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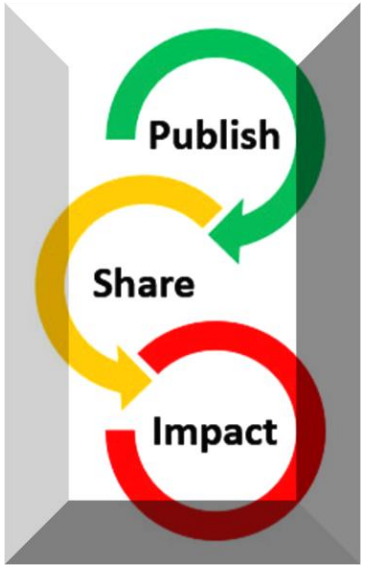

CRITERION- 3

RESEARCH PUBLICATION AND AWARDS

3.3 RESEARCH PUBLICATION AND AWARDS

3.3.1	TOTAL NUMBER OF RESEARCH PAPERS PUBLISHED PER TEACHER IN THE JOURNALS NOTIFIED ON UGC CARE LIST DURING LAST FIVE YEARS				
3.3.1.1	NUMBER OF RESEARCH PAPERS PUBLISHED PER TEACHER IN THE JOURNALS NOTIFIED ON UGC CARE LIST DURING LAST FIVE YEARS				
	2018-19	2019-20	2020-21	2021-22	2022-23
	21	10	11	11	7

DEPARTMENT		NAME OF FACULTY	TOTAL NUMBER OF PUBLICATION IN UGC CARE LIST 2018-2023
BCOM		DR SANEESH C, HUSITHA PRASANTH, K SOORAJ MENON	5
BOTANY		DR V K SREENIVAS, DR AKHILA	13
CHEMISTRY		DR R MANU, DR NISHA NANDAKUMAR, DR RAGI K	15
ECONOMICS		DR DHANYA S, GAYATHRI SOMASEKHARAN	4
HISTORY		DR NOORJAHAN MAJEED	2
PHYSICS		DR SUSHEEL RAHUL, DR SOUMYA K	9
LANGUAGE	MALAYALAM	DR ASHA MOL S	1
	HINDI	DR P GEETHA	7
	SANSKRIT	DR DHANYA M M	2
LIBRARY		DR JYOTHI G NAIR	2
TOTAL			**60**

2018-19

DEPARTMENT		NAME OF FACULTY	NUMBER OF PUBLICATION IN UGC CARE LIST
BCOM		DR SANEESH C, HUSITHA PRASANTH, K SOORAJ MENON	3
BOTANY		DR V K SREENIVAS, DR AKHILA	8
CHEMISTRY		DR R MANU, DR NISHA NANDAKUMAR, DR RAGI K	2
ECONOMICS		DR DHANYA S, GAYATHRI SOMASEKHARAN	
HISTORY		DR NOORJAHAN MAJEED	1
MATHEMATICS			
PHYSICS		DR SUSHEEL RAHUL, DR SOUMYA K	2
LANGUAGE	MALAYALAM	DR ASHA MOL S	
	HINDI	DR P GEETHA	1
	SANSKRIT	DR DHANYA M M	2
LIBRARY		DR JYOTHI G NAIR	2
TOTAL			**21**

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Subscribers Satisfaction on Newspaper Agency Service in Kerala

Dr. Sanesh C.[1,#] & **Dr. B. Johnson** [2]
[1]Assistant Professor & Head, Sri Vyasa N.S.S College, Wadakkanchery, Thrissur, Kerala, India.
[2]Professor & Head, Department of Commerce and Management Studies, University of Calicut, Kerala, India.

[#]corresponding author.
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Asian Review of Social Sciences

Home / Archives /
Vol. 8 No. S1 (2019): Special Issue February 2019 /
Articles

Growth and Seasonality of Tourist Arrivals at Athirappilly-Vazhachal Ecotourism Destination

https://doi.org/10.51983/arss-2019.8.S1.1498

K. Sooraj Menon
Guest Faculty, Department of Commerce, Sree Vyasa N.S.S. College, Thrissur, Kerala, India

DOI: https://doi.org/10.51983/arss-2019.8.S1.1498

ISSN: 2249-6319 (Print); 2583-8091 (Online)

Keywords: Tourist Arrivals, Ecotourism Management, Seasonality, Athirappilly-Vazhachal

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Asian Review of Social Sciences

Home / Archives /
Vol. 8 No. S1 (2019): Special Issue February 2019 /
Articles

Community Participation in Ecotourism Management with Special Reference to Athirappilly and Vazhachal

https://doi.org/10.51983/arss-2019.8.S1.2777

K. Sooraj Menon
Department of Commerce, Sree Vyasa N.S.S. College, Thrissur, Kerala, India

ISSN: 2249-6319 (Print); 2583-8091 (Online)

DOI: https://doi.org/10.51983/arss-2019.8.S1.2777

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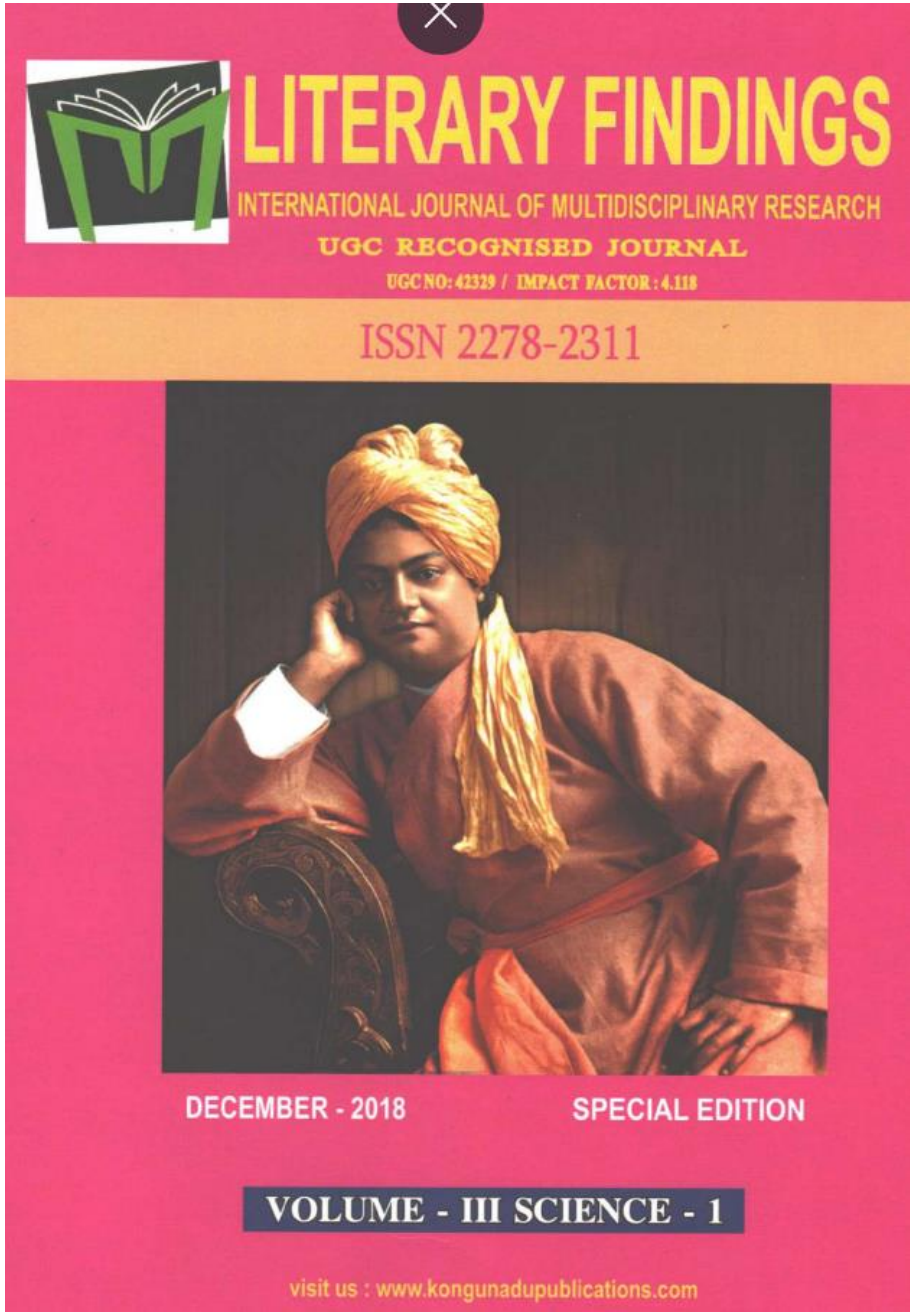

SEED MORPHO CHARACTERS AND BIOCHEMICAL EVALUATION OF WILD SPECIES OF *SESAMUM* L. (PEDALIACEAE)

AKHILA H Assistant.Professor in Botany
Sri Vyasa NSS College,Wadakkanchery,Thrissur
S SUHARA BEEVY,Department of Botany,
University of Kerala, Kariavattom, TVPM

Introduction

The genus *Sesamum* belonging to the family Pedaliaceae is one of the oil crop, cultivated in Asia since ancient times. The genus comprises of 36 species (Kobayashi, 1981) and in India it is represented by 7 species (Nayar and Mehra, 1970). *Sesamum* consists of both cultivated and wild species and a great deal of diversity was observed in the genus in India (Arora and Riley, 1994). Seed morphological characters have been considered as a supplementary tool in assessing systematic relationships. According to Aniszewski *et al.* (2001), seed morphology is an evolutionary trait that contributes to genetic diversity. The cultivated sesame seed is a good source of nutrients like iron, phosphorous, magnesium, calcium, manganese, copper and zinc, besides its high oil and protein contents. The wild species *S. malabaricum*, *S. radiatum*, *S. angustifolium* and *S. calycium* ssp.*baumii* are also edible as reported by Nimmakayala *et al.* (2011). Wild species of *Sesamum* shows drought and insect resistance, It is also used as hair shampoo.

Materials and Methods

Thirty seven accessions under six species of *Sesamum* (*S. indicum*, *S. radiatum*, *S. malabaricum*, *S. prostratum*, *S. laciniatum* and *S. alatum*) were collected from different localities of state of Kerala. For the analysis of total seed protein and seed oil percentage, a commercially released variety *S. indicum* var. CO1 from Tamil Nadu Agricultural University, Coimbatore were also studied. Seed morpho characters were studied using Stereo microscope and SEM observations. Along with this, quantitative characters such as seed length, breadth, thickness, number of seeds per capsule and weight per 1000 seeds were also noted. The total seed protein was estimated using Lowry *et al.* (1951). Seed oil was extracted using the soxhlet method in petroleum ether as solvent and the percentage of oil were calculated. The data were statistically analysed with one way ANOVA at significant level $p<0.05$ (SPSS software7.0)

Result and Discussion

The stereomicroscopic and SEM observations showed variations in seed morpho characters (Fig1). The dull black seed coat colour in the cultivated species, *S. indicum* helped to distinguish it from the wild species with medium brown and bright black colour seed. Hassan (2012) and Yasothai (2014) reported various colours of seeds in the cultivated species such as white, red and brown to black colour. The cultivated taxa, *S. indicum* seeds were smooth with hilum projection whereas, it was rough with non-projected hilum region in the wild. Different types of seed coat texture viz, smooth (*S. indicum*), radially rough (*S. radiatum*), reticulately rough (*S. malabaricum*), partially rough (*S. prostratum* and *S. laciniatum*) and rough with deep furrows (*S. alatum*) noticed during the study suggested the taxonomic significance of the character in the genus. The

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Cinnamomum ovalifolium (Lauraceae) – a new record for India with notes on its lectotypification

A. J. Robi[1]✉, V. P. Thomas[2], V. K. Sreenivas[3], P. S. Udayan[4] and P. Sujanapal[5]

[1]Department of Botany, Bishop Abraham Memorial College, Thuruthicad, Pathanamthitta – 689597, Kerala, India
[2]P.G. Department of Botany, Catholicate College, Pathanamthitta – 689645, Kerala, India
[3]Department of Botany, Sri Vyasa NSS College, Vyasagiri P.O., Wadakkanchery, Thrissur – 680623, Kerala, India
[4]P.G, Department of Botany & Research Centre, Sree Krishna College, Ariyannur P.O., Guruvayur, Thrissur – 680102, Kerala, India
[5]Silviculture Division, Kerala Forest Research Institute, Peechi, Thrissur – 680653, Kerala, India.
✉Corresponding author: ajrobin80@gmail.com

DOI : 10.20324/nelumbo/v60/2018/122393

सिन्नामोमम ओवालिफोलियम (लोरेसी)–भारत के लिए एक नवीन अभिलेख एवं इसके लेक्टोटाइपिफिकेशन पर टिप्पणी

ए. जे. रोबी, वी. पी. थॉमस, वी. के. श्रीनिवास, पी. एस. उदायन एवं पी. सुजानापाल

सारांश

सिन्नामोमम ओवालिफोलियम राइट, श्रीलंका में पाये जाने वाली एक पादप जाति है जिसे भारत से प्रथम बार अभिलेखित किया गया है। इसे केरल राज्य में दक्षिणी पश्चिमी घाट में तिरूवनंतपुरम जिले में अगस्तयमाला जैवआरक्षित क्षेत्र से संग्रहित किया गया है। प्रस्तुत शोध पत्र में इस जाति की वर्गिकी, पारिस्थितिकी के विस्तृत वर्णन एवं सहज निर्धारण के लिए रेखांकन उपलब्ध करवाया गया है।

6

Annals of Plant Sciences 7.7 (2018) pp. 2377-2378

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ISSN: 2287-688X
OPEN ACCESS
www.annalsofplantsciences.com

Research Article

Lectotypification of the name *Gymnostachyum canescens* (Acanthaceae)

Shameer M.C.[1&2*] and V.K. Sreenivas[1]

[1]Department of Botany, Sri Vyasa N.S.S. College, Wadakkanchery, Thrissur, Kerala, India
[2]Research and Development Centre, Bharathiar University, Coimbatore, Tamil Nadu, India.

Received: 07-06-2018; **Revised:** 19-06-2018; **Accepted:** 28-06-2018

Abstract: The lectotype of *Gymnostachyum canescens* (Nees) T. Anderson is designated here.

Keywords: Acanthaceae, *Gymnostachyum canescens*, Lectotype, Western Ghats.

https://doi.org/10.21746/aps.2018.7.7.2

Introduction

In India, the genus *Gymnostachyum* Nees (Acanthaceae) is represented by 15 taxa distributed mainly in Western Ghats region (Prabhukumar *et al.,* 2015). While revising the genus *Gymnostachyum* in India, it is revealed that, the species *G. canescens* (Nees) T. Anderson was published without the designation of type. Therefore, we have scruitinized the protologue and then followed by the herbarium survey, found that *G. canescens* is needed to be typified. The lectotype is designated here according to Art. 9.2 of the ICN (McNeill *et al.,* 2012).

Typification of names

Gymnostachyum canescens (Nees) T. Anderson (1867: 505) *Cryptophragmium canescens* Nees (1832: 100)

Type (lectotype, designated here): INDIA, Mysore-Carnatic region, G. Thomson s. n., (P, barcode P00719603) [digital images!] Fig. 1.

Residual Syntypes: INDIA, Courtallum, Wight s. n., (P barcode P00719604) [digital images!]

Thomson and kept in P (P barcode P00719603 [digital images!]) fits the description, and is preserved very well, which is considered as the best choice and designated here as the lectotype.

