



## GOKULEPITOME 2017

# **Publication & Presented By Members**



**Prof. S V Gopalkrishna M.Pharm, Ph.D** Principal & professor Gokul College of Pharmacy

1. Title of paper: Antiarthritic activity of a polyherbal formulation against Freund's complete adjuvant induced arthritis in Female Wistar rats in Journal of Basic and Clinical Pharmacy, Vol. 6 | Issue 3 | June-August 2015

Abstract: To formulate a polyherbal formulation and evaluate its antiarthritic activity against Freund's complete adjuvant induced arthritis in Female Wistar rats. Materials and Methods: Glycosmis pentaphylla, Tridax procumbens, and Mangifera indica are well-known plants available throughout India and they are commonly used for the treatment of various diseases including arthritis. polyherbal formulation The was formulated using the ethanol extracts of the stem bark of G. pentaphylla, whole plant of T. procumbens, and leaves of M. indica. The polyherbal formulation contains the ethanol extracts of G.pentaphylla, T.procumbens, and M.indica in the ratio of 2:2:1. The quality of the finished product was evaluated as per the World Health Organization's guidelines for the quality control of herbal materials. Arthritis was induced in female Wistar rats using Freund's complete adjuvant(FCA), and the antiarthritic effect of polyherbal formulation was studied at doses of 250 and 500 mg/kg. The effects were compared with those of indomethacin (10 mg/kg). At the end of the study, blood samples were collected for biochemical and hematological analysis. The radiological examination was carried out before terminating the study

Title of 2. paper: "Simple UV Spectrophotometric estimation of methocarbamol by **Co-solubilisation** technique" by Vijayasree P, Devika G S, Sravani M, Gopal Krishna S V, Research J. Pharm. and Technology, 7(8): (8)2014 P837-839; ISSN 0974-3618, ISSN,e- 0974-360X, Impact factor: 0.18

Abstract: Pharmaceutical analysis occupied a pivotal role in determination of drugs in formulation and its combinations. The complexity of problems in existing methods in terms of achieving the selectivity, speed, cost, simplicity, sensitivity, precision and accuracy has been replaced by new methods of analysis. The present work attempts to minimize the time and cost consumption by simple spectrophotometric method by co-solubilization technique based on the use of acetone and 0.1N sodium hydroxide solution used in the ratio of 1:9 as a solvent system. Here acetone acts as a co solvent. The drug has an absorption maximum at 267 nm and obeys Beer-Lambert's law in the concentration range of 5- 25 µg/ml with correlation coefficient value of 0.999. The apparent molar absorptivity is 9.215×10 3 L mol-1cm-1. The slope and intercept of the regression equation are 3.3 ×10-2 and 5.4x10-2 respectively. The mean recovery obtained for Methocarbamol was found to be 100.56%. The optimum experimental parameters for the method have been studied. The validity of the elucidated method was assessed according to International Conference on Harmonization guidelines. Statistical analysis of the results has been carried out revealing high accuracy and good precision. The proposed method was successfully applied to

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the determination of methocarbamol in bulk and pharmaceutical dosage forms.



Mr.R.Srinivas Rao, M.Tech Asst.Professor of Electrical & Electronics Engineering. Gokul Institute of Technology and Sciences Bobbili.

1. Title of Paper: "The Control of Decreased-Rating Automatic Voltage Restorer with A Battery Energy Storage System" in International Journal of Innovative Technologies, ISSN 2321-8665 Vol.05, Issue.01, January-2017, Pages: 0134-0139

**Abstract:**Dynamic voltage restorers (DVRs) are analyzed with particular focus on a new method used to minimize the rating of the voltage source converter (VSC) used in DVR. A new control technique is proposed to control the capacitorsupported DVR. The control of a DVR is demonstrated with a reduced-rating VSC. The reference load voltage is estimated using the unit vectors. The synchronous reference frame theory is used for the conversion of voltages from rotating vectors to the stationary frame. The compensation of the voltage sag, swell, and harmonics is demonstrated using a reducedrating DVR.

