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# Synthesis of 1,3-dihydro-1,3-dioxo-2*H*-isoindole-2-acetic acid derivatives *via* acid-amine coupling

Urvashi Tarane, Arnet Maria Antony, Ravindra V. Singh

## Abstract

1,3-Dihydro-1,3-dioxo-2*H*-isoindole-2-acetic acid (also known as phthaloyl amino acid derivatives formed by *N*-phthaloylation of amino acid) are of great interest as they possess many biological activities which include hypolipidemic, anticancer, anti-inflammatory and immuno-modulatory properties. A series of phthaloyl amino acid analogs were synthesized by condensation of phthalic anhydride with glycine followed by acid-amine coupling with various amines in the presence of HATU and DIPEA. The synthesized compounds were characterized using <sup>1</sup>H NMR, IR and Mass spectroscopy.

**Key words:** 1,3-dihydro-1,3-dioxo-2*H*-isoindole-2-acetic acid, phthaloyl amino acid, acid-amine coupling, HATU and DIPEA.

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# Study of Accumulation of Heavy Metal Contamination and its Biochemical Effects on Aquatic Plant *Pistia stratiotes* L.

Priyadarshini Pillai

## Abstract

Toxic metal contamination of soil, aqueous waste water streams and groundwater causes major environmental and human health problems. The most commonly used methods for dealing with heavy metal pollution are still extremely costly. Use of aquatic plants to extract, sequester and/or detoxify pollutants is a new and powerful technique for environmental clean up. Plants are ideal agents for soil and water remediation because of their unique genetic, biochemical and physiological properties. The aim of this work is to evaluate the potential of free floating duck weed *Pistia stratiotes* to remove heavy metals from waste water and to study the biochemical effect of heavy metals on *Pistia stratiotes*. One-month laboratory experiments have been conducted to mark the percentage removal of different heavy metals at different concentrations and the effect of heavy metals on nitrate reductase activity, total chlorophyll and protein contents of the plant. Approximately 93% of total heavy metal induced toxicity appears resulting in the reduced activities of nitrate reductase, total chlorophyll and protein content of the plant. The results recommended the use of *Pistia stratiotes* to ameliorate the wastewater contaminated with heavy metals.

**Key words:** Heavy metals, waste water, Biochemical, aquatic macrophyte, remediation.

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# Synthesis and Characterisation of bis-Chalcone Polymer-Silver Nanocomposites

Shweta Sooranagimath and T.S. Perundevis

## Abstract

The present study explores the synthesis of Polymer-Silver Nanocomposites in view of their increasing applications in various fields due to their outstanding properties. Polymer-Silver Nanocomposites were synthesized using bischalcone polymers with  $\text{AgNO}_3$  as metal precursor and DMF as solvent. Formation of Polymer-Metal Nanocomposites was confirmed by IR spectroscopy, UV spectroscopy, X-ray Diffraction (XRD) analysis. In addition, the surface morphology of the nanocomposites was recorded using Scanning Electron Microscopy (SEM) .

**Key words:** Chalcone, polymer, silver nanocomposite

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# Tourism Planning and Development for Sustainability in Western Odisha Tourism Circuit

Shwetasaibal Samanta Sahoo

## Abstract

In striving to prevent disorderly tourism development, in order to successfully overcome the daily changes that occur in turbulent surrounding, planning of sustainable tourism development occurs as the only way to do it successfully. So, sustainable development refers to the use without exploitation of natural, cultural and all other tourist resources from the current generation, it means to preserve them for future use by future generations. Since the development of tourism in a certain area largely dependent on natural and anthropogenic attractiveness which are located in the surrounding, the practicing of sustainable development gets more and more important. In case these resources to be destroyed or degraded, the attractiveness of the destination is reduced as well, but also leads into question for development of tourism in this region, because potential tourists are interested in visiting attractive and clean destinations which offer services with high quality. However, the environment that has no attributes of a quality environment is not only unattractive to tourists, but in that environment also domestic population do not feel comfortable. Planning of sustainable tourism development actually concerns planning of preserve the environment, and it encompasses a variety of research and analysis before making a decision on any determination of the direction of development. All these activities are done in order not to allow intensive exploitation of resources in some specific areas, without care about the preservation of resources. The study is undertaken on Western Odisha, a developing tourism destination region of Odisha state. This paper explores the main components of tourism planning and development processes, various planning approaches and the strategies the tourism planners and investors can use for sustainable tourism planning and development in Western Odisha.

**Key words:** Tourism Planning, Sustainability, Destination, Development, Western Odisha

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# Mavilan Community in Kasaragod District of Kerala: A Socio-Economic Study

N. Karunakaran and Nisha. M

## Abstract

The scheduled tribes in India are generally considered as 'Adivasis' meaning indigenous people and are original inhabitants. Psychologically, they often experienced passive indifference that takes exclusion from educational opportunities, social participation and access to their own land. All tribal communities are not alike due to different historical and social conditions. The Mavilan community are scheduled tribes of Kerala and inhabit the hill areas of Kannur and Kasaragod district and a number of opinions existing regarding their origin. The culture, rituals and beliefs of them are unique and possess an ethnic identity of their own. Their major settlements are seen in Chengala, Puthigae, Balal, Kallar, and Panathady areas of Kasaragod district. The government provides various welfare schemes and programmes for the development of this community, and the study focused on the socio-economic and health status and revealed the poor economic and social conditions of people.