Pteridology Today: Challenges and Opportunities (173-184) 2018
Proceedings of the Symposium held at BSI, WRC, Pune

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SORUS MORPHOLOGY OF SELECTED FERNS IN THE WESTERN GHATS OF SOUTH INDIA

V. K. Sreenivas*, C. Varna vival and K. R.Vimal

Department of Botany, Sri Vyasa N. S. S. College, Vyasagiri (P.O.), Wadakkanchery, Thrissur, Kerala – 680623, INDIA

**Corresponding Author: sreenivasvk@gmail.com*

ABSTRACT

Ferns are spore bearing, flowerless and primitive vascular plants originated in the Silurian Period of Paleozoic era. They were diversified in the Carboniferous to the Jurassic and declined sharply in Cretaceous period. Sorus is the reproductive structure formed in the sporophylls of ferns and arranged differently depends on the genera or species. About 30 species of ferns from different areas of Western Ghats of South India were analyzed with Binocular Stereo microscope with attached camera and photographs were taken. They are coming under 21 genera and 10 families. The types of sorus recognized in the present study were crescent, hooked, irregular, linear, reniform, reticulate, round and spike shaped. Out of 30 species selected, 12 species with linear sorus, seven species with reniform sorus and five species had round sorus. Two species were having crescent sorus whereas the remaining four species each with reticulate, hooked, irregular and spike shaped sori. The position of sorus may be marginal, submarginal, median along costa or costule, all over the abaxial surface (acrostichoid), and scattered. 11 species with submarginal sori and 11 species with sori on either side of costa or costule. Marginal sori were observed in four species, acrostichoid sori were observed in three species, and one species with scattered sori. The shape and position of sori differ from each other in the studied species. Morphological characteristics of sori can be utilized for the easy identification of some species along with other vegetative features.

INTRODUCTION

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http://www.mapress.com/j/pt/

Correspondence

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PHYTOTAXA
ISSN 1179-3163 (online edition)

https://doi.org/10.11646/phytotaxa.379.2.9

Lectotypification of the name *Striga densiflora* (Orobanchaceae)

OMALSREE MOOLAYIL[1†], SUJANA K ARJUNAN[2] & VADAKKEKARA SREENIVAS[1]
1 - Department of Botany, Sri Vyasa N.S.S. College, Wadakkanchery, Kerala, India
†Also affiliated to Research and Development Centre, Bharathiar University, Coimbatore, Tamil Nadu, India
2 -Central Botanical Laboratory, Botanical Survey of India, Howrah, West Bengal, India
**Author for correspondence: omalsree.nedungadi@gmail.com*

https://doi.org/10.11646/phytotaxa.379.2.9

The genus *Striga* Loureiro (1790: 22) belongs to the family Orobanchaceae and comprises about 43 species (Omalsree *et al*. 2015) with the highest diversity in tropical Africa, where 28 taxa have been recorded and 22 of them are endemic (Mohamed *et al*. 2001, Fischer *et al*. 2011). In India, ten species were recorded so far including four recently described species, viz. *Striga kamalii* Omalsree *et al*. (2015: 166), *S. indica* Prabhu *et al*. (2013: 284), *S. musselmanii* Omalsree & V.K. Sreenivas (2018a: 99) and *S. scottiana* Jeeva *et al*. (2012: 79). Very limited information is available on the genus in India except some sketchy enumerations in the state floras and few geographical distribution reports (Hooker 1884, Gamble & Fischer 1923, Saldanha 1963, Matthew 1981, Sasidharan 2013). The taxonomic position of less known Indian species as *S. densiflora* Bentham (1835: 41) Bentham (1836: 363), *S. masuria* (Buch.- Ham. ex Benth. 1835: 41) Benth, (1836: 364), *S. sulphurea* Dalzell & A. Gibson (1861: 182) etc. is still not clear. As a result, majority of specimens deposited in various herbaria are misidentified and plants are often referred to unresolved names (*S. sulphurea*) in databases (e.g. The Plant List 2018).

The authors (OM and VKS) described a new species *S. kamalii* from Coimbatore district of Tamil Nadu. This taxon was previously misidentified as *S. densiflora* (*S. kamalii* has 10-ribbed calyx lobes vs. *S. densiflora* has 5). Likewise, *S. masuria* was found in south India in Guindy National Park, Tamil Nadu, after 135 years and in Kodikuthimala of Kerala (Omalsree & Sreenivas 2018). Interestingly, in both areas, the plants are quite common and specimens previously collected from these localities were recorded as *S. angustifolia*. On the evidence of these collections, the authors reassessed the name *S. masuria* as *Striga angustifolia* var. *masuria* (Buch.- Ham. ex Benth.) Omalsree & V.K. Sreenivas (2018: 12294).

On the basis of these taxonomic issues there was finding and designation of the types of the names of the species involved. The plants were described during the colonial era without any designation of types. During the revision of the taxonomy of *Striga* in India, topic also of the Ph.D. thesis of the first author, we traced specimens of *Striga* collected from India referable to *S. masuria* and *S. densiflora*. The name *S. masuria* has been recently lectotypified (Omalsree & Sreenivas

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NOTE

A REASSESSMENT AND LECTOTYPIFICATION OF THE NAME *STRIGA MASURIA* (BUCH.-HAM. EX BENTH.) BENTH. (OROBANCHACEAE) AND ITS COLLECTION FROM THE WESTERN GHATS OF INDIA

M. Omalsree & V.K. Sreenivas

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Research Article

Striga masuria (Orobanchaceae) – A new record to the flora of Kerala, India.

Omalsree M.[1&2], Vivek P., Sojan Jose, Suresh V.K., & Sreenivas V.K.[1]

[1]Department of Botany, Sri Vyasa N.S.S. College, Wadakkanchery, Kerala, India.
[2]Research and Development Centre, Bharathiar University, Coimbatore, Tamil Nadu, India.
[3]Department of Botany, Govt. Victoria College, Palakkad, Kerala, India.
[4]Department of Dravyaguna, VPSV Ayurveda College, Kottakkal, Kerala, India

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Received: 24-04-2018; **Revised:** 5-05-2018; **Accepted:** 21-05-2018

Abstract: *Striga masuria* (Buch.-Ham. ex Benth.) Benth. (Orobanchaceae) is reported from Kerala state for the first time.

Keywords: New Record, Kerala, Orobanchaceae, *Striga masuria*

Introduction

The genus *Striga* Lour. (1790) belongs to the family Orobanchaceae, comprises about 43 species (Mohamed *et al.,* 2001) with the highest diversity in tropical Africa (Fischer *et al.,*). Out of this, nine species were recorded so far from India (Omalsree *et al.,* 2015). As a part of the ongoing taxonomic revision on the genus *Striga* in India, the authors collected one unknown species of *Striga* from Kodikuthimala regions of Malappuram district, Kerala, India. Further studies based on relevant literature and comparison with type specimens its identity has been confirmed as *Striga masuria* (Buch.-Ham. ex Benth.) Benth. (1836), a very rare species in India, earlier recorded only from Tamil Nadu. Therefore, it is the second distribution record in India and also a new addition to the flora of Kerala.

Taxonomic Treatments

Striga masuria (Buch.-Ham. ex Benth.) Benth. in Hooker, Companion Bot. Mag. 1: 364. 1836.

Buchnera masuria Buchanan-Hamilton ex Bentham, Scroph. Ind. 41. 1835.

Type:—NEPAL, Morang hills, Francis (Buchanan) Hamilton, 1419 (K!).

Erect annual, chlorophyllous herbs, 32–68 cm tall. Stem densely hispid, quadrangular, green, branched from middle to apex. Leaves opposite at base alternate towards apex, sessile, 12–40 × 1–4 mm, linear-lanceolate, margin ciliate with strigose hair, acute at apex, cuneate at base, hairy on both surfaces especially on mid-rib; mid-rib prominent. Inflorescence terminal or from axils of upper leaves, 15–45cm long.Rachis angular, strigose hairy. Flowers zygomorphic, sessile, hypogynous, lax, alternate, 22–34 per inflorescence. Bract 1, 2.6–2.9 mm long, linear-lanceolate. Bracteole 2, 1.8–2.1 mm long, linear-lanceolate. Calyx tubular, 15-ribbed, ending upto the teeth and sinuses; lobes 5, 2.4–2.8

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Phytotaxa 375 (1): 099–103
http://www.mapress.com/j/pt/

Article

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ISSN 1179-3163 (online edition)

https://doi.org/10.11646/phytotaxa.375.1.6

Striga musselmanii (Orobanchaceae): A new species of *Striga* from Western Ghats, India

OMALSREE MOOLAYIL[1†] & V. K. SREENIVAS[1]
[1]*Department of Botany, Sri Vyasa N.S.S. College, Wadakkanchery, Kerala, India*
[†]*Also affiliated toResearch and Development Centre, Bharathiar University, Coimbatore, Tamil Nadu, India*
**Author for correspondence: omalsree.nedungadi@gmail.com*

https://doi.org/10.11646/phytotaxa.375.1

Abstract

Striga musselmanii, a new species from Western Ghats is described. A detailed description, data on distribution and ecology are provided along with SEM data.

Keywords: Hemiparasite, Poaceae, *Striga angustifolia*

Introduction

The genus *Striga* Loureiro (1790: 22) belongs to the family Orobanchaceae, comprises about 43 species (Fischer *et al.* 2011, Mohamed *et al.* 2001), out of which nine species have been recorded from India (Omalsree *et al.* 2015, Jayanthi *et al.* 2013). As a part of the ongoing taxonomic revision on the genus *Striga* in India, the authors encountered an interesting specimen of *Striga*, growing along with some members of Poaceae in Naduvattam forest regions of Nilgiri biosphere reserve, Tamil Nadu. The plant shows close similarity with *S. angustifolia* (D. Don) Saldanha (1825:91; 1963:70) by its 15-ribbed calyx lobes, but is easily distinguished from the latter by means of its glabrous stem, leaf, rachis, bract, bracteole and calyx lobes and yellow flowers against white. Detailed taxonomic studies with the perusal of relevant literature (Hooker 1884, Gamble 1924, Saldanha 1963, Matthew 1980, Musselman & Hepper1988, Mohamed *et al.* 2001, Fischer *et al.* 2011, Jayanthi *et al.* 2013, Omalsree *et al.* 2015, Omalsree & Sreenivas 2018) it is confirmed that this taxon is a species hitherto unknown to science, which is described here as *Striga musselmanii sp. nov.*.

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Electrochemically Synthesized Poly An Efficient Protection for Carbon Steel Corrosion

SINI VARGHESE CHERUVATHUR[1], JOBY THOMAS KAKKASSERY[2]*, VINOD RAPHAEL PALAYOOR[3], BINSI M PAULSON[4] and RAGI KOOLIYAT[5]

[1,2,4,5]Research division, Department of Chemistry, St. Thomas' College (Autonomous), Thrissur, Kerala-680001, India.
[3]Department of Chemistry, Government Engineering College, Thrissur, Kerala-680009, India.
*Corresponding author E-mail: drjobythomask@gmail.com

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ABSTRACT

The corrosion protection efficacy of electrochemically synthesized poly(2-aminobenzenesulphonic acid) (P2ABSA) on carbon steel in 1.0 M HCl was investigated by electrochemical impedance spectroscopy, Tafel polarisation, scanning electron microscopy (SEM) and FT-IR spectral studies. The polymeric coating was prepared on the steel surface using cyclic voltammetry. Investigations established that P2ABSA effectively prevent the metal dissolution in HCl medium. Polarisation studies revealed that this polymer hinder both anodic and cathodic process of corrosion appreciably. The structures of the chemically and electrochemically synthesised polymers were compared using IR spectroscopy. Morphology of the steel surface confirmed the intact response of P2ABSA on steel surface treated with HCl.

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International Journal of Electrochemistry
Volume 2019, Article ID 1094148, 13 pages
https://doi.org/10.1155/2019/1094148

Hindawi

https://doi.org/10.1155/2019/1094148

Research Article

Synthesis, Cyclic Voltammetric, Electrochemical, and Gravimetric Corrosion Inhibition Investigations of Schiff Base Derived from 5,5-Dimethyl-1,3-cyclohexanedione and 2-Aminophenol on Mild Steel in 1 M HCl and 0.5 M H_2SO_4

Ragi Kooliyat,[1] Joby Thomas Kakkassery,[1] Vinod P. Raphael,[2] Sini Varghese Cheruvathur,[1] and Binsi M. Paulson[1]

[1]*Department of Chemistry, St. Thomas' College (Autonomous), Thrissur, Kerala 680001, India*
[2]*Department of Chemistry, Govt. Engineering College, Thrissur, Kerala 680009, India*

Correspondence should be addressed to Joby Thomas Kakkassery; drjobythomask@gmail.com

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Schiff base 2,2'-(5,5-dimethylcyclohexane-1,3-diylidene)bis(azan-1-yl-1-ylidene) diphenol (DmChDp) was synthesized and characterized using spectroscopic methods (IR, UV, NMR, and Mass) and cyclic voltammetric (CV) studies. The corrosion inhibition potency of (DmChDp) on mild steel (MS) in 1M HCl and 0.5M H_2SO_4 was investigated. The corrosion monitoring techniques employed for this purpose are gravimetric and electrochemical methods (EIS and potentiodynamic polarization studies). The study reveals that the Schiff base, DmChDp, acts as excellent corrosion inhibitor on mild steel in 1M HCl. DmChDp obeys Langmuir adsorption isotherm both in 1M HCl and 0.5M H_2SO_4 on MS. Polarization studies show that DmChDp behaves as a mixed type inhibitor in both media. Scanning electron microscopic analysis established the protective nature of DmChDp on mild steel surface. The impact of temperature on the corrosion of MS was also evaluated using gravimetric method.

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Superlattices and Microstructures

Volume 129, May 2019, Pages 1-13

Variations of non-linear optical properties and susceptibility with layer thicknesses of CdS/ZnS/CdS/ZnS multilayer quantum dot

Suseel Rahul K [a b], A.K Sneha [a], Vincent Mathew [b]

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Highlights

- This work theoretically investigates the role of susceptibility on the optical properties of quantum heterostructure for inter band and intra band

15

Quantum confined stark effect on the binding energy of exciton in type II quantum heterostructure

Rahul K. Suseel, and Vincent Mathew

Citation: AIP Conference Proceedings **1953**, 030084 (2018); doi: 10.1063/1.5032419
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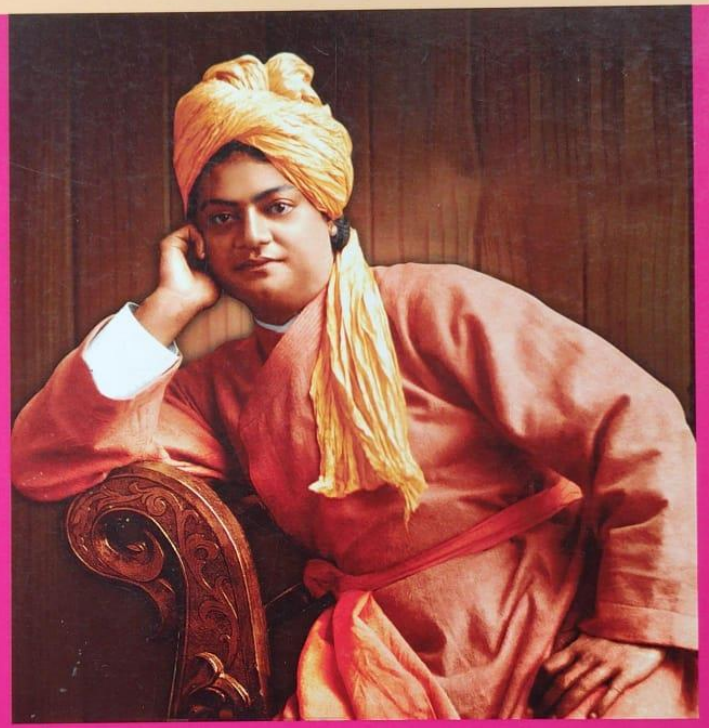

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ഏറനാടൻ മലയാളത്തിൽ മാപ്പിള മലയാളത്തിന്റെ സ്വാധീനം—ഒരു ചരിത്ര വീക്ഷണം

Noorjahan Majeed

ആമുഖം

പ്രാദേശികഭാഷാപഠനം ചരിത്രപരമായി നടത്തുമ്പോൾ അതിന് വ്യാപ്തിയേറുന്നു. ഗ്രന്ഥഭാഷ പലപ്പോഴും അലങ്കാരജടിലമായതിനാൽ വാമൊഴിയിൽ നിന്ന് അകന്നാണ് നിൽക്കുന്നത്. ഏറനാടൻ മലയാളമെന്ന് വ്യവഹരിക്കാവുന്ന ഭാഷാഭേദവും വാമൊഴിയുടെ സത്ത ഉൾക്കൊള്ളുന്നു. ഈ പ്രബന്ധത്തിൽ ഏറനാട് ഭാഷാഭേദവും മാപ്പിള ഭാഷാഭേദവുമായി ഒരു താരതമ്യ പഠനത്തിനാണ് ശ്രമിക്കുന്നത്. മാപ്പിള മലയാളത്തിൽ നിന്ന് ഏറനാടൻ മലയാളം ഭിന്നമാണെന്ന കാഴ്ചപ്പാട് പുനഃപരിശോധിക്കേണ്ടതുണ്ടെന്നും ഇവയുടെ കൊടുക്കൽ വാങ്ങലുകൾ ഭാഷാ ചരിത്ര സാംസ്ക്കാരിക സന്ദർഭങ്ങൾ വഴി തിരിച്ചറിയാനാവുമെന്നും പ്രബന്ധം തെളിയിക്കുന്നു.

