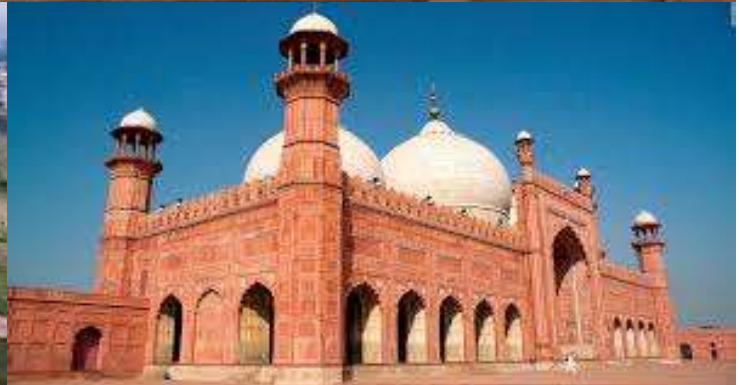


Proceedings of 1st ICEST-2020-GICCL
1st International Conference on Emerging Science and Technologies
November 24, 2020 Lahore, Pakistan



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1st international Conference on Emerging Science and Technologies

Department of Physics

Govt. Islamia College Civil Lines Lahore, Pakistan

ICEST-2020-GICCL

Proceedings of papers

Organized by: Department of Physics, GICCL Lahore, Pakistan

November 24, 2020

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About 1st ICEST-2020-GICCL

ICEST-2020-GICCL is an International Conference on Emerging Science and Technologies, November 24, 2020 at Govt. Islamia College Civil Lines Lahore, Pakistan. The ultimate ambition of this conference is to bridge the gap between Physics and Emerging Science aiming at technological opportunities for college students and researchers. The advanced technologies promise novel revolutionary products and methods in numerous areas of application. Renowned National and International researchers have been invited as keynote talks in this prestigious conference. Scientists working in research fields related to ICEST-2020-GICCL topics are to submit papers. All accepted papers (presented at the conference and following IEEE format) will be submitted and published in Pakistan Journal of Emerging Science and Technologies (PJEST), Department of Physics, Govt. Islamia College Civil Lines Lahore, Pakistan.

Venue: Lahore, the eternal city, is one of the oldest cities in the world with a vivid and rich history and culture, records the great changes of the Pakistani nation just like a living history book. Lahore is the capital of the Pakistani province of Punjab, and is the country's 2nd largest city after Karachi, as well as the 18th largest city proper in the world. Lahore is one of Pakistan's wealthiest cities with an estimated GDP of \$65.14 billion (PPP) as of 2017. Lahore is the largest city and historic cultural center of the wider Punjab region, and is one of Pakistan's most socially liberal, progressive, and cosmopolitan cities.

Govt. Islamia College Civil Lines Lahore, Pakistan

Our college is one of the first ranked institutions of the Punjab. Let us have a glance on the past history of the college. The college is providing sports apart from academic activities. This college is providing the students opportunities for acquiring skill in Hockey, Football, Volley Ball, Basket Ball, Squash, Badminton, Tennis, Bodybuilding, Rowing, Hiking, Kabaddi, Weightlifting, Handball Boxing, Tug of War, Cricket, Taikvando and Athletics. Our trained players have always been bringing a good name and repute to the college and country in International Olympics and Asian Games. It is hoped that we will be successful in maintaining our former splendid records in the coming championships and competitions. Now, our college is going to arrange an international conference on emerging science and technologies; it will be held on 24 November 2020.

Message from Organizing Committee

It is our pleasure to have all of you engaged in 1st International Conference on Emerging Science and Technologies (ICEST-2020-GICCL). This International Conference is held in Govt. Islamia College Civil Lines, Lahore, Pakistan on November 24, 2020. This one-day conference focuses on the current research in Emerging Science and related technologies. The conference aims to be a key international forum for the exchange and dissemination of technical information on every field of science.