2. Title of Paper: "Modeling and Simulation of SRF and P-Q based Control DSTATCOM" in International Journal for Scientific Research & Development, Vol. 2, and Issue 06, 2014 | ISSN (online): 2321-0613

**Abstract:** With the widespread use of harmonic generating devices, the control of harmonic currents to maintain a high level of power quality is becoming increasingly important. An effective

way for harmonic suppression is the harmonic compensation by using active power filter. This paper presents a comprehensive survey of DSTATCOM control strategies put forward recently. It is aimed at providing a broad perspective on the status of DSTATCOM control methods to researchers and application engineers dealing with harmonic suppression issues. Many control techniques have been designed, developed, and realized for active filters in recent years. This paper presents different types of Synchronous reference frame methods for real time generation of compensating current for harmonic mitigation and reactive power compensation. All the techniques are analyzed mathematically and simulation results are obtained which are being compared in terms of its compensation performance with different parameters under steady state condition. The three techniques analyzed are the Synchronous Reference Frame Theory (SRF), SRF theory without synchronizing circuit like phase lock loop (PLL) also called instantaneous current component theory and finally modified SRF theory. Simulation results are obtained under sinusoidal balanced voltage source balanced load condition. The comparison and effectiveness of all the methods is based on the theoretical analysis and simulation results obtained with MATLAB employing a three phase three wire DSTATCOM test system.



#### Mr.B,SH,Suresh Kumar, M.Tech, (Ph.D) Asst.Professor of Electrical &

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1. Title Of Paper : "Grid Connected PV-FC Hybrid System And Power Management Control" in International

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Journal of Advance Research In Science And Engineering, IJARSE, Vol. No.3, Issue No.11, November 2014, ISSN-2319-8354(E).pp:81-96.

Abstract: This paper presents a method to operate a grid connected hybrid system. The hybrid system composed of a Photovoltaic (PV) array and a Proton exchange membrane fuel cell (PEMFC) is considered. Two operation modes, the unit-power control (UPC) mode and the feeder-flow control (FFC) mode, can be applied to the hybrid system. In the UPC mode, variations of load demand are compensated by the main grid because the hybrid source output is regulated to reference power. Renewable energy is currently widely used. One of these resources is solar energy. The photovoltaic (PV) array normally uses a maximum power point tracking (MPPT) technique to continuously deliver the highest power to the load when there are variations in irradiation and temperature. The disadvantage of PV energy is that the PV output power depends on weather conditions and cell temperature, making it an uncontrollable source. Furthermore, it is not available during the night In the FFC mode, the feeder flow is regulated to a constant, the extra load demand is picked up by the hybrid source, and, hence, the feeder reference power must be known. she system can maximize the generated power when load is heavy and minimizes the load shedding area. When load is light, the UPC mode is selected and, thus, the hybrid source works more stably. The changes in operating mode only occur when the load demand is at the boundary of mode change; otherwise, the operating mode is either UPC mode or FFC mode. Besides, the variation of hybrid source reference power is eliminated by means of hysteresis. The proposed operating strategy with a flexible operation mode change always operates the PV array at maximum output power and the PEMFC in its high efficiency performance band, thus improving the performance of system operation, enhancing system stability, and decreasing the number of operating mode changes.in the MATLAB simulink environment.

 Title of Paper: "Single Phase Grid Connected Nine Level Inverter" in International Journal & Magazine of Engineering, Technology, Management and Research, Volume No: 1(2014), Issue No: 12, December 2014, ISSN No: 2348-4845, pp: 623-629.

Abstract: A single-phase grid-connected inverter is usually used for residential or lowpower applications of power ranges that are less than 10 kW. Types of single-phase grid-connected inverters have been investigated. The three-level inverter can satisfy specifications through its very high switching, but it could also unfortunately increase switching losses, acoustic noise, and level of interference to other equipment.Improving its output waveform reduces its harmonic content and, hence also the size of the filter used and the level of electromagnetic interference (EMI) generated by the inverter's switching operation. In this paper a single-phase seven-level inverter for gridconnected photovoltaic systems, with a novel pulse width-modulated (PWM) control scheme is designed.

Three reference signals that are identical to each other with an offset that is equivalent to the amplitude of the triangular carrier signal were used to generate the PWM signals. The inverter is capable of producing seven levels of output-voltage levels (Vdc, 2Vdc/3, Vdc/3, 0, -Vdc/3, -2Vdc/3, -Vdc) from the dc supply voltage. Multilevel inverters offer improved output waveforms and lower THD. The behavior of the proposed multilevel inverter was analyzed in detail by using MATLAB. The results obtained from 7-level inverter are compared with 9 levels by using a separate control.