ഏറനാടിന്റെ ഭാഷാഭേദത്തിന് കാരണമായ ചരിത്രപരവും സാംസ്കാരികപരവുമായ പശ്ചാത്തലം പ്രബന്ധം വിശകലനം ചെയ്യുന്നു. മലയാളത്തിന്റെ ചില മാനക രൂപപദങ്ങളെ ഏറനാട് മലയാളവും മാപ്പിള മലയാളവുമായി താരതമ്യം ചെയ്യുന്നതിലൂടെ ഇവയുടെ സമാനത തെളിയിക്കപ്പെടുന്നു.

ഈ പ്രബന്ധരചനക്ക് സഹായിച്ച ഉപാദാന സാമഗ്രികളിൽ ഒന്നാമത്തേത് ഏറനാട്ടിലെ വിവിധ പ്രദേശങ്ങളിലുള്ള ജനങ്ങളുമായുള്ള പ്രബന്ധകർത്താവിന്റെ സമ്പർക്കവും ആശയവിനിമയവുമാണ്. അനൗപചാരികമായി നടത്തിയ ഈ ഫീൽഡ് സർവ്വേ പ്രബന്ധം ചരിത്ര പശ്ചാത്തലത്തിൽ മുന്നോട്ട് കൊണ്ടുപോകാൻ പ്രേരകമായി. രണ്ടാമതായി ഇംഗ്ലീഷിലും മലയാളത്തിലും ഉള്ള ചരിത്രവും ഭാഷാഭേദവും വിവരിക്കുന്ന ഗ്രന്ഥങ്ങളാണ്. മൂന്നാമതായി അന്തർവൈജ്ഞാനികമായി ചരിത്രത്തേയും ഭാഷാശാസ്ത്രത്തേയും ബന്ധിപ്പിക്കുന്ന ഗ്രന്ഥങ്ങളാണ്.

പരിമിതികൾ

പ്രബന്ധത്തിൽ ഏറനാട് മലയാളത്തിൽ മാപ്പിള മലയാളത്തിന്റെ അവഗണിക്കാനാവാത്ത സാമ്യങ്ങൾ വിശകലനം ചെയ്തിട്ടുണ്ടെങ്കിലും ഇതിന്റെ സ്വാധീനം, വ്യക്തികൾ, പ്രായം, ധനശേഷി, വിദ്യാഭ്യാസം, ജാതി തുടങ്ങിയ ഘടകങ്ങളനുസരിച്ച് ഏറ്റകുറച്ചിലുകളുണ്ടാകാം. ഇവിടെ മലബാറിന്റെ ഒരു

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डॉ. पी. गीता

जन्म : 1968, आकलूर, पुथुर जिला, केरल।

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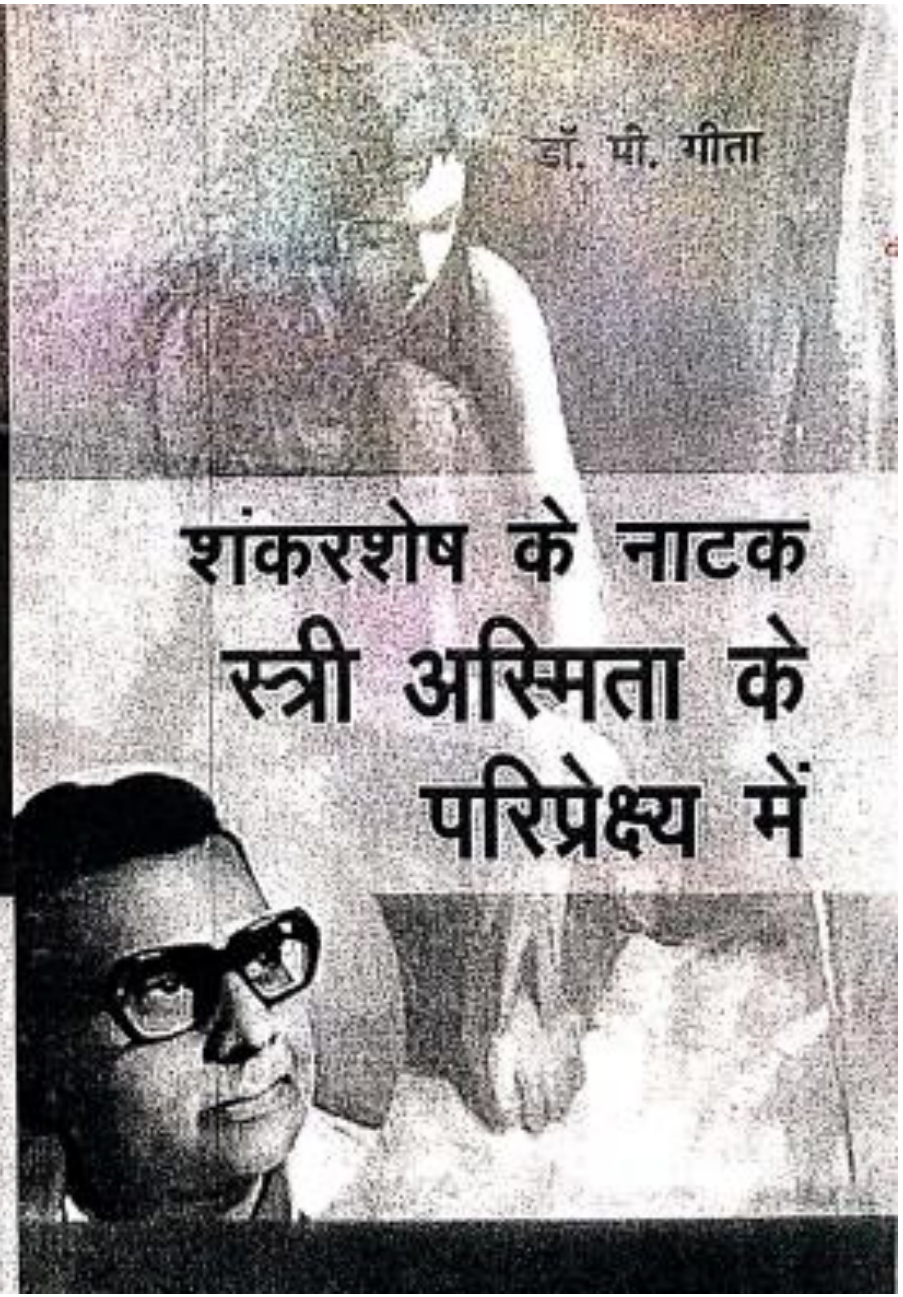

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Genetic Diversity Research Publication Output in India: A Scientometric Analysis

Jyothi G. Nair[1] and S. Raja[2]
[1]Research Scholar, DLIS, [2]Assistant Librarian, Central Library,
Alagappa University, Karaikudi, Tamil Nadu, India
E-Mail: lisraja1979@gmail.com
(Received 22 September 2018; Revised 15 October 2018; Accepted 27 October 2018; Available online 8 November 2018)

Abstract - **This paper attempts a scientometric analysis of literature in the field of genetic diversity in India over 5 years (2013-2017). A total of 1417 records and 5960 unique authors are identified. The study characterizes growth output, Authorship pattern, Collaboration pattern, Citation pattern, institutional status etc. Many of the publications have received worldwide attention of various researchers, policymakers, and planners. The number of papers was maximum in the year 2016. Average publication per year is 283. Multi-authored papers dominated over single authorship. The study was analysed by using HistCite software.**

some developed regions and emerging economies. The USA lead in the quantity of publication and collaboration links[6]. The study analyzed the research output of genetic diversity publication of Indian output.

III. OBJECTIVES

1. To identify the year wise growth in the field of Genetic Diversity research.
2. To identify the Relative Growth Rate of Publication

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A Scientometric Assessment of Renewable Biomass Research Output in India

Jyothi G. Nair[1], S. Raja[2] and P. Devapattabiraman[3]
[1]Research Scholar, DLIS, [2]Assistant Librarian, Central Library
[1&2]Alagappa University, Karaikudi, Tamil Nadu, India
[3]Research Scholar, Department of Performing Arts, Pondicherry Central University, Puducherry, India
E-Mail: mejyothignair@gmail.com, lisraja1979@gmail.com
(Received 30 December 2018; Revised 26 January 2019; Accepted 20 February 2019; Available online 25 February 2019)

Abstract - **This paper provides a quantitative assessment of the scientific literature for mapping the intellectual structure of Renewable Biomass research in India and its scientific development over 20 years (1999-2018). A total of 691 publications were subjected to examination. The study characterizes top (cited and downloaded) papers, citation patterns, most frequent topic clusters, and keywords, and social mentions by country, discipline, and professional status.**

highly cited papers of about 1 lakh publications of forest mycology from 1987-2008. Anil Sagar, Basavaraj Shivappa, Karanam Bhanumurthy (2013) attempts to highlight the growth and development of dark energy literature and studied the quantitative and qualitative assessment by way of analyzing various features of research output based on WoS, collected 5858 publications and analysed the

2019-20

DEPARTMENT	NAME OF FACULTY	NUMBER OF PUBLICATION IN UGC CARE LIST
BOTANY	DR V K SREENIVAS, DR AKHILA	1
CHEMISTRY	DR R MANU, DR NISHA NANDAKUMAR, DR RAGI K	3
ECONOMICS	DR DHANYA S, GAYATHRI SOMASEKHARAN	2
HISTORY	DR NOORJAHAN MAJEED	1
PHYSICS	DR SUSHEEL RAHUL, DR SOUMYA K	3
TOTAL		**10**

STRIGA KAMALII (FAMILY OROBANCHACEAE): A NEW RECORD TO THE FLORA OF KERALA, INDIA[1]

OMALSREE NEDUNGADI[2,3,*], R. JAGADEESAN[4] AND V.K. SREENIVAS[2,5]

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First published: April 30, 2020 | doi: 10.17087/jbnhs/2020/v117/123074
[2]Department of Botany, Sri Vyasa N.S.S. College, Vyasagiri P.O., Wadakkanchery, Thrissur 680 623, Kerala, India.
[3]Current Address: Research and Development Centre, Bharathiar University, Coimbatore 641 046, Tamil Nadu, India.
Email: omalsree.nedungadi@gmail.com
[4]Department of Botany, University of Kerala, Kariavattom P.O., Thiruvananthapuram, Kerala, India. Email: vishnuviru22@gmail.com
[5]Email: sreenivasvk@gmail.com
*Corresponding author

Introduction

The genus *Striga* Loureiro (1790) belongs to the family Orobanchaceae that comprises about 43 species in the world (Omalsree *et al*. 2015), with the highest diversity in tropical Africa. Eight species were recorded so far from southern India, including the recent addition of three new species, namely *Striga kamalii* Omalsree *et al*. (2015), *S. indica* Jayanthi *et al*. (2013), and *S. scottiana* Jeeva *et al*. (2012). All species of *Striga* are obligate root hemiparasites, and require specific host plants for their survival (Botanga and Timko 2005). But a few taxa such as *S. gesnerioides*, *S. indica*, and *S. scottiana* parasitize a variety of hosts especially members of Euphorbiaceae (Jayanthi *et al*. 2013; Jeeva *et al*. 2012; Mohamed *et al*. 2001).

As a part of the taxonomic revision of the genus in India, the authors explored and collected many specimens from different geographical regions of India. While exploring the grassland around Anjanattupara, Chinnar, Idukki district of Kerala, the authors collected *S. kamalii,* an endemic species of Tamil Nadu, which is hitherto not reported from elsewhere except its type locality. Therefore, it is the first collection after type, reported here as a new addition to the flora of Kerala.

Taxonomy

Striga kamalii Omalsree, K.M.P. Kumar, M. Sabu & P. Sunojkumar. *Phytotaxa* 212(2): 163–168.

Material Examined: INDIA: Tamil Nadu: Coimbatore district, Bharathiar University Campus, ±450 m, 10.viii.2011, Prabhukumar KM CU88154 (Holotype CALI!; Isotype MH!, CALI!).

Perennial, erect chlorophyllous plant, 18–26 cm tall. Stem densely hispid, green. Leaves green, linear with acute apex, opposite to alternate, sessile, appressed to the stem, hispid on abaxial and adaxial sides, 15–18 × 1–3 mm. Bract one, longer than the calyx, ovate-linear, acute at apex, *c*. 6 × *c*. 1 mm, hispid on both sides. Bracteoles 2, equal, lanceolate, shorter than the calyx lobes, hispid at both sides, *c*. 5 mm long. Flowers opposite or alternate, sessile 11–12 mm long, white. Calyx 10-ribbed; lobes 5, *c*. 5 mm long, one rib in between the lobes and ending in the sinuses, equal, calyx teeth linear, hispid on upper surface, lower part glabrous. Corolla tube tubular, fully covered with glandular hairs, inner region of the tube densely pubescent, *c*. 9 mm long, 1/2 portion enclosed by the bracts; lobes obovate-round, white, slightly recurved, lower lip tripartite; upper lip bilobed, 2.2–2.3 × *c*. 2.3 mm. Stamens 4, attached to distal end of the tube, just below the throat. Ovary *c*. 2 mm long, glabrous; style long, up to 7 mm long, glabrous, a brown colour at the tip. Capsule oblong, *c*. 3 mm long, acute at apex, shorter than the calyx.

Distribution: Tamil Nadu and Kerala (Present collection).

Habitat and biotic association: Collected from the grasslands of Anjanattupara ranges of Chinnar, Idukki district at an elevation of 1,600–1,650 m. Approximately 10–25 individuals have been recorded from this area. The plant is growing in association with *Ischaemum indicum* (Houtt.) Merr. (Poaceae) and *Chrysopogon asper* (Heyne ex Hook.f.) Blatt. & McCann. (Poaceae).

Flowering & Fruiting: June–February.

Specimens examined: INDIA: Kerala: Idukki district, Chinnar, Anjanattupara, 03.ix.2017, Omalsree M. & R. Jagadeesan 626; Tamil Nadu: Coimbatore district, Bharathiar University Campus, 10.viii.2011, Prabhu Kumar K.M. 88154; 11.viii.2012, Prabhu Kumar K.M. & M. Omalsree 88161; 14.viii.2015, Omalsree M. 603; 15.x.2016, Omalsree M. 618; 05.xi.2017, Omalsree M. 628 (MH); Foot hills of Maruthamalai hills, 19.viii.2013, Prabhu Kumar K.M. & M. Omalsree 95816 (CALI!).