The conference features technical presentations that cover topics of current interest in the area of Plasma Physics, Quantum Entanglement, Organic Framework Nanoparticles: Synthesis and Applications as Cancer Biomarker, trace determination of inorganic/organic analytes, Photocatalysis for Environmental application, simulation, modelling and energy saving. Renowned researchers will give keynote speeches in this prestigious conference.

Therefore, this conference can be considered as an ice breaker for the local and international logistics industry to understand Sri Lanka, South Asia and the Indian Ocean opportunities for more efficient technology based skilled solutions to be discussed to re-position and invest pragmatically in an emerging region of the world. World is moving into emerging science revolution transforming with fifth generation technologies. We believe staff and students of Govt. Islamia College Civil Lines Lahore will have a great opportunity to learn from the network of renowned researchers and scientists and discuss, understand how the emerging Science will transform over the next few decades through the discussions and ideas presented at the ICEST-2020-GICCL. Therefore, it is very necessary that such conference must be carried on annually.

We are pleased to announce that we are launching Pakistan Journal of Emerging Science and Technologies (PJEST) and selected papers will be published in the Journal. We wish you all enjoy the conference and the wonderful city of Lahore. Please do not hesitate to ask our staff for any queries and assistance.

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ICEST-2020-GICCL

ICEST-2020-GICCL Conference Committees

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Keynote Conference Talks

Title of the talk: Plasma physics and its applications

Prof. Dr. Riaz Ahmad

Dean Faculty of Engineering, Dean Faculty of Mathematical and Physical Science,
Director Institute of Physics, Chairman Department of Physics GC University Lahore)

Title of the talk: Cu-Metal–Organic Framework Nanoparticles: Synthesis and Applications as Cancer Biomarker

Dr. Sheta. M. Sheta

Department of Inorganic Chemistry, National Research Centre, Egypt

Title of the talk: Photocatalysis for Environmental application

Prof. Dr. Said El.-Sheikh

Nanomaterials and Nanotechnology Department, Advanced Materials Division, Central Metallurgical R & D Institute (CMRDI), Cairo, Egypt

Title of the talk: Development of A Rapid Analytical Method for The Trace Determination of Inorganic/Organic Analytes

Prof. Dr. Muhammad Salman

Institute of Chemistry, University of the Punjab, Lahore

Title of the talk: Multifaceted Fourth State of Matter

Dr. Muhammad Jamil Alvi

Assistant professor Physics COMSATS

Title of the talk: Dynamics of A Moving Two-Level Atom Under the Influence of Intrinsic Decoherence

Dr. Syed Jamal Anwar

Department of Physics, Govt. Zamindar Postgraduate College Gujrat

Abstract of Accepted Papers

Cu-Metal–Organic Framework Nanoparticles: Synthesis and Applications as Cancer Biomarker

Dr. Sheta M. Sheta Department of Inorganic Chemistry, National Research Centre, Egypt

Abstract: The prostate-specific antigen (PSA) is a glycoprotein used as biomarker for diagnosing prostate cancer. Inventive of a diagnostic tool, new methodologies and approaches, for screening and quantification of tumor biomarkers have become a dominant challenge. In this work, a novel fast, facile, accurate, selective, and ultra-sensitivity optical approach for PSA is developed. Herein, a novel copper metal-organic framework nanospheres (Cu-MOF-NSs) was synthesized by a simple method followed by full characterization. A photoluminescence (PL) study carried out using Cu-MOF-NSs vs. PSA. The results revealed that, after the excitation (λ_{ex}) at 410 nm, the Cu-MOF-NSs showed a strong emission at 492 nm. Upon the addition of PSA, a remarkable quenching in the PL intensities. By using the Stern-Völmer equation, a linear relationship was attained over a wide PSA concentration range (1.0 -200 fg/mL) with correlation coefficient, 0.998. The detection limit (LOD) was 0.198 fg/mL and quantitation limit 0.60 fg/mL. Based on the present optical approach, the Cu-MOF-NSs can be used as a PSA-biosensor successfully in real serum and plasma samples. Furthermore, the selectivity of Cu-MOF-NSs towards PSA against different interfering analytes as well the quenching mechanism were well studied