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3. Title Of Paper: "Design and Simulation of Seven and Nine Level Diode Clamped Inverter" in International Journal of Advance Technology and Innovative Research, IJATIR, Vol.08,Issue.12, September-2016, ISSN 2348–2370, Pages:2218-2223

Abstract: This paper displays a detailed harmonic analysis of seven and nine level multilevel inverter. Utilization of traditional two level pulse width modulation (PWM) inverter provide less distorted current and voltage however at expense of higher switching losses due to high switching frequency. Multilevel inverter is developing as a suitable option for high power, medium voltage application. The most common multilevel inverter topologies are the neutral-point- clamped inverter (NPC), flying capacitor inverter (FC), and cascaded H-bridge inverter (CHB). This work is to analyze the performance of Diode clamped multilevel inverter with various multi carrier PWM control techniques. Sinusoidal PWM technique is used to control the switches of the inverter. The reduction in harmonics can be validated with %THD value get from the simulation results carried in MATLAB/SIMULINK.



Mr.P.Pavan Kumar, M.Tech Asst.Professor Dept. of ECE Gokul Institute of Technology and Sciences

1. Title of Paper: "A Novel Arm Based accident Preventive System For Automobiles" in International Journal of Intelligence Research, IJOIR,Volume 8, July - December 2016, (e) 0976-9859 (p) 0976-985x, pages : 73-77.

Abstract: Present world is being controlled by technologies and now a day's so many useful technologies are coming out to make our life style more comfort, luxurious and secure. Especially in automobiles many technologies are being implemented to provide more safety for users. This project is best application for avoiding collisions in automobiles. Based on requirements of modern vehicle, in- vehicle Controller Area Network (CAN) architecture has been implemented. In order to reduce point to point wiring harness in vehicle automation, CAN is suggested as a means for data communication within the vehicle environment. The benefits of CAN bus based network over traditional point to point schemes will offer increased flexibility and expandability for future technology insertions. This paper describes system which uses sensors to measure various parameters of the car like speed, distance from the other car, presence of alcohol in car and accidental change of lane and sends a warning signal to the driver if any of the parameter goes out of range to avoid accidents. The aim of this project is to avoid collision by detecting obstacles, vehicles using obstacle sensors (IR or Ultrasonic) and controlling the vehicle accordingly by using CAN protocol.



Mr.CH. VINODH KUMAR, M.Tech Asst.Professor Dept. of CIVIL Gokul Institute of Technology and Sciences

1. Title of Paper: "An Experimental Study on GEO-POLYMER Concrete With Fly Ash and METAKAOLIN as Source Materials" in International Journal and Magazine of Engineering Technology

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*Management & Research, volume No: 3, Issue: 10, Novembber 2016.* 

**Abstract:** Concrete is probably the most extensively used construction material in the world. The main ingredient in the conventional concrete is Portland cement. The amount of cement production emits approximately equal amount of carbon dioxide into the atmosphere. Cement production is consuming significant amount of natural resources. That has brought pressures to reduce cement consumption by the use of supplementary materials. Availability of mineral admixtures marked opening of a new era for designing concrete mix of higher and higher strength. GROUND GRANULATED BLAST FURNACE SLAG (GGBS) is a new mineral admixture, whose potential is not fully utilized. Moreover only limited studies have been carried out in India on the use of slag for the development of high strength concrete with addition of steel fibres. The study focuses on the flexural strength performance of the blended concrete containing 20% percentage of GGBS and different %s of steel fibres as a partial replacement of OPC. The cement in concrete is replaced accordingly with the percentage of 20% by weight of GGBS and 1%, 2%, 3% by weight of steel fiber. Concrete Samples are tested at the age of 7 and 28 days of curing. Finally, the strength performance of slag blended fiber reinforced concrete is compared with the performance of control mix. From the experimental investigations, it has been observed that, the optimum replacement of 20% of Ground Granulated Blast Furnace Slag to cement and steel fiber of 2% with respect to the weight of cement showed improved better results in flexural strength and proved to be optimum proportion when compared with other proportions with respect to strength and economy.