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Flexible Ag/FMWCNT Electrode Fabricated Through Benign Reducing Agent for Sensor Application

Reshma. M and R. Manu [z]

Research Department of Chemistry, Sri Vyasa N. S. S. College, Thrissur, Kerala 680623, India

In the present work environmentally benign chemical agents were used for fabrication of silver functionalized multiwalled carbon nano tubes (Ag/FMWCNT) flexible conductive films. The leaf extract of Melissa officinalis serves as an efficient route for the synthesis of silver nanoparticles and also as reducing agent during electroless process. A simple and low cost electroless deposition process was employed for the synthesis of the electrode material and for fabrication of the Ag/FMWCNT film. The morphology and structure of the composite films were analyzed using Field emission scanning electron microscopy (FESEM), Energy dispersive X-ray analysis (EDAX) and the functional groups in the composite film was identified by FTIR technique. Electrochemical characterization of flexible Ag/FMWCNT electrode includes cyclic voltammetry (CV) and impedance spectroscopy which revealed excellent pseudo capacitive nature, cyclic stability and energy storage characteristics for the developed film. The sensor characteristics of the fabricated electrode for detection of dopamine is investigated using CV, Differential pulse voltammetry (DPV) and chrono amperometric (CA) techniques. The Ag/FMWCNT exhibited good sensor characteristics with a detection limit of 0.7μM for dopamine.
 [DOI: 10.1149/2.0381916jes]

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Nano science and technology plays a pivotal role in all emerging field of development whether it is in healthcare, electronics and energy or in any other myriad areas. The unique physical, chemical and biological characteristics of nano scale materials opens a novel route for various applications compared to macroscale units.[1] Researchers are much interested to develop into the intricacies of these type of nano scale metals and their different metal oxide in synthesizing, functionalizing and making them ideal candidate for specific application in different areas such as drug delivery, catalysis, diseases diagnosis, optoelectronics, electronic fabrication, electrochemical application etc.[2–5] Numerous methods are employed for the synthesis of metal nanoparticles and their functionalized products. Among these chemical reduction, electrochemical technique, photochemical reduction are commonly employed. Chemical methods has various limitations since it includes use of toxic reducing agents, lack of reusability of reagents and its impacts on environment. In order to overcome these limitations, synergistic application of nanotechnology and biotechnology is to be

In order to overcome the toxicity and other environmental issues, researchers now focus their work on green synthesis of nanoparticles. Various biological methods such as microbial as well as plant mediated synthesis have been developed for the synthesis of nanoparticles. Various plant extracts has been used as green reductanct for silver nanoparticle synthesis. Plant extract can serve both as reducing and capping agent for the synthesis of silver nanoparticles. Moreover these green reagents enables stable and shape controlled synthesis of silver nanoparticles.[21–24] Nano silver particles have great adaptability when it is incorporated with other materials and such distinctive properties of silver nanoparticles makes it efficient candidate for wide range of applications. Carbon nanotubes (CNTs) possess high tensile strength, excellent mechanical characteristics, good electrical conductivity, high thermal conductivity and large specific surface area. CNTs especially multi-walled CNTs (MWCNT) can serve as good supports for silver nanoparticles which enables the fabrication of Ag-MWCNT composites at minimized cost.[25–27]

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Research Article

Mitigation of concrete reinforced steel corrosion by penta sodium triphosphate: physicochemical and electrochemical investigations

Binsi M. Paulson[1] · K. Joby Thomas[1] · Vinod P. Raphael[2] · K. S. Shaju[2] · K. Ragi[1]

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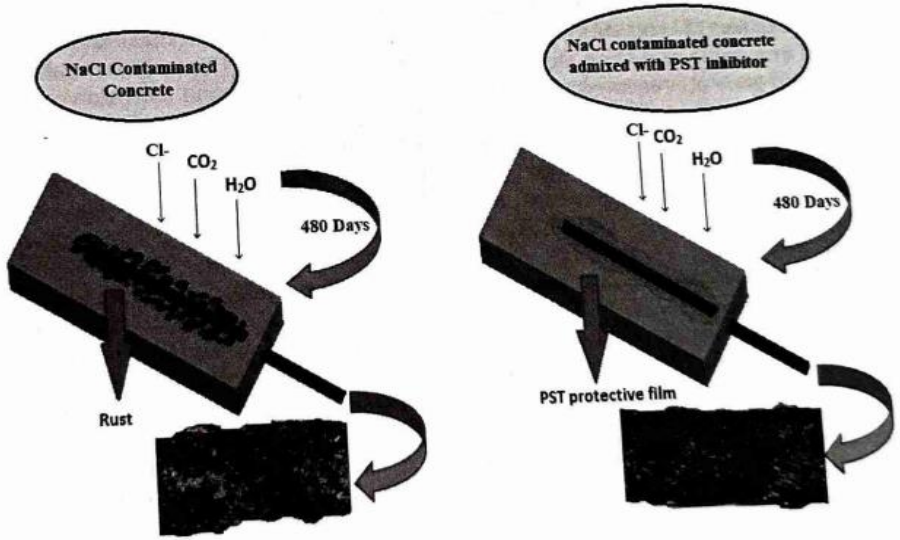

Keywords Corrosion · Inhibitor · Concrete steel reinforcement · Admixture

✉ K. Joby Thomas, drjobythomask@gmail.com; jobythomask@stthomas.ac.in | [1]Center for Electrochemical Studies, Department of Chemistry, St. Thomas' College (Autonomous), Thrissur, Kerala 680001, India. [2]Department of Chemistry, Government Engineering College, Thrissur, Kerala 680009, India.

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Interaction of two heterocyclic Schiff bases derived from 2-acetyl pyridine on mild steel in hydrochloric acid: Physicochemical and corrosion inhibition investigations

M. Paulson Binsi[a], Thomas K. Joby[a*], K. Ragi[a], Varghese C. Sini[a] and Johnson Reeja[a]

[a]*Research division, Dept. of Chemistry, St. Thomas' College(Autonomous), Thrissur, Kerala – 68000, India*

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ABSTRACT

Two heterocyclic Schiff bases namely (E)-2-(1-(2-phenylhydrazono)ethyl)pyridine (or 2-acetyl pyridine phenyl hydrazone) (2APPH) and (E)-2-(1-triazylidineethyl)pyridine (or 2-acetyl pyridine semicarbazone) (2APSC) were synthesized, characterized and their corrosion inhibition behaviour as well as mechanism of inhibition were investigated by different techniques. Structural characterization includes NMR, Mass, IR and UV-visible spectroscopy and elemental analysis. Corrosion inhibition behaviour of aforesaid compounds on mild steel in 1M hydrochloric acid was examined by electrochemical methods including potentiodynamic polarization analysis and electrochemical impedance spectroscopic techniques. The mechanism of corrosion inhibition was explored and supplemented by adsorption and surface morphological studies. Quantum mechanical investigations on corrosion behaviour of compounds were also conducted and satisfying correlation was noticed between the results of corrosion measurement methods and quantum mechanical evaluations.

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10

The Socio Economic and Health Impacts of Floods and Landslide on the Residents of Wadakkancherry, Trissur District

Dhanya S.

Introduction

One sixth of the total population of Kerala has been directly affected by the floods and related incidents, thirty five out of the fifty four dams within the state were opened. The flooding experience of 2018 cannot be forgotten by Malayalies as it was a worst, over 483 people died and a million of people were evacuated. There was a massive flood affected Kerala, due to unusual high rainfall during the monsoon season. All 14 districts of the state were placed on red alert. Heavy rain and flood in most districts of Kerala resulted into great disruption of livelihood of resident. The speed of the flood water in the affected regions flowed so fast and have caused severe landslide and have left the hilly districts isolated and record the flood as the worst hit state the economic loss.

Due to different climatic and rainfall patterns in different regions, it has been the experience that while some parts are suffering from devasting floods another part is suffering drought at the same time. With the increase in population and development activity there has been a tendency to occupy the

floodplains, which has resulted in damage of a more serious nature over the years. Flooding is caused by the inadequate capacity of water with in the rivers and dams to contain the high flows brought down from the upper catchments due to heavy rainfall

Objectives of the Study

The present study has addressed the floods of the year 2018 faced by the Kerala.

The main objective of the study is to

1. To analyse the flood situation of Kerala
2. To analyze the socio economic and health impacts of flood in Wadakkancherry and Kuranchery region

Research Methodology

The present study is based on both primary and secondary data. Stratified sampling method is used to collect the data to understand the impacts of flood. During the field investigation, observation method as well as informal personal communication with some persons has made for the purpose of verification of data provided by some persons. Secondary data were collected from journals, newspapers were also used.

Literature Review

Flooding is the most popular kind of disaster globally. A number of investigations have revealed that human activities contribute largely to floods. Many people were homeless and discomfort. Both social and emotional costs were involved in flooded areas. These costs comprise displacement from homes, the loss of private valuables and the continuing fear and insecurity caused by the ugly experience. As vulnerability to

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ORGANIC FARMING: A BOON OR BANE FOR RURAL FARMERS

GAYATRI SOMASEKHARAN
Assistant Professor, Department of Economics,
Sree Vyasa NSS College, Wadakkanchery, Thrissur, Kerala
Email:gayatri.kiran26@gmail.com

Abstract

*"The difference between what we do and what we are capable of doing would suffice to solve most of the world's problems" – **Mahatma Gandhi.***

Agriculture in India has a long history of nearly 10000 years. In the course of its evolution it was remodeled by the concept of Green Revolution which even though multiplied the production, initialized the heavy use of fertilizers and pesticides. The consequence was severe for ecosystem and sustainability. Due to its heavy impact many alternative farming systems were thought of by the experts and Organic Agriculture evolved as a cure to wipe out the negative effects of Green Revolution. Eventhough it took 30 years for our country to convert just 3% of its agricultural land into organic, India is steadily moving forward with this idea. My humble initiative is to understand the trend of growth in Organic agriculture in India and specifically in Kerala. A primary analysis was undertaken to analyze how organic agriculture has helped the rural farmers of Elanad village (Thrissur) to uplift their economic condition.

***Key words:** Organic farming, Green Revolution, Participatory Guarantee Systems, Jaivik Bharat, organic fertilizers.*

Introduction

Organic agriculture is defined as a farming system and management thatcancreate an ecosystem with sustainable productivity without the use of artificial external inputs such as chemicals, fertilizers and pesticides. According to the report by the union ministry of agriculture (Eleventh Sitting of the Committee of Estimates 2014-15), organic trade in India is expected to touch Rs 6000 crore which is one percent of the global trade. The area under organic cultivation has increased substantially in states like Andhra Pradesh, Jharkhand, Orissa, Chhattisgarh etc. Statistics also shows negative trend in some states like Delhi, Bihar, Meghalaya etc. (Business World). As per a recent Government of India study, the organic food market in the country is

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Density functional study of magnetic, structural and electronic properties of quasi-one-dimensional compounds $CrSbX_3$ $(X = S, Se)$

Thomas Mathew [a, b], Suseel Rahul K [a, c], Vincent Mathew [a, *]

[a] Department of Physics, Central University of Kerala, India
[b] Department of Physics, St Stephen's College, Uzhavoor, Kerala, India
[c] Department of Physics, Sree Vyasa NSS College, Wadakkanchery, Kerala, India

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ABSTRACT

Antimony chromium trichalcogenides $CrSbX_3 (X = Se, S)$ have interesting electronic and magnetic properties due to their quasi-one-dimensional structure. We investigated magnetic, structural and electronic properties of $CrSbSe_3$ and $CrSbS_3$ using density functional theory as implemented in VASP. Ground state magnetic ordering of the materials were determined using PBE functional including spin-orbit interaction and we find that $CrSbSe_3$ is ferromagnetic and $CrSbS_3$ is anti-ferromagnetic. We used exchange-correlation functionals SCAN and PBE to study structural properties. We also calculated the Magneto-crystalline Anisotropy of $CrSbSe_3$ along three different directions. We found that the axis which is parallel to the chains is the hard axis (b-axis) and the axis which is perpendicular to the chains (a-axis) is the easy axis. Electronic structure calculations confirms that $CrSbSe_3$ and $CrSbS_3$ are indirect band gap semiconductors.

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Study on the doping effect of spin coated Al and In doped and (Al/In) co-doped ZnO thin films for near-infrared plasmonic applications

K. Soumya, I. Packia Selvam, S.N. Potty*

Centre for Materials for Electronics Technology (C-MET), Scientific Society, Ministry of Electronics & Information Technology, Government of India, Shoranur Road, Athani P.O, Thrissur 680 581, India

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ABSTRACT

Al and In doped and (Al/In) co-doped ZnO films were fabricated by spin coating for near infrared plasmonic applications. The total dopant concentration was fixed at 3 at.%, in which In and Al were varied sequentially.

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Tuning of work function of ZnO by doping and co-doping: An investigation using X-ray photoelectron spectroscopy

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K. Soumya [a], I. Packia Selvam [a], C.P. Vinod [b], S.N. Potty [a,*]

[a] Centre for Materials for Electronics Technology (C-MET), Scientific Society, Ministry of Electronics & Information Technology, Government of India, Shoranur Road, Athani P.O, Thrissur, 680 581, India
[b] Catalysis and Inorganic Chemistry Division, CSIR-National Chemical Laboratory, Pune, 411008, India

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ABSTRACT

The shift in the work function of the ZnO thin film upon varying codoping ratio has been investigated by X-ray

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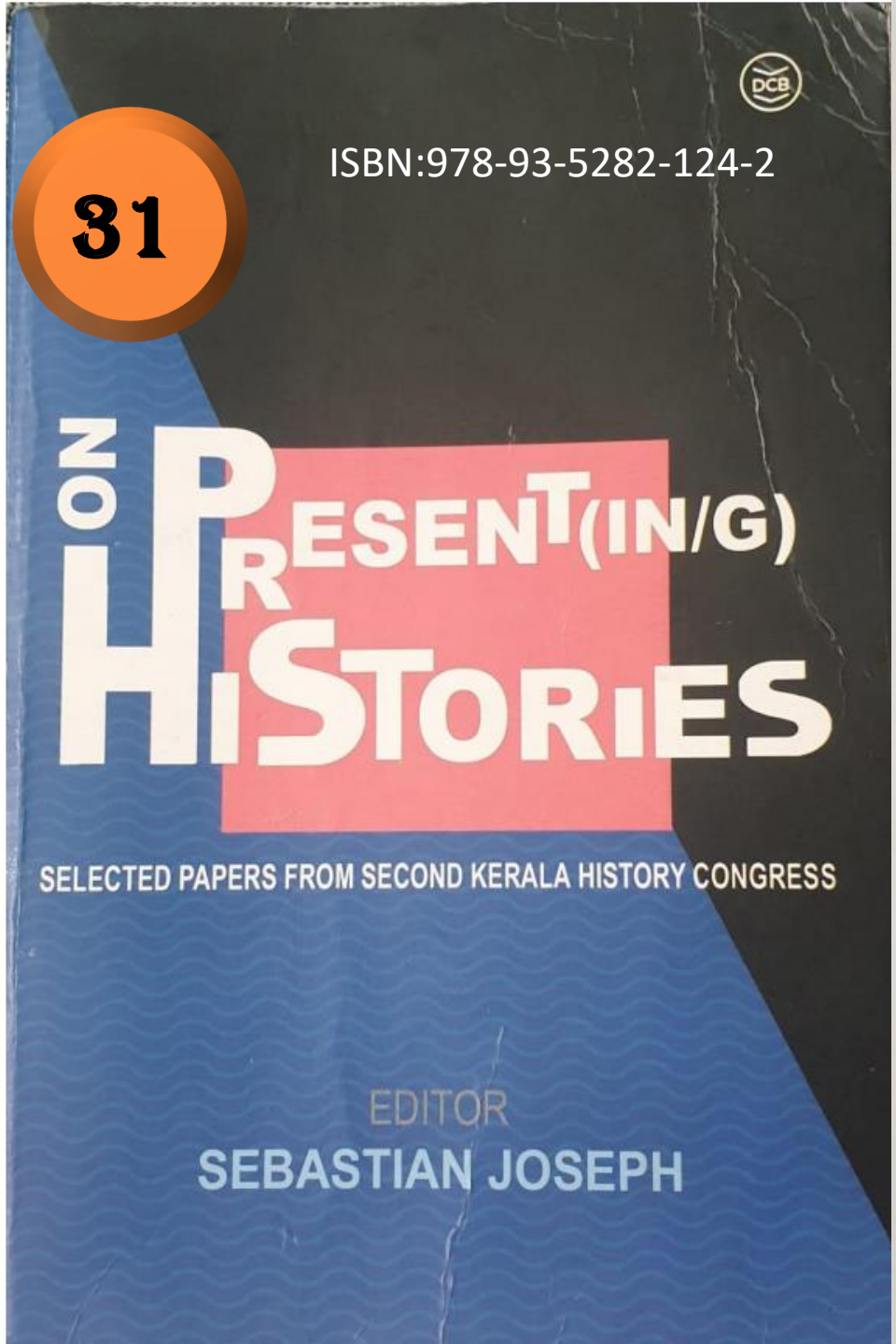

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BOTANY		DR V K SREENIVAS, DR AKHILA	2
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TOTAL			**11**

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READERS SATISFACTION ON NEWSPAPER AGENCY SERVICE IN KERALA

Dr. Sanesh C Assistant Professor & Head, Sri Vyasa N.S.S College, Wadakkanchery, Thrissur, Kerala, India.
Dr. B. Johnson Professor & Head, Department of Commerce and Management Studies, University of Calicut, Kerala, India.