Development of A Rapid Analytical Method for The Trace Determination of Inorganic/Organic Analytes

Muhammad Salman, Waheed-uz-Zaman, Umar Farooq, Amara Dar, Jamil Anwar

Institute of Chemistry, University of the Punjab, Lahore

Abstract: We developed a quantitative spot test method as a rapid analytical technique for the quantitative trace analysis of different analytes including Heavy metals, Anions and Organic compounds. The major benefits of using this technique are (i) small sample utilization (ii) Rapid analysis (iii) online Analysis (iv) elimination of expensive instrumentation. These benefits make these techniques especially important for developing countries. The present study includes the trace determination (ppb level) of Arsenic by spot test. A well-known old method for arsenic determination, Gudzeit Method, has been modified for quantitative determination of Arsenic in aqueous samples. Other applications of spot test performed by our team are also given.

Photocatalysis for Environmental application

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A

bstract: Industrial discharge of organic and heavy metals contaminants into water resources is becoming more serious that caused severe environmental damage. Therefore, the photocatalytic nanomaterials offer a new meaning of remediation and degradation on organic and heavy metals pollutants in the aqueous and waste-water of electroplating, production of steel and alloys, wood preservation, tannery and paint area. In this study, a new photocatalysts such as BiPO_4 , $\text{BiPO}_4/\text{Bi}_2\text{S}_3$, $\text{Bi}_2\text{S}_3/\text{BiOBr}$ were synthesized via facile and simple one pot synthesis. The produced materials were fully characterized using XRD, FE-SEM, EDS, TEM, UV-vis (DRS), XPS, Raman, FT-IR and PL. The synthesized heterostructures confirmed the self- assembly of BiPO_4 nanorods bundles as well as successful anchoring of Bi_2S_3 nanoflowers onto BiOBr nanosheets. The as-prepared BiPO_4 , was tested for aniline blue degradation. Whereas, $\text{BiPO}_4/\text{Bi}_2\text{S}_3$, and $\text{Bi}_2\text{S}_3/\text{BiOBr}$ hybrid structures exhibited significantly enhanced the photocatalytic performance for reduction of Cr (VI) to Cr (III) compared with pure BiPO_4 or BiOBr that confirmed by XPS analysis. The hybrid structure of $\text{Bi}_2\text{S}_3/\text{BiOBr}$ showed a superior rate constant 10 times higher than that for pure BiOBr . Moreover, the reduction efficiency of Cr (VI) solution containing 50 mg/L was improved up to 99.2% within 40 min by the addition of tartaric acid as hole scavenger. The kinetic study and reaction mechanisms were investigated. On the other hand, the reduction efficiency of different photocatalysts towards Cr (VI) removal from real sample was also examined. The produced materials can be reused after regeneration without a significant loss in photoreaction behavior after four recycle runs.

Keywords: Nano-photocatalysts; Photoreduction; Cr (VI), aniline blue, photodegradation, Kinetic; Mechanism; Real sample

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Dynamics of A Moving Two-Level Atom Under the Influence of Intrinsic Decoherence