**Key words:** Mavilan community, socio-economic status, scheduled tribe, Kasaragod.

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# Vidhana Soudha in The Making – The Role of Kengal Hanumanthaiah

Nalini Sekaran and V. Kantharaju

## Abstract

Monuments of Karnataka represent one of the most outstanding facets of the multi-faceted culture of the State. Bengaluru, the capital city of Karnataka has innumerable monuments which bear testimony to its rich cultural heritage. These monuments have become an inspiration for the future generations. One such monument is the State Legislative Assembly, Vidhana Soudha, conceptualised and constructed by Kengal Hanumanthaiah, the second Chief Minister of Karnataka. The Vidhana Soudha is a dressed stone building with many architectural features. This building is an important landmark in the city of Bengaluru.

This paper makes an attempt to understand and appreciate the efforts made by Kengal Hanumanthaiah in erecting Vidhana Soudha, one of the greatest architectural marvels of not only Karnataka but of India .

**Key words:** Cultural heritage, Monuments, multi-faceted, State Legislative Assembly Vidhana Soudha.

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# “Quarrels Deep Within the Flesh”: Trauma of Remembering in David Chariandy’s *Soucouyant*

Sathya Pramode and Prakrithi. H. N

## Abstract

Identified as a contemporary field of study, Trauma Studies has gained momentum as a purposive discourse. This research paper attempts to resolve the questions regarding the role of memory in understanding the traumatic material embedded in the text. David Chariandy’s novel *Soucouyant* has been subject to close perusal in this study. The analysis of the chosen text has revealed the possibility of considering multiple approaches for the purpose of locating trauma.

**Key words:** Trauma, Trauma Studies, Trauma Narratives, Post Traumatic Stress Disorder, Memory

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# Optimization of Farm Resources Used in Sesame Production in Jigawa State of Nigeria

Sadiq M.S., Singh I.P., Lawal M. and Ahmad M.M

## Abstract

The present research empirically determined the allocative efficiency of productive resources used in the production of sesame in Jigawa State of Nigeria using undated/cross-sectional data collected from a total of 99 active farmers selected using multi-stage sampling design. The instrument for the data collection was structured questionnaires complemented with interview schedules. The collected data were analyzed using pseudo-profit function and inferential statistic. The empirical results showed that the farmers were not technically and allocatively efficient.

Despite that sesame production in the studied area was found profitable. However, scope still exists for the farmers to improve their economic efficiency in order to optimize profit in the production of sesame in the studied area. Therefore, the study recommended improvement in the farmers' technical know-how for enhanced efficiency and also the farmers should be encouraged to form viable co-operative association in the studied area in order to maximize the pecuniary economic advantages.

**Key words:** Optimization, Farm resources, Sesame, Jigawa State, Nigeria

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# Impact of Gujarat Election Result on Sensex Stocks

R.C. Mugunthan and Sharath Prabhu

## Abstract

Stock market is sensitive. It discounts every inside and outside information. Hence it started reacting to the results of the Gujarat election results in December 2017. The behaviour of the stockmarket during the election result has motivated the researchers to undertake a research to test whether the reaction or impact is significant or not. We have studied the behaviour of Sensex stocks as they are the representative of the entire stock market in India. It was found in the study that there is no significant impact on the behaviour of stock prices due to the results of Gujarat election.

**Key words:** Abnormal returns, election, result, stock market

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# Investigation of Seasonal Anomalies (Month Effect) in the Selected Indian Commodity Futures

P A Ayyappa and Mahesh Kumar. K. R.

## Abstract

Commodity futures markets in India has occupied imperative position in terms of trading volumes and turnover. In this research paper we attempt to investigate if there is any significant Seasonal Anomalies Copper, Crude and Gold Futures prices which are actively traded in Multi Commodity Exchange, using daily data covering a period from 2<sup>nd</sup> May 2005 to 31<sup>st</sup> July 2017.

GARCH models are very successful at capturing the volatility clustering effect of financial markets where daily price returns are highly volatile and they usually outperform the ARIMA type models in capturing asymmetric effects and volatility clustering. We have deployed EGARCH model which is more accurate in measuring seasonal abnormalities. These finding may help the speculators in formulating trading strategies and investors in decision-making process.

We have observed that there are no seasonal anomalies in Copper futures. EGARCH (1 1) estimates indicated that there were significant relationship between the month-effect and Crude futures specifically in February and June month during the study period. In Gold futures contract seasonal anomalies was observed for all the month except May and July .The effects of January, February, March, June, August, September and November month were seems to be positive on gold futures whereas effects of April, October & December were seems to be Negative.

**Key words:** Commodity futures, Copper, Crude and Gold Futures GARCH, EGARCH, Seasonal Anomalies

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