Abstract
Newspaper subscription and reading is a traditional habit among most of the people living in Kerala. Most of the people in Kerala start their daily routine by reading a newspaper with a cup of tea. Newspaper agent's service quality must be evaluated by newspaper publishers from the opinion of newspaper subscribers. If subscribers are not happy with the service of newspaper agent and delivery boys it may affect the overall prosperity of the newspaper industry itself. Therefore it is relevant to measure the service quality of newspaper agents. Nowadays readers have more options for getting information on varying issues. It revealed that regarding the distribution matters of newspapers, many of the subscribers are not pleased with the current status. Interestingly publishers are not interested to know from the subscribers regarding delivery related issues.

Key words: *Timely Delivery of Newspaper, Regularity of Delivery, Neat Distribution, Prompt Billing, Prompt Cash Collection, Grievance Handling by the Newspaper Agent.*
Paper classification : Research Paper

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1.1 Introduction

A newspaper is a regularly scheduled publication containing news of present events, information giving articles, different features and advertising. In the morning, most of the people have the habit of reading the newspaper along with a cup of tea. Whatever is the weather condition, whether its winter or rainy season people are expecting the newspaper to be delivered early morning throughout every day of the year. Subscribers consider it as a right to get their copy of the newspaper as soon as

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Research Paper

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Ten New Cultivars of Capsicum (Solanaceae) from India

A R Anuroopa*[1] and V K Sreenivas[2]

[1]Department of Botany, Sri Vyasa N.S.S. College, Wadakkanchery - 680 582, Kerala, India

[2]Research and Development Centre, Bharathiar University, Coimbatore - 641 046, Tamil Nadu, India

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ABSTRACT

The genus *Capsicum* L. (Solanaceae) are considered to be originated in the South America and extended throughout the continent with about 41 species. The members of the genus *Capsicum* are widely used as a spice and vegetables with great economic value. The present study aims at the intra specific classification of genus *Capsicum* from Kerala state of India and naming the cultivars according to ICNCP rules and regulations. It was identified that 10 new cultivars under 2 species such as *Capsicum annuum* L. and *Capsicum fruitescens* L. from India. They are described with notes.

Key words: *Capsicum*, Cultivars, Kerala, Solanaceae

The genus *capsicum* L. (Solanaceae) comprises about 41 species in the world (Barboza *et al*. 2020), including most economically important species such as *C. annuum* L., *C. baccatum* L., *C. chinense* Jacq., *C. frutescens* L., and *C. pubescens* Ruiz & Pav. (Perry *et al*. 2007, Barboza *et al*. 2019). Tournefort (1719) first used the name *Capsicum* to the genus which was later taken up by Linnaeus (1753). The origin of the genus was along the Andes of western to north-western South America and expanded in a clockwise direction around the Amazon basin, towards central and south-eastern Brazil, then back to western South America, and finally northwards to Central America (Garcia *et al*. 2019). More recently, different molecular, cytogenetic, enzymatic studies have been carried in the infrageneric classification of *Capsicum* (Barboza 2011). There is currently no comprehensive taxonomic work on *Capsicum* in India. So, in this paper, we attempt to describe the genus *Capsicum* from Kerala along with 10 new cultivars as the first part of the work.

MATERIALS AND METHODS

The present study mainly based on the specimens collected from 14 districts of Kerala, India, during 2018 and 2019. The vegetative and reproductive characters were

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Direct and indirect organogenesis of *Gymnostachyum latifolium* var. decurrens: An endangered plant

Shameer MC[1*], Sreenivas VK[2]
[1] Research and Development Centre, Bharathiar University, Coimbatore, Tamil Nadu, India
[2] Department of Botany, Sri Vyasa NSS College, Vyasagiri PO, Wadakkancherry, Thrissur District, Kerala, India

Abstract
The study aimed to evaluate the efficiency of direct and indirect organogenesis for large-scale multiplication, propagation and conservation of *Gymnostachyum latifolium* var. *decurrens*, an endemic and endangered plant. Shoot tips and nodal explants were used for direct organogenesis. The highest frequency of shoot initiation from node and shoot tip was observed on MS medium with 2.22 M BAP. Node is used as a source of explant for callogenesis. High frequency of green and friable organogenic callus induction (95%) was observed from the node on MS medium supplied with 13.56 M 2,4-D. The regeneration frequency of shoot induction from the nodal derived calli was high (86%) when MS medium supplemented with 11.10 M BAP. Microshoots regenerated via direct as well as indirect organogenesis were rooted best in ½ MS medium containing 10.74 M NAA. The well rooted plantlets were successfully established in the soil.

Keywords: *Gymnostachyum latifolium* var. *decurrens*, endangered, organogenesis

Introduction
Gymnostachyum latifolium (Dalzell) T. Anders. var. *decurrens* Gamble (Family – Acanthaceae) is an endangered plant distributed in the Western Ghats of Kerala, Goa and Karnataka States. This plant grows among laterite rocky slopes near streams in a moist deciduous forests. The plant is having antioxidantal, antimicrobial and antipyretic and traditionally used for curing many disorders [1]. The key feature of this species of *Gymnostachyum* is that the leaves of the plant decurrent on petiole, lamina broadly elliptic, decurrent at base; lower lip shallowly 3-lobed, filament bent above at the connective, stamens and style held within corolla lobe. Poor seed setting, seed germination and seed viability are the certain constrains in its survival in nature

and 15 psi pressure for 20 minutes and flame sterilization was also done at the time of inoculation.

Preparation of Culture media
MS (Murashige & Skoog, 1962) medium with 3% sucrose at full or half strength was used as the basal medium for all the *in vitro* studies. MS Basal medium was modified by the addition of different growth regulators *viz*., 2,4-Dichlorophenoxy acetic acid (2,4-D), Naphthalene acetic acid (NAA), Indole 3-acetic acid (IAA), Indole-3-butyric acid (IBA), Benzylaminopurine (BAP) and Kinetin (Kn) at different concentrations either singly or in combinations.

Sterilization of explants

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RESEARCH Open Access

In vitro antibacterial and in silico docking studies of two Schiff bases on *Staphylococcus aureus* and its target proteins

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Ragi K[1], Joby Thomas Kakkassery[1*], Vinod P. Raphael[2], Reeja Johnson[1] and Vidhya Thomas K[1]

Abstract

Background: Schiff base compounds have extensive applications in various fields such as analytical, inorganic, organic, and biological fields. They have excellent pharmacology application prospects in the modern era and are widely used in the pharmaceutical industry. In the present work in vitro antibacterial and in silico docking studies of two Schiff base compounds 2,2′-(5,5-dimethylcyclohexane-1,3-diylidene)bis(azan-1-yl-1-ylidene)diphenol (DmChDp) and N,N′-(5,5-dimethylcyclohexane-1,3-diylidene)dianiline (DmChDa) were carried out against the bacterial strain *Staphylococcus aureus* and its target proteins.

Results: The tests proved that the ligands have potential antibacterial activity. In the computational analysis, the drug-like properties of the compounds were first pre-filtered using the Lipinski rule of five. Then, molecular docking study was conducted using the AutoDock 4.2 program, to establish the mechanism by which the molecules inhibit the growth of *S. aureus*. For this purpose, 6 different target proteins (PDB ID: 1T2P, 3U2D, 2W9S, 1N67, 2ZCO, and 4H8E) of *S. aureus* were selected. Both the Schiff bases showed a good binding affinity with the target protein dihydrofolate reductase enzyme (PDB ID: 2W9S) but in different sites. Maximum binding energies of about − 10.3 and − 10.2 kcal/mol were observed when DmChDp and DmChDa were docked with 2W9S.

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Ixora coccinea extract as an efficient eco-friendly corrosion inhibitor in acidic media: Experimental and theoretical approach

Vidhya Thomas K[a], Joby Thomas Kakkassery[a*], Vinod P. Raphael[b], K. Ragi[a] and Reeja Johnson[a]

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[a]*Centre for Electrochemical Studies, Department of Chemistry, St. Thomas' College (Autonomous), Thrissur, Kerala 680001, India*
[b]*Department of Chemistry, Government Engineering College, Thrissur, Kerala, India*

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ABSTRACT

The corrosion inhibition power of an eco-friendly green inhibitor *Ixora coccinea* extract (ICE) for mild steel in 1 M HCl and 0.5 M H_2SO_4 was analysed using physicochemical and electrochemical techniques. 1–5 v/v% ICE was prepared and added into the corrosive acidic media for different analyses. Weight loss measurements conducted for a period of 24hrs for mild steel immersion revealed 89.38% and 77.96% inhibition capacity of ICE in 1 M HCl and 0.5 M H_2SO_4 medium respectively. Electrochemical impedance parameters show that as concentration is increased, efficiency increases and double layer capacitance decreases. Potentiodynamic polarization techniques are also in good agreement with impedance studies and exhibit the mixed type inhibition character of ICE. Electrochemical noise spectrum also strongly supports the anti-corrosive property of ICE and the magnitude of noise signal decreases concerning the increase in ICE concentration. Ixorene, which is one of the major constituents of *Ixora coccinea* leaves was also studied for its corrosion inhibition nature by quantum mechanical calculations and was found to match with all other results. Adsorption studies of ICE are in accordance with Langmuir isotherm. Surface morphological studies confirm the formation of a protective barrier on mild steel surface in both media, i.e., 1 M HCl and 0.5 M H_2SO_4.

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Experimental and Theoretical Investigations on the Corrosion Inhibition action of Thiadiazole Derivatives on Carbon Steel in 1M HCl medium

REEJA JOHNSON[1], JOBY THOMAS KAKKASSERY[2*], VINOD RAPHAEL PALAYOOR[3], RAGI KOOLIYAT[4] and VIDHYA THOMAS KANNANAIKKAL[5]

[1,2,4,5]Centre for Electrochemical Studies, St. Thomas' College (Autonomous), Thrissur, (University of Calicut), Kerala-680001, India.
[3]Department of Chemistry, Government Engineering College, Thrissur, Kerala-680009, India.
*Corresponding author E-mail: drjobythomask@gmail.com

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ABSTRACT

Novel thiadiazole derivatives of Schiff bases namely (E)-N-(anthracen-9-ylmethylene)-5-(4-nitrophenyl)-1,3,4-thiadiazol-2-amine (A9CNPTDA) and N-(anthracen-9(10H)-ylidene)-5-(4-nitrophenyl)-1,3,4-thiadiazol-2-amine (ANNPTDA) were synthesized, characterized and

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Corrosion inhibition of mild steel by N, N'-(5,5- dimethylcyclohexane-1,3-diylidene)dianiline in acid media: Gravimetric and electrochemical evaluations

K. Ragi[a], Joby Thomas Kakkassery[a*], Vinod P. Raphael[b], Binsi M. Paulson[a] and Reeja Johnson[a]

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[a]*Department of Chemistry, St. Thomas' College Autonomous (University of Calicut), Thrissur, India-680001*
[b]*Department of Chemistry, Govt. Engineering College, Thrissur, India-680009*

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ABSTRACT

The corrosion inhibition efficiency of the Schiff base N,N'-(5,5-dimethylcyclohexane-1,3-diylidene)dianiline (DmChDa) on mild steel in 1M HCl and 0.5M H_2SO_4 was evaluated using gravimetric, electrochemical impedance spectroscopy, potentiodynamic polarization and electrochemical noise measurement. Experimental results established that DmChDa possess relatively high corrosion inhibition capacity. Langmuir and El-Awady adsorption isotherms were obeyed by the Schiff base in 1M HCl and 0.5M H_2SO_4 respectively. SEM analysis showed that DmChDa was adsorbed on the steel surface during corrosion inhibition. The variation of metal dissolution with temperature was also examined using gravimetric study.

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Ethylene-propylene-diene (5-ethylidene-2-norbornene) terpolymer/ aluminium hydroxide nanocomposites: Thermal, mechanical and flame retardant characteristics

Ajalesh Balachandran Nair [a,*], Nisha Nandakumar [b], EP Ayswarya [c], VC Resmi [d], Vidya Francis [e], Neethumol Varghese [a], P Nelson Joseph [a], Rani Joseph [f]

[a] Department of Chemistry, Union Christian College, Aluva -683 102, Kerala, India
[b] Department of Chemistry, Sri Vyasa N S S College, Wadakanchery, Kerala, India
[c] Department of Science and Humanities, Federal Institute of Science and Technology, Mookkannoor, Kerala, India
[d] Department of Chemistry, S N M College, Maliankara, Kerala, India
[e] Department of Chemistry, Carmel College, Mala, Kerala, India
[f] Department of Polymer Science and Rubber Technology, Cochin University of Science & Technology, Kochi-682 022, Kerala, India

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ABSTRACT

Ethylene-propylene-diene rubber (EPDM) composites were fabricated by incorporating aluminium hydroxide (ATH) and high abrasion furnace (HAF) carbon black using two-roll mill mixing strategy. The thermal stability, flammability and mechanical properties of the composites were investigated by thermogravimetric analysis (TGA), limiting oxygen index (LOI), horizontal burning test (UL94 HB), mechanical testing (UTM) and dynamic mechanical analysis (DMA). TGA profiles showed that,EPDM/ ATH composites presented incremented char residue and reduced mass loss rate compared to control EPDM. The incorporation of ATH was found to benefit the flame retardancy of composites. The storage modulus (E') of composites peaked due to the increased stiffness of the material with filler loading. Investigation of visco-elastic properties showed the existence of strong polymer - filler interaction. The morphology of the composites under study and the corresponding char residue obtained after their LOI testing were investigated by scanning electron microscopic studies (SEM).