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Abstract: A wide-ranging and captivating problematic QE that is designed with the assistance of QFI and VNE for affecting two level atomic system is offered in this study. It is designed mathematically the time-based development of the state vector of whole system under the affections of basic de-coherence for 2 level atoms. It is proved that the phase of an estimated stricture, basic de-coherence, and the atom gesticulation show a significant and protuberant role through the time development of the atom scheme. It is observed that here is a mono-tonic relative amid the atom QFI and QE in the absenteeism of atomic signal. It is presented that at revitalization time the limited supreme values of QFI decrease slowly. Sporadic performance of QFI is experiential in the attendance of atom motion, which becomes additional significant and extraordinary for 2 level atom schemes. Furthermore, the QFI and QE prove a conflicting answer in time development in the attendance of atomic motion. It is showed that the development of QE is additional liable to the inherent decoherence; a substantial alteration arises in the degree of QE when the inherent de-coherence limit upsurges. Basic de-coherence in the atomic field boundary curbs the non-classical affects of the atom schemes. Together the QE and QFI soak to their inferior levels for lengthier time scales in the attendance of basic de-coherence. For greater values of basic decoherence, the unexpected demise of QE is detected.

Power and Resource Allocation in Wireless Communication Network

Mohsin Nazir, Sana Sarwar, Aneeqa Sabah

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Abstract: The word wireless refers to the transfer of information over a space without needing wires, cables, or different electrical nodes. Wireless communication is one of the significant methods for transferring data or information to other devices. Wireless communication networks are considered as the tools for "anywhere-anytime connection". Present-day wireless communication methods are necessary to support a variety of higher-speed data, communication facilities, for its subscribers. As wireless systems remain connected through most features of our life, it is extremely controlled by limited resources of the network, in terms of (power and bandwidth). It is generally recognized that power is a severely limited resource and must be considered the consequences of this limitation. To improve performance for wireless systems, it is of excessive importance to the allocation of resources rapidly based on the modern network scenarios. Wireless strategies and technologies are enhancing progressively ubiquitous in the present world. The concentration of

this work is to optimize the performance of energy efficiency and the spectral efficiency of the wireless networks.

Index Terms: Wireless Communication, Wireless Network, Power Allocation, Resource Allocation

Threat and Vulnerability Detection System for Cloud Computing

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Abstract: Network data generates information that is created across the network and this information can be attacked by the cyber attacker. Cyber hackers and criminals always hit to steal critical, and meaningful information from user's private information. In cloud computing environment, a huge amount of information is processed through distributed computing and the information is always stored in a shared environment that can be attacked by cyber criminals. Data generation in the cloud computing is increasing rapidly and is huge in an amount called big data. This big data and cloud computing information are more suspected to be attacked. Although big data is very enhanced technology due to its characteristics like hug size, variety of data, and fast speed, it is very hard to detect cyber and traditional attacks with traditional detection techniques that are mostly used by the big data organizations. In this article, new threat Detection system that practices big data methodologies like big analysis Detects data and attacks on cloud computing in less time.

Sign Gesture Classification and Recognition using Machine Learning

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Abstract: Gesture classification is one of the most emerging domains of today's era. Among the major applications of gesture classification, sign gesture classification and recognition are considered as the core class of this domain. Keeping in mind the specifications of region based and language-based variations, development of standard sign gesture classifier is the main objective of current researchers. Many language translators and gesture classifiers had been utilized to capture this communication deficiency. Simulation and hardware prototype based different models have been implemented

using vision based, sensor based and hybrid classifiers. To overcome communication barrier between normal and effected community, gesture classification and recognition-based prototype has been presented in this paper. Main objective of this model is to classify sign gestures, made by deaf mute individuals and recognize the actual meaning of performed gestures. The algorithms used for training and testing of dataset are Support Vector Machine, K-Nearest Neighbor, Discriminant Analysis and Decision Tree based classification algorithms. With maximized efficiency for static alpha numeric gestures of American Sign Language, an average accuracy of 98% to 99% has been achieved in this work. Presented model is succeeded in achieving improved systematic efficiency with increased recognition accuracy.

Keywords- gesture classification, gesture recognition, machine learning, sign gesture classification, sign recognition

Parametric Estimation of Surgical Robotic Arm using Fuzzy Analysis.

