel at high temperature, which are generally used for the Pre-Engineered Building (PEB) system. The PEB system is generally used for non-residential buildings, such as factories and warehouses. The structural steel members are installed without fire resistance protection, which means they are very weak in the case of fire. The end-plate connection could be critical in the case of fire because most of the moment is resisted by the tensile force of the bolts. Therefore, the mechanical properties of bolts at elevated temperatures are tested. Coupon test specimens for SS400, SM490, and F10T bolts were tested according to KS D 0801 and ASTM E8M. The high-temperature coupon tests were performed at 20°C, 400°C, 500°C, and 600°C. The test results were compared with the design reduction</p>



	<p>factors obtained from the American and European standards (AISC, 2005, CEN, 2005). The yield strength and tensile strength satisfied the minimum strength of the specified standards at 20°C. However, the reduction factor for yield strength obtained at a high temperature was lower than that of the standard value suggested by the code. In particular, the reduction factors for the high-strength bolt (F10T) were lower than those of the structural steel members (SM490, SS400).</p> <p><b>Keywords:</b> Elevated Temperature, Tensile Test, Mechanical Properties, High-Strength Bolt</p>
 <p><b>Moh'd El Khatieb</b> GICICRST1701095</p>	<p>Trial concrete Mix design comparison using local materials under local environment</p> <p><b>Moh'd El Khatieb</b> Department of Civil Engineering, Zarqa University, Zarqa, Jordan</p> <p><b>ABSTRACT</b></p> <p>Concrete is one of the most important material in construction and the addition of some other materials can change its properties. With the increase in trend towards the wider use of concrete for special constructions and high raise buildings there is a growing demand of concrete with higher compressive strength. So to achieve that, we have to clarify the right proportion and material properties.</p> <p>The objective of this paper is to develop high strength concrete mix design using local material under local environment to achieve safety, cost saving, and to contribute to the recent studies done in this field.</p> <p>Whilst a number of studies have considered the development of a rational or standardized method of concrete mix design for HSC (de Larrard, 1999; Mehta and Aitcin, 1990b), no widely accepted method is currently available.</p> <p>The main requirements for successful and practical HSC are a low water/cement ratio combined with high workability and good workability retention characteristics. In the absence of a standard mix design method, the importance of trial mixes in achieving the desired concrete performance is increased.</p> <p>The role of fineness modulus of fine aggregate is very important in the development of high strength concrete also adopting the right additive helps to decrease w/c ratio and increase the concrete strength.</p> <p>While "ACI Recommended Practice 211.1" Indicate that any mix design procedure will provide a first approximation of the proportions and must be checked by trial batches and local characteristics in materials should be considered</p> <p><b>Key words:</b> High Strength Concrete, Additives, fine aggregate, Mix Design, Slump, Tensile Strength</p>

## LISTENERS

<p><b>Adeayo Godwin SMITH</b> Administrative and Trainee Officer , Diamond Stream Avenue Int'l Ltd, Bodija, Nigeria. GICICRST1701072</p>
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<p><b>Julius EmiseiluEmoekpeire</b> Executive Officer (Administration), University of Ibadan, Ibadan, Nigeria GICICRST1701073</p>
<p><b>Ejaz Ahmed</b> Physics, Hazara University , Pakistan GICICRST1701076</p>
<p><b>FasanyaAyodele Gabriel</b> Physics, College Of Education, Waka-Biu, Borno State, College Of Education Waka- Biu, Borno, Nigeria GICICRST1701086</p>
<p><b>Lu'lu' Ayman Mohammad Banat</b> Department of Computer Graphics and Animation, Faculty of Information Technology, Princess Sumaya University for Technology, Amman, Jordan GICECG1701062</p>
<p><b>Arda Gürarda</b> Physical Tests, Tofas, Bursa, Turkey GICICRST1701088</p>
<p><b>Jenanrashid</b> Pharmacy Clinical Pharmacy, Lebanese International University , Lebanon GICICRST1701090</p>
<p><b>Humayun Zarak</b> Department of Information Technology, University of Gujarat, Pakistan GICICRST1701091</p>
<p><b>Semih Sezer Bekar</b> Body, Closures Design, Tofas ,Bursa, Turkey GICICRST1701092</p>
<p><b>Kyung-Jae, Shin</b> Steel Structure And Structural Dynamic Lab, Kyungpook National University , Daegu, Republic Of Korea GICICRST1701089</p>