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Electronic and Optical Properties of Quasi-1D Barium Zinc Chalcogenides Ba_2ZnX_3(X = S,Se,Te): A DFT Approach

Thomas Mathew, Suseel Rahul K, Sujith C. P, Vincent Mathew

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Effect of RF power on structural, electrical,optical properties and surface plasmon resonance of sputtered AZO thin films

K Soumya
Centre for Materials for Electronics Technology (C-MET)
Scientific Society, Ministry of Electronics & Information Technology
Government of India, Shoranur Road, Athani P.O, Thrissur 680 581, INDIA

I.Packia Selvam
Centre for Materials for Electronics Technology (C-MET)
Scientific Society, Ministry of Electronics & Information Technology
Government of India, Shoranur Road, Athani P.O, Thrissur 680 581, INDIA

S N Potty
Centre for Materials for Electronics Technology (C-MET)
Scientific Society, Ministry of Electronics & Information Technology
Government of India, Shoranur Road, Athani P.O, Thrissur 680 581, INDIA

***Abstract*— The effect of radio frequency power on the structural, electrical, optical and plasmonic properties of aluminium doped zinc oxide films coated by sputtering are investigated. The structural results showed that films with good crystallinity are formed at high RF power. The high carrier density necessary for NIR plasmonics was achieved only at 110 RF power. On the other hand, bandgap increased with RF power was in accordance with the BM effect. The real permittivity of the AZO films extracted using Drude-Lorentz approach revealed negative values for ε_1 in the NIR wavelength only at a sputter power of 110W. This was further verified by exciting SPR theoretically based on Kretschmann configuration.**

***Keywords*— plasmonics, AZO, Kretschmann configuration.**

Introduction

Plasmonics is one of the emerging fields in the nanophotonics and has received much attention due to the potential applications extended from spectrally selective coatings on substrates to various sub-wavelength devices including chemical as well as biological sensors. This is achieved by overcoming the limitations of photonics and plasmonics helped to manipulate light beyond the diffraction limit at the nanoscale level. At specific wavelength, on the interface of metal-dielectric, the incident light will excite the free electrons and this collective oscillations of electrons is defined as surface plasmon resonance (SPR)[1].Generally, metals like gold and silver were considered as the conventional plasmonic material due to their minimum loss in the UV-VIS region. But their large loss beyond visible region makes them unsuitable for NIR plasmonic applications[2].The loss enduring in plasmonics includes the damping due to free carrier scattering and the carrier's intra/interband transitions, and those losses limit the feasibility of materials for plasmonic applications[3].Transparent conducting oxide such as tin doped indium oxide (ITO), aluminium/ gallium /indium doped zinc oxide (AZO, GZO, IZO) etc have been received remarkable attention due to their low resistivity and high transmittance. These materials are suitable candidates for plasmonic applications in the near or mid infrared regions. Among them ITO is the most commonly used TCO material because of its high carrier density and the high mobility [4].Due to the fact of high cost, an alternative to this material is always in demand. Among all TCO materials, ZnO is nontoxic, abundance and inexpensive. It is a n-type semiconductor having bandgap of nearly 3.3eV and suitable addition of group III elements such as Al/In/Ga can generate free carriers and thus achieve significant improvement in the electrical properties [5].

It has been recently proposed that AZO thin films can be optimal choice of plasmonic applications in the NIR wavelength [1, 2, 6]. By controlling the deposition conditions in RF sputtering, the carrier concentration can be tuned to obtain required carrier density ~10^{20}/cm^3 [1].For this most of the researcher's use sintered solid targets[1,2].Here we used powder as sputtering target so that required doping percentage can be optimized. The plasma frequency ω_p of the material depends on the carrier density (n) as [6]

$$\omega_p^2 = \frac{ne^2}{m\varepsilon_0}, \qquad (1)$$

Where e is the electronic charge, m is the effective mass of the free carrier and ε_0 is the permittivity of vacuum.

I. Experimental Details

In this work, we used Al doped ZnO powder for RF sputtering, and systematically studied the effect of deposition power on structural, electrical optical and surface plasmon resonance. Al doped ZnO (AZO) powder was prepared by solid state ceramic route. For this, ZnO powder was mixed with Al_2O_3 for 1 hour and calcined at 700ºC for 3 hours. For RF sputtering, the chamber was evacuated to 5 x 10^{-6} mbar and working pressure was set to 5 x 10^{-3}mbar. By fixing the deposition time as 1 hr and target-substrate distance as 5 cm, thin films were coated by varying RF power from 70W to 110W on glass substrates.

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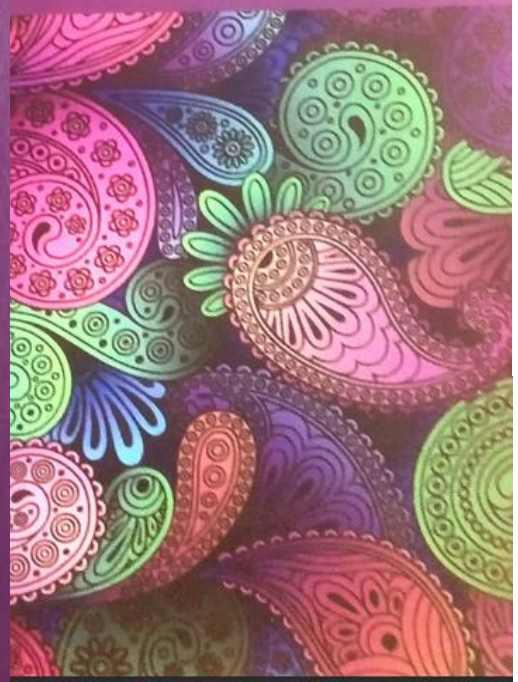
തുടി

കണ്ണൂർ സർവ്വകലാശാല
മലയാള വിഭാഗം

2020 ജൂലൈ - സെപ്തംബർ വാല്യം 8 ലക്കം 3



തുടി
റിസർച്ച് ജേർണൽ
2020 ജൂലൈ - സെപ്തംബർ, വാല്യം-8, ലക്കം-3

ഉള്ളടക്കം

ഹിമവാന്റെ മുകൾത്തട്ടിൽ - യാത്ര, അനുഭവം, ആഖ്യാനം

ഡോ.ആശാമോൾ എസ്.

മലയാളത്തിലെ സഞ്ചാരസാഹിത്യശാഖയിൽ വളരെ ശ്രദ്ധേയമായ മുന്നേറ്റമാണ് ഹിമാലയ സഞ്ചാരസാഹിത്യകൃതികൾക്ക് ഉണ്ടായിട്ടുള്ളത്. അതിൽത്തന്നെ അവതരണത്തിന്റെ ലാളിത്യംകൊണ്ടും സമീപനത്തിന്റെ സമഗ്രതകൊണ്ടും സവിശേഷ ശ്രദ്ധയ്ക്കർഹമായ കൃതിയാണ് രാജൻ കാക്കനാടന്റെ ഹിമവാന്റെ മുകൾത്തട്ടിൽ. 1975 ൽ രാജൻ കാക്കനാടൻ കാൽനടയായി നടത്തിയ ബദരീനാഥ് കേദാർനാഥ്, തുംഗനാഥ് ക്ഷേത്രദർശനങ്ങളാണ് ഈ കൃതിയ്ക്കടിസ്ഥാനം. ഹിമാലയത്തിലെ പ്രധാനപ്പെട്ട മൂന്ന് തീർത്ഥാടനകേന്ദ്രങ്ങളിലൂടെയാണ് യാത്രികൻ തന്റെ യാത്ര പൂർത്തിയാക്കുന്നത്. എങ്കിലും സമീപനത്തിന്റെയും അവതരണത്തിന്റെയും തലത്തിൽ ആ കൃതി സ്വീകരിച്ചിരിക്കുന്ന പുതുമ സാഹിത്യത്തിലെ മറ്റ് ഹിമവത്‌യാത്രാനുഭവങ്ങളിൽ നിന്നെല്ലാം അതിനെ വ്യത്യസ്തമാക്കുന്നു. ഒരു തീർത്ഥാടകനെയും മനുഷ്യസ്നേഹിയേയും സാഹസികനെയും സർവ്വസംഗപരിത്യാഗിയായ സന്യാസിയേയും എല്ലാം ഈ ഗ്രന്ഥകർത്താവിൽ ഒരേസമയം കണ്ടെത്തുന്നതിനാകും.

തെക്കൻ രാജസ്ഥാനിലെ ആബുശൃംഗത്തിന്റെ വടക്കുപടിഞ്ഞാറായുള്ള ഗണേഷ് പോയിന്റിനടുത്തുള്ള ഗുഹയിൽ പാർക്കുന്ന കൃഷ്ണശരൺ എന്ന സന്യാസിയിൽ നിന്നും ഹിമാലയൻയാത്രയുടെ പ്രാധാന്യത്തെക്കുറിച്ച് മനസ്സിലാക്കിയ ഗ്രന്ഥകാരൻ കയ്യിൽ ആവശ്യമായ പണമോ, തണുപ്പിൽനിന്ന് രക്ഷനേടുന്നതിനും പർവ്വതാരോഹണ

2021-22

DEPARTMENT		NAME OF FACULTY	NUMBER OF PUBLICATION IN UGC CARE LIST
BCOM		DR SANEESH C, HUSITHA PRASANTH, K SOORAJ MENON	1
BOTANY		DR V K SREENIVAS, DR AKHILA	1
CHEMISTRY		DR R MANU, DR NISHA NANDAKUMAR, DR RAGI K	2
ECONOMICS		DR DHANYA S, GAYATHRI SOMASEKHARAN	1
PHYSICS		DR SUSHEEL RAHUL, DR SOUMYA K	1
LANGUAGE			
	HINDI	DR P GEETHA	5
TOTAL			**11**

ANVESAK
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ECONOMICS AND BUSINESS MODEL OF INDIAN NEWSPAPER BUSINESS

Dr. Sanesh C Assistant Professor & Head, Sri Vyasa N.S.S College, Wadakkanchery, Thrissur, Kerala, India.
Dr. B. Johnson Professor & Head, Department of Commerce and Management Studies, University of Calicut, Kerala, India.

Abstract

India is the second largest newspaper market in the world. It is growing in double digits. The increasing literacy rate in rural India has seen the growth of the newspaper industry by circulation figures. Of the hundred subscriber's paid-for daily newspapers in the world, twenty-one is from India. The Newspaper industry is one of the most stable and profitable businesses in India. By opening up of Foreign Direct Investment [FDI] in print media, the last few years have seen dozens of new editions and brands being launched. From different regions of the world, we are in receipt of reports of reducing circulation figures and revenue drops as well as staff strength reduction at some newspapers or the other in America or the United Kingdom. While looking the future of the Indian newspaper industry, it cannot see the immediate loss of advertising and readership experienced by many western newspapers. There are mainly two reasons for this: One is the possibility of growth given that newspaper penetration is quite low. The other factor is that newspaper agents through the delivery boys appointed by them deliver daily newspapers in India at home. In the western markets bulk of newspaper, sales came from newsstands and through vending machines. Until the home subscription delivery model works economically, it will be very difficult to take out dailies from the family's media basket.

Key words: Newspaper, Circulation, Subscription, Readership, Brand Extension

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Introduction

A newspaper is a regularly scheduled publication containing news of present events, information giving articles, different features and advertising. Newspapers are generally printed on relatively inexpensive, low-grade paper known as newsprint. Newspapers typically publish stories on local, national and international political events and personalities, crime, business, entertainment, society, and sports. Most traditional papers also feature an editorial page and columns that express the personal opinions of writers. A newspaper is generally funded by paid subscriptions and advertising. Newspapers

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COMPARATIVE EVALUATION OF NUTRITIONAL AND PUNGENCY QUALITIES OF SELECTED CHILLI CULTIVARS

Anuroopa A R[1,2*] and Sreenivas V K[1]

[1]*Department of Botany, Sri Vyasa N.S.S. College, Wadakkanchery - 680 582, Kerala*
[2]*Centre for Research and Evaluation, Bharathiar University, Coimbatore - 641 046, Tamil Nadu*

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Chilli is a popular spice plant from the family Solanaceae. It is famous for pungency and is an indispensable part of our daily life, not only in India but all over the world. The place of origin of chilli is believed to be America. In pre-Colombian times capsicum was widely used in central and south America. Archeological evidences suggest that the Indians used to eat chillies as early as 7000 BC, although these were probably wild plants (Vaughan *et al*., 1997). Throughout the world chilli is consumed fresh, dried or powdered (El-Ghoraba *et al*., 2013). In world, area and productivity of chilli is around 20.20 million hectare and 37.62 million tons respectively. The largest producer of chillies in the world is India accounting for 13.76 million ton annually out of the total 37. 62 million ton global chilli production (Geetha *et al*., 2017). The present term 'chilli pepper' refers to varieties with small and spicy fruits, on contrary the term 'sweet pepper' refers to varieties with larger and little or no spicy (Tripodi and Sanjeet, 2019). The uniqueness of chilli is the typical pungency due to the presence of capsinoids, which are secondary metabolites and derived of phenylpropanoids produced in placental epidermis cell and accumulated in structures located on placenta surface (Stewart *et al*., 2007). Capsaicin and dihydroxy capsaicin are the two predominant compounds accounting for almost 90 percent of total capsinoids. Anti-inflammatory, anti-cancer and anti-obesity activities have been linked to capsinoids (Luo *et al*., 2011). In India, C. *annuum* and C.

available chilli powder from Kerala.

Preparation of sample

Samples were prepared with six different types of fresh chilli fruits, *i.e*., Bullet chilli, Piriyan chilli, Pacha chilli, Sambari chilli, Bajji chilli (*C.annuum* L.), Kanthari chilli (*C. frutescens* L.) and one commercially available chilli powder (MC) available in Kerala, India. The materials were washed thoroughly with double distilled water and shade dried for 10-12 days. Dried samples were powdered with the help of grinder and stored in airtight container, each sample was weighed and used for further analysis. Moisture, ash, fat and crude fibre contents were estimated by AOAC method (1998).

Moisture

Thermogravimetric analysis was used for the determination of moisture content. Five g of chilli fruits was taken in a porcelain dish and placed in an electric oven maintained at 105^{0}C ± 2^{0}C for 5 hours. The dish was cooled in a desiccator and weighed. The process of heating and cooling in a desiccator was repeated until the differences in two successive weights was less than 1 mg.

Ash content

The crucible was heated to 550±25^{0}C in a muffle furnace, and cooled in a desiccator (M0). Two g of the sample was weighed into a crucible (M1), and about 2ml

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Fabrication of Cu-WO_3-functionalised multiwalled carbon nanotubes composite film electrode by direct deposition for sensing application

M. Reshma, R. Manu *

Research Department of Chemistry, Sri Vyasa NSS College, Wadakkanchery, Thrissur, Kerala, 680623 INDIA

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ABSTRACT

Development of nano composite film electrodes have been widely researched for its application as sensors, pseudo capacitors and negative electrodes. Different types of metal oxides, nano materials and various deposition techniques were concomitantly employed for fabrication of this type of electrodes. In the present work electroless deposition technique was applied for formation of copper seed layer over flexible poly ethylene substrate and further electrodeposition of WO_3-functionalized multi walled carbon nanotube (fMWCNT) on to copper seed layer. Stable conducting films with uniform morphology of WO_3-fMWCNT nano composite was formed over flexible copper substrate. The composite film possessed good electrochemical stability as revealed from various electrochemical analysis. The Cu-WO_3-fMWCNT films were used as sensor for qualitative analysis of lubricant oils subjected to aging process under controlled conditions. The developed film electrode give good response curve in the impedance spectroscopy technique during the analysis of fresh and aged lubricant oil Different techniques such as X-ray Powder Diffraction, Scanning Electron Microscopy, Energy Dispersive X-Ray analysis with mapping pattern and Fourier Transform Infrared technique was used for characterization of the hybrid film electrode.

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Tinospora cordifolia extract as an environmentally benign green corrosion inhibitor in acid media: electrochemical; surface morphological, quantum chemical, and statistical investigations

Vidhya Thomas K [a] ✉, Joby Thomas K [a] ✉, Vinod Rapheal P [b], A.S. Sabu [c], K. Ragi [a], Reeja Johnson [a]

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COMPOUND GROWTH RATE IN INSTITUTIONAL CREDIT TO AGRICULTURE WITH SPECIAL REFERENCE TO PALAKKAD DISTRICT

Dhanya. S

Introduction

Modern Agricultural Technology requires heavy investment in current inputs like high-yielding seeds, fertilizers, and pesticides as well as in certain items of medium and long-term investment such as machinery, irrigation, land improvement, etc. The vast majority of Indian farmers has no savings for investment purposes and would be deprived of the benefits of modern technology. Credit being the lifeblood of agriculture, free flow of credit would rejuvenate this sector. Infusion of short, medium and long term credit for improving irrigation, development of land, acquiring equipment's and machines, production of crops processing and marketing in agriculture. Financing agricultural development through institutions aims at enabling the farmers and the agricultural sector to move on to a better technology and create a sustained increase in agricultural output. Compound growth of institutional credit to agriculture and allied activities during the year 1998 to 2009 in Palakkad district has been considered and computed for this purpose

Research Gap

The study helpsto know thegrowth and extent of institutional credit disbursement toagricultural and allied activities by Cooperatives, Commercial banks and Regional rural banks in Palakkad district. It also analyzed the socio economicfactors influencing the credit. For this both primary and secondary data were used. Hence the study is both descriptive and analytical. There are very few studies about institutional agricultural credit with respect to Kerala State and particularly Palakkad district. Hence this study is undertaken. The study highlights policy support to move into a sustainable and higher growth in agricultural productivity in the district.