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Abstract: In the modern era of innovation and technology, robotic based surgery is emerging as a revolutionized surgical method over conventional open surgical methods. Among various other robotic techniques in bio-medical applications, minimally invasive surgery (MIS) robotic arms are considered a viable choice owing to its small incisions, less rate of infection with better and rapid recovery, less blood loss and reduced post-surgical pain. For MIS robotic arm a flexible seven-degrees of freedom (7-DOF) pneumatically operated mechanism is widely used. It consists of three components including a surgeon console which is used by surgeon to control the robotic arm, a patient cart which contains three to four arms controlled by the surgeon from the console and a vision cart. Among these arms, one is used to hold surgical instruments like scissor and the other one controls the 3-D camera. Vision cart shows the 3-dimensional stereoscopic displays to surgeon on the console. In this work, a parametric estimation based on fuzzy analysis was performed for 7-DOF surgical robots. The effect of movement of joysticks attachment with surgeon console is studied on angle of the robotic arm. The movement of the joystick will change the angle of the robotic arm which will result in the movement of the robotic arm towards and away from the patient. The simulated and the MAMDANI calculated results show a difference of 0.3% which shows the accuracy of the calculations.

Keywords: Robotic Arms, Surgical instrument, Fuzzy Analysis, Parametric estimation.

Piezoelectric Analysis of Micro Sheets for Smart Phone Battery Charging

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Abstract: Cell phones are considered as a vital part of every day's life. Short battery timing is major problem most of cell phone users face nowadays. Particularly in remote areas charging option of cell phone are not available. Hence, there is need to enhance the battery of cell phone using various option. One of them is to use a thin piezo electric sheet on the screen that is directly connected to the battery. The sheet converts mechanical energy generated by tapping the screen into electrical energy. The output of the piezoelectric sheet is connected to the battery which will result in charging of the cell-phone. In this work, the effect of applied stress, strain, deflection and its effect on voltage and energy distribution has been analyzed using ANSYS software. The results depict that, more the stress applied on the film by tapping, more will be the generated voltage. Similarly, larger the screen deflection more will be the generated voltage by tapping.

Keywords: Piezo Electric, Cell phones, Stress, Fuzzy Analysis.

Simulation of Solid Gold Microneedles using Fuzzy Logic

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Abstract: Microneedles are MEMS based devices that have gained attention nowadays due to their adverse biomedical applications ranging from drug delivery to skin and eye treatment and now even malaria test is also been conducting using microneedles patch. Different materials like metal, polymer, and silicon etc. has been used to fabricate microneedles and tip diameter of different micron ranges has been made. In this research paper FLC simulation of gold microneedle tip has been done by varying time and voltage to understand how much sharp the tip is achieved which penetrates easily into the skin when fabricated. The results developed shows the Tip Diameter of

6.97 μ m has been calculated when time is of 10.8 minutes and voltage is of 22.4 volts. Thus, the error between the simulated and calculated value is 0.06% which confirms its accuracy.

Keywords: MEMS, Microneedles, Mamdani's model, Fuzzy logic, Fuzzy rules, Membership functions, MATLAB.

Geometrical and Microfluidic Analysis of AAO Membrane for Filtration

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Abstract: Fluid flow at the nano-scale is slightly different as compared to a larger scale. Anodic Aluminum Oxide (AAO) membranes, due to their biocompatibility and uniform size, have gathered great attention for applications in biotechnology for filtration of various fluids and viruses. In this paper, Fluent in ANSYS workbench is used to generate 3D geometry of the AAO membrane with hexagonal pores. Computational analysis for pressure and velocity distribution inside nanopores is performed. Predicted graph for influence of driving force on pressure and velocity variation inside membrane pore along with ANSYS fluent simulated results as charts for velocity, and pressure distribution within a single pore has been shown. The presented work provides predicted data for filtration applications of AAO membrane.