#### 2. Title of Paper: "Effect Of External Pre stressing On Steel Arches" in International Journal and Magazine of Engineering Technology, Management & Research, volume No: 3, Issue:10, November 2016

**Abstract:** Arch bridges are amongst the oldest man made bridges. It is a most efficient structural form that is both striking in appearance and aesthetic in character. An arch is a curved structure that is usually made of stone, brick, concrete, or, more recently, steel. Its purpose is to support or strengthen a building.

Pre stress is the method of inducing a stress in a structural element to enhance its loading capacity. Pre stress is usually induced in a material that has a high compressive strength in relation to its tensile strength, so that the member is kept in compression and the loading capacity is maximized.

In this view, considered two hinged arch with external pre stressing to increase the load carrying capacity with different tendon configuration of different spans. Then analyzed all the mentioned arches with four different tendon configurations for spans of 30, 60, 90 and 120m.

From the study, it was observed that applying external pre stressing force to the arches shown significant variation in the bending moment and deflection for all the considered spans.

3. Title of Paper: "An experimental investigation on performance of ternary Concrete in strength and durability aspects" in International Journal of Academic Research, Vol.2, Issue-1(4), January-March, 2015, ISSN: 2348-7666.

**Abtract:** The Enormous growth in the urbanization and industrialization demanding the environment friendly and high performance

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construction materials it also requires more durability to ensure the longer lifespan of the structures. The necessity of these materials made the civil engineers to carry out a research on preparation of strong construction materials. Concrete is one of the rigid and effective construction materials in the presents scenario. The adequate improvement in strength of the concrete includes addition of some secondary cementatious compoundssuch as Fly Ash, Ground Granulated Blast Furnace Slag (GGBS), natural Pozzolans and silica fume. The advances in concrete technology and engineering have not been adequately captured in the specification of concrete. Usage is often curtailed because of prescriptive concerns or historical comparisons about how such materials should perform.in addition **SCMs** (Secondary Cementatious Compounds) can exhibit significant variation in chemical and physical properties both within a given source and more commonly between sources. Users need specific Guidance to assist defining the performance them in of requirements for a concrete application and the proportions of selection of optimal the cementitious materials needed to produce the required durable concrete. The selection process is complicated by the fact that blended cements currently available in are selected regions(ACI2007).Both port land and blended cements have already been optimized by the manufacturer to provide specific properties(i.e. setting time, shrinkage, strength gain). The addition of SCMs (as binary, ternary or even more complex mixtures) can alter these properties, and hence, has the potential to impact the overall performance of the concrete. Silica fume and Fly Ash are recognized as desirable cementations ingredients of concrete and as a valuable cement replacement material that imparts some specific qualities to the composite cement concrete. The present study gives details on strength and durability characteristics of ternary concrete.

Ternary means three different cementitious components in the mix, in general includes Portland cement and other two cementitious materials, reclaimed industrial byproducts like silica fume and fly ash. The proposed study on produced ternary concrete by partial replacement of cement by 5% both fly ash and silica fume in various combinations. In the present work an attempt has been made to study the strength properties of ternary concrete in compression, tension and flexure and also durability aspects of ternary blended concrete. In durability studies 5% concentration of acids are used. In the investigation, M20 Grade concrete mix is designed with different percentages of cementitious materials (5%. 7.5%, 10% & 12.5%) and tests were conducted for compressive strength, split tensile strength and modulus of rupture strengths at 7, 28 and 56 days. Durability studies were carried in the same combination of ternary concrete (OPC, silica fume and fly ash) immersed in Sulphuric acid (H2SO4) and Hydrochloric acid (HCl ), Potassium Sulphide (K2SO4) solutions and Sea water. The results experimentation obtained from the are compared with the results of reference mix made with regular cement. Test results indicate that the replacement of cement by 10% had attained a maximum strength in M25 Grade concrete. The results obtained thus are encouraging for partial replacement.

GOKUL ALUMNI MEET -2017 CONDUCTED ON 12-02-2017 AT GOKUL DEGREE COLLEGE HYDERABAD.



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### INDUSTRIAL VISIT TO JINDAL STAINLESS LIMITED ON 12-02-2017







MEDICAL HEALTH CAMP AT TERLAM ON 11-02-2017

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