Research Problem

Palakkad district occupied an important place in Kerala's agriculture scenario. The Palakkad district has the largest cropped area among all the districts of the state.Palakkad, being the largest district, there was a high potential for agriculture in the district. But it continues to be one of the backward districts in the state. The share of the agriculture and allied activities in the domestic product of the district is 14.17 at constant prices during 2008-2009 and is higher than the state average of 12.42 percentOut of the total rice production in the State during 2007-2008, 46.22 percent is contributed by the district. There are 436 bank branches in the district. The average population covered by one bank branch is around 6002, which is more than that of many of the districts in the State. Despite having many favorable features, progress achieved in agriculture sector in the district has not been

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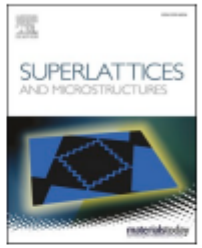

Density functional study of structural, electronic and optical properties of quasi-one-dimensional compounds $BaTiX_3(X = S, Se)$

Thomas Mathew [a,b], Suseel Rahul K [a,c], Saji Joseph [d], Vincent Mathew [a,*]

[a] Department of Physics, Central University of Kerala, India
[b] Department of Physics, St Stephen's College, Uzhavoor, Kerala, India
[c] Department of Physics, Sree Vyasa NSS College, Wadakkanchery, Kerala, India
[d] Department of Physics, Pavanatma College, Idukki, Kerala, India

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ABSTRACT

Structural, electronic and optical properties of the quasi-one-dimensional material $BaTiSe_3$ were investigated using density functional theory and were compared with that of $BaTiS_3$, which is well known for exhibiting the highest broadband giant birefringence. The relative stability of two different structures of $BaTiS_3$, one crystallizing in the space group $P6_3/mmc$ and another in $P6_3mc$ were studied using the PBE exchange-correlation functional. It was found that the recently synthesized $P6_3mc$ structure is more stable than the $P6_3/mmc$ structure. Electronic structure calculations with HSE06 and DFT + U methods predicted that both $BaTiS_3$ and $BaTiSe_3$ are narrow band gap semiconductors. These calculations also showed that $BaTiS_3$ is a direct band gap semiconductor while $BaTiSe_3$ is an indirect band gap semiconductor. Calculations of optical properties using the DFT + U method for different U values showed that both materials exhibit giant optical anisotropy. Birefringence of both materials were calculated and compared with experimental results of $BaTiS_3$. It was found that $BaTiSe_3$ exhibits broadband giant birefringence at least of the order of that exhibited by $BaTiS_3$.

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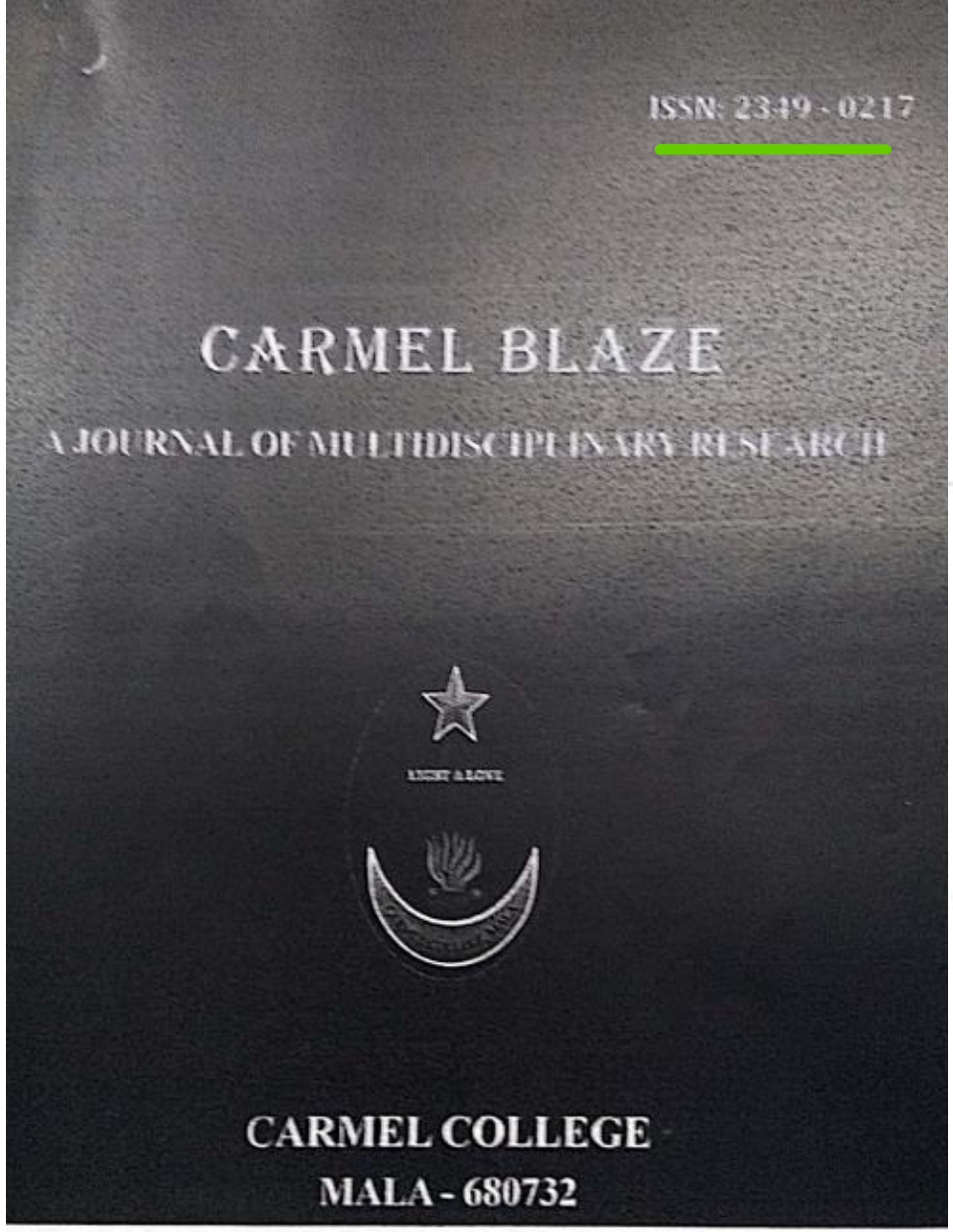

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इतिहास से वर्तमान में तब्दील होते दहशतनाक यथार्थ का कथा-संदर्भ

Dr. P. GEETHA,

Associate Professor & Head, Dept. of Hindi, Sri Vyasa N.S.S. College, Wadakkanchery, Thrissur.

Email. geethavk15@gmail.com

Abstract

साहित्य का मानव-जीवन से रिश्ता कोई नयी बात तो नहीं है। 'साहित्य समाज का दर्पण है' जैसे क्लीशेनुमा वक्तव्यों को हाशिए में रखते हुए भी हम इस सत्य से नज़रअंदाज़ तो नहीं कर पायेंगे कि साहित्य समाज की पुनर्रचना ज़रूर है। हिंदी साहित्य का वर्तमान परिदृश्य इस सत्य को वाकई रेखांकित करता है। अब के हिंदी रचनाकार, वे चाहे कवि हो, उपन्यासकार हो,कहानीकार हो या नाटककार, अपनी सामाजिक प्रतिबद्धता को इस तरह पेश कर रहे हैं कि उनकी सामाजिक दखलअंदाज़ी किसी महान सामाजिक कार्यकर्ता से उतनी कम नहीं है। इस दृष्टि से कथाकार पंकज सुबीर का नाम इसलिए उल्लेखनीय है कि उन्होंने अपने जीवन-काल के पूर्वार्ध में ही सशक्त कहानियों और

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स्त्री और परिस्थिति : शोषण का अंतहीन सिलसिला।

Dr. P. Geetha
Associate Professor & Head, Dept. of Hindi,
Sri Vyasa N.S.S. college, Wadakkanchery, Thrissur Dt..
Email -geethavk15@gmail.com

सारांश

वर्तमान भारतीय साहित्य की प्रमुख विशेषताओं में एक है, समाज और समय के साथ उसकी गहन संपृक्तता। हिंदी साहित्य का वर्तमान परिदृश्य भी इससे अछूता नहीं है। समाज की महीन-सी धडकनों को भी आज के साहित्यकार तुरंत पहचानते हैं और उन्हें सर्जनात्मक रूप देते भी हैं। इस प्रवृत्ति में विधागत अंतर उतना नहीं है। कविता, कहानी, उपन्यास जैसी केंद्र-विधाओं की किताबों का दिन-ब-दिन बढता प्रकाशन और उनमें कई रचनाओं का उपर्युक्त समय और समाज-सापेक्षता के कारण चर्चा के केंद्र में आना इसका सबूत है। इन विधाओं की तुलना में नाटक का प्रकाशन अपेक्षाकृत कम हो गया है। लेकिन कुछ साल पहले तक हिंदी में नाटक भी सशक्त विधा रही थी। मोहन राकेश से शुरू होनेवाली एक सशक्त परंपरा वर्षों तक हिंदी में अपनी अलग पहचान बनाती रही थी। इनमें से कई नाटक अपनी बहुआयामी अर्थ-संपुष्टता के बावजूद वांछित आस्वादन और आकलन से छूट गये हैं। वर्तमान दौर में उनमें से कुछ नाटकों का गंभीर पुनर्पाठ हो रहा है।

भीष्म साहनी का मशहूर नाटक 'माधवी' इस प्रकार की एक रचना है, जिसको वर्तमान संदर्भ में परखने पर उसकी कुछ अनुद्घाटित उपलब्धियाँ सामने आएँगी। इस अनुसंधानात्मक लेख में एक ऐसे पुनर्पाठ के ज़रिए प्रस्तुत नाटक की प्रासंगिकता को बाहर लाने का प्रयास किया जा रहा है। 'माधवी' उसके प्रकाशन-काल में ही उसमें व्यंजित स्त्री-चेतना की अहमियत के कारण बहु चर्चित नाटक रहा था। लेकिन उस समय में स्त्री-विमर्श के जो आयाम थे, उनकी कसौटी पर ही इसका मूल्यांकन हुआ था। लेकिन आज जब स्त्री-विमर्श के अंतर्गत पारिस्थितिक स्त्री-विमर्श अपनी जो नयी ज़मीन खोज रहा है, उस संदर्भ में इस नाटक का पुनर्पाठ अधिक प्रासंगिक लगता है। इसके मूल में यह तथ्य काम कर रहा है कि स्त्री और परिस्थिति दोनों व्यवस्था की स्वार्थ-केंद्रित मनोवृत्ति के कारण गहरे शोषण और दोहन की प्रक्रिया से गुज़र रही हैं। आगे इस शोषण और

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Authored By

Dr. P. GEETHA, M.A., M.Phil., Ph.D., B.Ed.,
Associate Professor & Head, Dept. of Hindi,Sri Vyasa N.S.S. College, Wadakkanchery, Thrissur
Dt..PIN – 680623. Kerala

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Dr. P. GEETHA, M.A., M.Phil., Ph.D., B.Ed.,
Associate Professor & Head, Dept. of Hindi,Sri Vyasa N.S.S. College, Wadakkanchery, Thrissur
Dt..PIN – 680623. Kerala –geethavk15@gmail.com

सारांश

प्रगतिशील कविता के मेरुदंड के रूप में मशहूर नागार्जुन की असली महत्ता को एक जनकवि की हैसियत से मानना ही अधिक संगत है। वे विद्रोही अवश्य हैं - भारतेन्दु और निराला के बाद सबसे समर्थ व्यंग्यकार भी, बावजूद इसके, उनकी जो अजीबोगरीब खूबी है, वह इस वर्ग के दूसरे कवियों से उन्हें अलगानेवाला सबसे ठोस पहलू है। नागार्जुन के इस सर्जनात्मक व्यक्तित्व का उद्घाटन करते हुए प्रभाकर माचवे ने जो कहा है उससे शायद कोई असहमति नहीं प्रकट करेंगे कि "श्री नागार्जुन के साहित्य की शक्ति उनके जनता के प्रति निकटतम संपर्क और जन-साधारण की आशा- आकांक्षाओं से अपने आपको एकाकार करने में है। वे सच्चे अर्थ में जन कवी हैं" [1] भारतीय अस्मिता से कवि का जो गहरा रिश्ता है, वह महज एक प्रगतिवादी कवि के संकुचित दायरे से भारतीय जन-मानस के सजग चितेरे के व्यापक धरातल पर पहुंचने में उन्हें मदद दे सका है। सामान्य जन-मानस के बहुरंगी विकल्पों में से फूट निकलनेवाली इस काव्य-धारा में ठेठ भारतीय संस्कृति में रंगे हुए हीरे बिखरे पड़े हैं। इस विशेष संदर्भ में नागार्जुन को हिंदी की प्रगतिशील कविता के सच्चे प्रतिनिधि कहे तो अत्युक्ति नहीं होगी।

बीज शब्द :नागार्जुन, कविता, संस्कृति, प्रकृति।

नागार्जुन की सांस्कृतिक बारीकियों की चर्चा करने से पहले डॉ. रामविलस शर्मा द्वारा संस्कृति के बारे में दी गई एक सामान्य परिभाषा को उद्धृत करना समीचीन लगता है, क्योंकि वह नागार्जुन की सांस्कृतिक दृष्टि को परखने की सही कसौटी होगी - "संस्कृति का उद्गम समाज है, मानव संगठन के बिना संस्कृति की कल्पना ही नहीं की जा सकती। अपने जन्म से ही संस्कृति मनुष्य के परस्पर मिले-जुले जीवन का प्रतिबिंब बन जाती है। मानसिक धरातल पर वह उनके बौद्धिक संबंधों का प्रतिरोध उपस्थित करती है।"[2] संस्कृति का तथाकथित स्वरूप नागार्जुन की कविता में ढूंढना व्यर्थ ही होगा। उनकी कविताओं में उभरने वाली संस्कृति का सीधा संबंध भारतीय जनजीवन से हैं, यहाँ के किसानों, मज़दूरों, खेतों में और फैक्टरियों से हैं, साथ ही यहाँ की प्राकृतिक सुषमा से है। इसका मतलब यह नहीं है कि प्राचीन सांस्कृतिक मूल्यों से उनकी कविता अलग है। उन्होंने किसी भी सांस्कृतिक मूल्य से परहेज नहीं किया, अपितु, मूल्यों की सार्थकता पर विचार करते समय वर्तमान जीवन स्थितियों की कसौटी पर उन्हें परखने का प्रयास किया। या यों कहें कि उनके सामने भारतीय जन-जीवन केंद्र में है, दूसरी सभी स्थितियाँ उसकी पूरक सिद्ध होती हैं।