Keywords: ANSYS Fluent, AAO, Filtration, Nanopores

Modal Analysis of Hard Disk Drive Suspension by using ANSYS

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Abstract: Hard Disk drive is considered as an essential part of conventional and modern computer systems. A commonly used hard disk consist of four major components including a platter for storing data, spindle for spinning the data stored platter, a data reader and writer and an actuator. A suspension is attached for the proper movement of slider for rapid spinning of the spindle. With numerous vibration modes that results in multiple resonant frequency, the suspension for the hard disk drive

is considered as a vital part for proper spinning of the spindle. At frequency larger than resonant frequency, the suspensions vibrational mode results in a large radial displacement which is the reason for the origination of the tracking error in the Hard disk drive. So, the suspension has to be operated with frequencies of less than the resonant frequency. Similarly defects in the suspensions can be attributed to the machinery and assembly defects. In this work, a study is performed to analyze the mechanical stability and mode of vibration of suspension of HDD at less than resonance frequency. To perform the modal analysis the finite element-based software ANSYS has been used. The results depict that an excellent mechanical stability of the hard disk drive can be attained when the vibrational frequency is less than resonance frequency.

Keywords: ANSYS, HDD, Resonant frequency, suspension, Finite element-based

Fuzzy Simulation of Drug Delivery System through Valve-less Micropump

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Abstract: This research article presents Fuzzy estimation of fluidic parameters for valve-less micropump. The drug delivery system is incomplete without a micropump. The proposed Fuzzy controller micropump (MDDFC) consists of three inputs and two outputs. The investigation through Fuzzy simulation is carried out in order to evaluate the drug flow rate and drug speed. The simulation based on the real time conditions for fluidic parameters. Results are in good agreement with previous researches. The difference between simulated and calculated results is just 1 μ l/min for drug flow rate and 0.01 milliliter/sec for drug speed.

Keywords: Micropump, Micro Drug Delivery System, Fuzzy MATLAB

IoT Security Challenges and Privacy Issues in Healthcare Systems

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Abstract: In the current era, the demand for the Internet of Things (IoT) increased for different fields such as transportation, vehicle tracking, E-tags, healthcare management, smart cities, and smart agriculture management system, etc. As per growing trends for the usage of IoT in healthcare for the patient health monitoring like a heartbeat, mental health, sugar level, oxygen level in the air, blood pressure, and daily exercises for rehabilitation of earth quick affected persons. At the same time, this is useful for the elderly peoples for the medicine intake history or they may need to visit a doctor by using these IoT apps. Due to this life get easier for most peoples to give time to their professional duties. With this, the business opportunities for the medical industry and IoT vendors also increased. But with this easiness, it has created big security challenges and privacy issues for the patient information leakage. These issues are because of heterogeneous nature of IoT devices, low processing power, and less battery power storage constraints. In this chapter we will present novel approach to combat these security issues and privacy problems in this area.

Evaluation of Nuclear Reaction Cross Sections for the Production of ^{52}Mn for implementation in Nuclear medicine

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Abstract: Hybrid diagnostic techniques like Positron Emission Tomography (PET)/Magnetic Resonating Imaging (MRI) are field of interest and ^{52}Mn is among several other contenders' radionuclides of this sprint. Although Mn have other potential radionuclides including ^{51}Mn , ^{52g}Mn and ^{52m}Mn but ^{52}Mn possess most suitable attributes which brought it as promising participant for PET/MRI applications. Soaring applications of the radionuclides in both diagnostic and therapeutic demands high yield, socio economic and optimum production routes. Production cross section for ^{52}Mn have been reported by many groups via nuclear reactions namely $^{52}\text{Cr}(p, x)^{52}\text{Mn}$, $^{nat}\text{Cr}(p, x)^{52}\text{Mn}$, $^{50}\text{Cr}(a, x)^{52}\text{Mn}$, $^{54}\text{Fe}(d, x)^{52}\text{Mn}$, $^{nat}\text{Ni}(d, x)^{52}\text{Mn}$, and $^{59}\text{Co}(d, x)^{52}\text{Mn}$. Current study emphasizes the production via charge particle induce reactions on Cr and Ni. Experimental reported data were

rivalled to theoretic computations by means of EMPIRE-3.2, TALYS-1.9 and ALLICE-IPPE nuclear model codes. Using recommended excitation functions based on established techniques Thick Target Yield (TTY) were calculated. Radionuclidic impurities analysis were done for each case and optimum production route is proposed for future productions.

Keywords: ^{52}Mn , PET/MRI, Nuclear Model calculations, Thick Target Yield (TTY)

Analysis of Effect of Dye on the Efficiency of Advanced Generation Dye-Sensitized Solar Cells

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Abstract: Advanced generation solar cells are considered as an optimal choice for energy generation owing to its low cost, flexible and easy manufacturing. Among various types of advanced generation solar cell, dye-sensitized solar cells have gained gigantic attention due to its better efficiency and low cost and easy manufacturing. Dye-sensitized solar cells use dye as a charge generation source. When light falls on the dye an electron hole pair. Commonly used dye is Ruthenium. The prepared anode (Usually metal oxide) is dipped in a solution of ruthenium dye and then the cell is stacked. Dye plays an important role in the overall efficiency of the cell. In this work, a parametric estimation using MATLAB Fuzzy analysis on the concentration of ruthenium dye and time for which the anode is dipped in the dye is analyzed and its effect on the overall power conversion efficiency of the cell is studied. The result depicts an increase in power conversion efficiency with increase in the concentration for dye. However more the time of dipping the anode is dye reduces the efficiency which shows its inverse relation with power conversion efficiency. Less than 1% error between the simulation and calculated results of Fuzzy analysis shows the accuracy of the system.

Keywords: Dye sensitized solar cell, Fuzzy analysis, Dye, Ruthenium.

Multifunctional Inorganic nanoparticles for cancer theranostic applications

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bstract: Cancer, uncontrolled growth of anomalous cells in body, is a stern intimidating sickness which has been beating numerous significant breathes in recent years. The tumorous lump, mass of tissue, thickening of anomalous cells, is started when long-standing cells do not expire and nurture in irrepressible behavior.

Appropriate analysis at initial phase can upsurge the existence rate. Consequently, experts and medical scientists are putting their energies for early exposure for early tumorous cells and appropriate dealing to recover the lives of cancer patients. Nanotechnology has been applying broadly in this field, predominantly nanotheranostics for the progression of actual methods for analytical treatment. Multifunctional inorganic nanoparticles, merging noninvasively molecular imaging investigation with therapeutic elements, have been donating meaningfully to MRI phototherapy for cancerous cells. MRI of nanoparticles are effectively applied as MRI contrast agents and thrilled photosynthesizers are able to yield cytotoxic reactive oxygen classes (ROS), like singlet oxygen ($^1\text{O}_2$) which can oxidize cellular macromolecules leading to tumorous cell ablation. This study will present some magnetic and titanium based multifunctional inorganic nanoparticles for positive dissimilarity agent in MRI and phototherapy applications of cancers.

Sp²-bonded BN deposited on Si by RF sputtering at room temperature

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Abstract: Boron nitride films are full-grown on Si substrates by using RF sputtering technique. It is done by means of hexagonal boron nitride mark at 25 C°. The depth of film in surface profilometer, elemental configuration by X-ray photoelectron spectroscopy. It has been studied with by RS and SEM. The full-grown films are of sp²-bonded boron nitride and confirmed the supposition that growing rate differs as the growing mode evolution arises. Electrical characteristics are particularized through I-V characteristics and C-V summarizing has been considered on the basis of metal-insulator-semiconductor (MIS) scheme. Failure was assessed to be larger than 10 Mega Volt per centimeter whereas dielectric constant was larger than 3 for full-grown films. This investigation will sustenance to manufacture boron nitride at small temperature and increase its usage in microelectronics.