नागार्जुन के मन में सांस्कृतिक गतिविधियों के अनुरूप कवि-चेतना को जगाने में एकाधिक पहलू प्रेरणा स्रोत बन गए हैं। अपनी जन्मभूमि मिथिला, अपने परिवार और आसपास का संस्कृत-निष्ठ परिवेश आदि किशोर वैधनाथ मिश्र के मन में भारतीयता के प्रति मोह जगाने में सहायक तो अवश्य हुए हैं। बाद में, संस्कृत, हिन्दी और मैथिली के असीमित पांडित्य के कारण कालिदास और उनकी रचनाओं में गोता लगाने और उनकी बारीक से बारीक खूबियों से नाता जोड़ने का मौका भी उन्हें मिला। कालिदास की रचनाओं के प्रभाव से हिमालय के प्रति आकर्षण और उसके द्वारा हिंदुस्तान की वैविध्य-भरी प्रकृति से रचनात्मक रिश्ता जोडने में वे सफल निकले।

नागार्जुन आस्था और संकल्प के कवि हैं। प्रगतिशील चिंतन की चिंगारियों से मुक्त होते हुए भी उनकी कविता लोकमंगल की भावना के मृदुल स्पर्श के कारण अपनी अलग पहचान रखती है। वह प्रगतिशील अवश्य हैं, परंतु उसके साथ-साथ या उससे ज्यादा मूल्यान्वेषी और मानवतावादी हैं, जो नए मूल्यों के जीवनोपयोगी पहलू पर ज़ोर देते हैं। संक्षेप में कहें, तो उसकी प्रगतिशीलता ठेठ सैद्धान्तिक नहीं है, वरन् उसके व्यावहारिक पहलू बुलंद हैं। आजादी के तुरंत बाद लिखी हुई कविता 'लाल भवानी' इस दृष्टि से उल्लेखनीय है। स्वतंत्रता-प्राप्ति कवि की राय में मात्र एक घटना है, जिसका प्रत्यक्ष प्रभाव भारत के जनजीवन पर नहीं के बराबर है। उनके मन में नौकरशाही,

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यू.जी.सी. से अनुमोदित हिन्दी मासिक पत्रिका

हिन्दी विद्यापीठ,
टी.सी.44/2670,जगती,
तिरुवनन्तपुरम- 695014
केरल।

संस्थापक संपादक :
स्व.पी.जी.वासुदेव

मुख्य संपादक :
डॉ.वी.वी.विश्वम
Mob: 9446662694
sangrathan2012@gmail.com

संपादक:
डॉ.एम.एस.विनयचन्द्रन
Mob: 9447657301
msvinayachandran61@gmail.com

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प्रोफ़.हिल्डा जोसफ
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धरती से रागात्मकता के व्यावहारिक कदम

डॉ.पी.गीता

डॉ.सुंदरलाल बहुगुणा

सुंदरलाल बहुगुणा भारत के पारिस्थितिक कार्य-कर्ताओं में पहली पंक्ति में आनेवाले हस्ती हैं। युवावस्था से ही तरह-तरह के जन-आंदोलनों में उनकी सक्रिय भागीदारी रही थी। अछूतोद्धार, खादी, पर्यावरण आदि उनके प्रमुख कार्य-क्षेत्र थे। 'चिपको आंदोलन' और टिहरी बाँध के विरुद्ध लंबा प्रतिरोध उनके जीवन की दो मार्मिक घटनाएँ हैं, जो सिर्फ भारत में ही नहीं, पूरे विश्व में भी काफी चर्चित हुई। इसके बावजूद पर्यावरण उनका मुख्य कर्म-क्षेत्र था। इस क्षेत्र में पंडित सुंदरलाल बहुगुणा का योगदान अत्यंत महत्वपूर्ण है। निष्ठावान जीवन ही उनके व्यक्तित्व की विशेषता है और अनवरत प्रयत्नशीलता सोने में सुगंध के समान उनके गुणों को और भी उजागर करती है। पर्यावरण और प्रकृति की सुरक्षा की जितनी ही लड़ाइयाँ हों, उनको उन्होंने नई चेतना दी। उनकी मृत्यु से भारत एक सतर्क पारिस्थितिक स्वयंसेवक खो बैठा है।

असल में आज धरती की पुकार नहीं, धरती का क्रंदन सुनाई पड़ रहा है। भारतीय परंपरा में नारी का आदर हो रहा था या शोषण, इस विषय को लेकर तर्क-वितर्क होने की संभावना है लेकिन यह सर्वविदित है कि हमारी परंपरा में प्रकृति का शोषण कभी नहीं हुआ करता था। आदिम काल से लेकर यहाँ प्रकृति का आदर होता रहा, प्रकृति को देवता मानकर उसकी पूजा हो रही थी। यदि हमें एक वृक्ष काटना है तो उससे प्रार्थना करके अनुमति ली जाती थी और उस पर जो पशु-पक्षी निवास करते हैं उनसे प्रार्थना करनी पड़ती थी कि वहाँ से दूर जाएँ। वृक्ष को काटने के बाद उसी के कई पौधे रोप दिए जाते थे। हमारी पुरानी संस्कृति में धरती के प्रति श्रद्धा-भाव के कई उदाहरण मिलते हैं-

"विष्णु पत्नी नमः रेणुकं पादरक्षस्व मे"

("हे धरती माता! मैं तुम्हें नमस्कार करता हूँ। मजबूरी से मुझे तुम्हारे ऊपर चलना पड़ता है, पैरों से रौंदना करना पड़ता है, इसलिए मुझे क्षमा करो।")

यह भी नहीं, वृक्षों के संदर्भ में भी अहिंसा के तत्व को कार्यान्वित करने की बात पर ज़ोर दिया जाता था। 'मनुस्मृति' में कहा गया है कि वृक्षों को काटनेवालों को वृक्षों के प्रयोजन के अनुसार कठिन से कठिन दंड दिया जाना चाहिए-

"वनस्पतीनाँ सर्वेषामुपभोगम् यथा/तथा तथा दम का हिंसयामिति धारणा।"[१]

हमारे पूर्वजों के मन में हमारे भविष्य की चिंता थी। लेकिन तकनीकी और प्रौद्योगिकी की दुनिया में हरेक क्षेत्र में प्रकृति का शोषण हो रहा है। अर्थ, ईश्वर बन गया है। आधुनिक मानव इतना स्व

१. मनुस्मृति, ८/२८५

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शोध सरोवर पत्रिका

आरती, वट्टपक्काडु, तिरुवनन्तपुरम - 695 014, केरल राज्य।

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इस अंक में

केरल विश्वविद्यालय से अनुमोदित पत्रिका

'वरुणपुत्री' मिथक और समसामयिकता की फैंटसी में झलकता युगीन यथार्थ

• डॉ.पी.गीता

नरेंद्र कोहली हिन्दी साहित्य के बहुमुखी प्रतिभासंपन्न साहित्यकार हैं। वे मुख्य रूप से कथाकार के रूप में विख्यात हैं, परंतु उपन्यास और कहानी के अलावा उन्होंने नाटक, निबंध, आलोचना, व्यंग्य जैसी प्रमुख गद्य विधाओं में अपनी रचनाशीलता का परिचय दिया है। इस दृष्टि से स्वतंत्रता के बाद के प्रतिष्ठित लेखकों में उनका नाम विशेष उल्लेखनीय है। मिथक को आधुनिक संदर्भ से जोड़कर उन्होंने कई महत्वपूर्ण सर्जनाएँ कीं। लेकिन इन रचनाओं में न तो पुराण का अंधानुकरण है और न नवीनता या बौद्धिकता की अतिवादिता है। उनकी दृष्टि संयमित और प्रगतिशील है, इसलिए भारतीय संस्कृति की जड़ों में छिपे हुए कई सत्यों की समकालीन संदर्भ में उन्होंने पुनःसृष्टि की। रामायण, महाभारत आदि पर आधारित उनके बृहदाकार उपन्यास इसके ज्वलंत उदाहरण हैं। बीस से ज़्यादा उपन्यास, करीब दस कहानी-संग्रह, आठ नाटक, दर्जनों व्यंग्य-संग्रह, निबंध-संग्रह, आलोचनात्मक ग्रंथ, बाल साहित्य आदि उनकी रचनाधर्मिता की व्यापकता और गहराई का परिचायक है। सन् 2012 में व्यास सम्मान और सन् 2017 में पद्मश्री से राष्ट्र ने उनको सम्मानित किया है।

'वरुणपुत्री' नरेंद्र कोहली की वास्तविक रचनाधर्मिता से थोड़ा हटकर लिखी गई रचना है। इसे कोलाज(collage) कहा जा सकता है। इसमें मिथक, राजनीति, संस्कृति, वैज्ञानिकता, पारिस्थितिकता, समकालीन राष्ट्रीय और अंतरराष्ट्रीय स्थितियाँ आदि का अजीबोगरीब ताना-बाना देखा जा सकता है। पात्रसृष्टि में भी यह मिश्रण हुआ है। वरुणपुत्री, विक्रम, मत्स्यकन्या जैसे पात्र पौराणिक छवि से युक्त हैं, तो विनोद, संजीव, राजीव जैसे पात्र आधुनिक हैं। उपर्युक्त कोलाजीय परिवेश के कारण उपन्यास में क्रमबद्धता भी उतनी नहीं है, चाहे वह कथ्य के स्तर पर हो या शिल्प के स्तर पर। फैंटसी और यथार्थ का, एक प्रकार से आँखमिचौनी का खेल होने के कारण पठनीयता में भी क्रमानुगतता संभव नहीं है। इसके बावजूद अपने महान उद्देश्य की दृष्टि से प्रस्तुत उपन्यास को प्रतिबद्धता से भरपूर एक विशिष्ट प्रयोग कहा जा सकता है । इसके मद्देनज़र उपन्यास की शिल्पिक कमियों और पठनीयता की बाधाओं को एकदम दरकिनार अंदाज़ किया जा सकता है। यह सात अध्यायों में विभाजित 133 पृष्ठोंवाला छोटा उपन्यास है।

उपन्यास की शुरुआत द्वारका से होती है। विक्रम अपने बाप, सौतेली माँ, उनके दो पुत्र आदि के साथ द्वारका आया था। ये पारंपरिक रूप से धार्मिक नहीं हैं, यहाँ पहुँचने के पीछे घूमने का शौक ही बड़ा कारण है। वे समुद्र सागरतट पर आ बैठा। वहाँ मन न लगने के कारण कहीं दूर के बीच (beach) में ड्राईवर के कहने पर गया। विक्रम का पिता अमीर था। लेकिन विक्रम को संपत्ति पर कोई रुचि नहीं थी। वह प्रकृति से प्यार करता है। प्रकृति में लौटना उनके लिए सदा से माँ की गोद में लौटना जैसा था। विक्रम को सागर ऐसा लगा कि यह सारा सागर श्रीकृष्ण का रूप है । सागर के रूप

2022-23

DEPARTMENT		NAME OF FACULTY	TOTAL NUMBER OF PUBLICATION IN UGC CARE LIST 2018-2023
BOTANY		DR V K SREENIVAS, DR AKHILA	1
CHEMISTRY		DR R MANU, DR NISHA NANDAKUMAR, DR RAGI K	3
ECONOMICS		DR DHANYA S, GAYATHRI SOMASEKHARAN	1
PHYSICS		DR SUSHEEL RAHUL, DR SOUMYA K	1
LANGUAGE			
	HINDI	DR P GEETHA	1
TOTAL			**7**

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PROCEEDINGS

SECOND INTERNATIONAL CONFERENCE ON

PLANT FUNCTIONAL BIOLOGY

(ICPFB-22)

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Development of Pd@MWCNT-Co_3O_4 Electrode Sensors Using Cobalt Recovered from Spent Lithium Ion Batteries

M. Reshma and R. Manu[z]

Research Department of Chemistry, Sri Vyasa NSS College, Wadakkanchery, Thrissur, Kerala 680623, India

The rampant use of various types of energy storage devices for different applications poses a great threat to the environment as most of the materials after their usage are not recycled properly. Battery materials that are exposed to the environment without proper recycling or recovery protocol are of more concern. In the present work, the chemical components recovered from spent lithium batteries were processed through suitable methods and were utilized for the fabrication of electrode materials for sensor application. The present work demonstrates a highly sensitive and cost-effective method for fabricating disposable non-enzymatic glucose sensors based on Pd functionalized MWCNT-Co_3O_4 electrode using cobalt recovered from a spent Li-ion battery. The incorporation of palladium onto the multi-walled carbon nanotube (MWCNT) and further deposition of this composite onto the Co_3O_4 substrate greatly enhanced the glucose sensing characteristics. The sensing behavior of the Co_3O_4 electrode and Pd@MWCNT-Co_3O_4 electrode towards glucose electro-oxidation were compared using Cyclic Voltammetry (CV) and Chrono-amperometric (CA) techniques. A very low detection limit of 0.6 μM was obtained by the Pd@MWCNT-Co_3O_4 electrode towards glucose sensing. The sensor fabrication process was economical and possessed excellent stability, selectivity and good reproducibility.
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Different types of battery/energy storage systems are concomitantly used for various types of applications that require a continuous and steady power supply. The battery materials which are dumped to Earth without any recycling after their life cycle pose a great threat to the environment and human life. As the use of electric vehicles and electronic gadgets starts to grow exponentially, the pile-up of various battery waste materials that once powered various systems posed environmental concerns. Industry analysts predict that by 2020, China alone will generate some 500,000 metric tons of used Lithium-ion batteries (LIB) and that by 2030, the worldwide number will hit 2 million metric tons per year. If current trends for handling these spent batteries are not properly addressed, most of these systems may end up in landfills without any proper recycling process. These popular power packs contain valuable metals and heavy metal spills, result in environmental pollution. When heated, these organic materials can produce hazardous gases like HF, Cl_2, CO_2 and CO leading to global warming. Due to these concerns, it is highly desirable to recycle LIB. More over the economic value of spent LIB rises on the extraction of valuable metals from these batteries by various techniques.[8] Cobalt is included in the category of "Critical Raw Materials" (CRM) due to its high economic value and lack of its supply from the corresponding sources. Natural graphite and phosphorous which are used in batteries are also included in the CRM category. So recovery of cobalt is one of the salient processes in the recycling of battery materials.[9] The recovered cobalt can be converted into various forms by suitable methods. Cobalt oxide is one such material that can be synthesized by various experimental methods. The different nanostructured

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The fabrication of TiO_2/AgCNF/Nafion/GC electrodes for simultaneous electrochemical detection of Cd(II), Pb(II), Cu(II), and Hg(II) by optimizing the porosity of electrospun TiO_2 nanofibers

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Silicon
https://doi.org/10.1007/s12633-021-01185-2

ORIGINAL PAPER

Isolation and Characterization of Fibrillar Nanosilica of Floral Origin: *Cortaderia selloana* Flowers as the Silica Source

M. A. Shadiya[1,2] · C. D. Midhun Dominic[3] · Nisha Nandakumar[4] · Rani Joseph[2] · K. E. George[2]

Received: 6 January 2021 / Accepted: 27 May 2021

Abstract
Herein we report a novel green chemical route by exploiting the vast and abundant flowers of *Cortaderia selloana*, known as 'pampass grass' for the isolation of nano silica fibers. To attain high-purity silica from these floras, leaching in hydrochloric acid of three varied normalities and running water treatment was conducted followed by air combustion. Highly pure, uniformly distributed fibrous (60-70 nm diameter) nanosilica was obtained when the acid concentration was 0.1 N, as optimized from Scanning electron microscopy and energy-dispersive X-ray spectroscopy studies. Brunauer–Emmett–Teller surface area analysis summarized that the isolated silica is of specific surface area of 126 m^2 /g. The actual morphology of isolated silica was rich in nano fibrillar channel network as revealed from HR-TEM analysis. This cost effective eco- benign pathway opens a new vista for utilization of bio-precursors as nanosilica source.

Keywords Pampas grass flowers · Nano silica fibers · Acid leaching · Scanning electron microscopy bio-precursor

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1 Introduction

The creation of smart functional materials, devices and systems through manipulation of matter in the nanometer scale are the innovations of nanotechnology. The exploitation of novel processes and properties which are generated because of the nanometer size have brought marked change in industrial inventions. Nanomaterials are cornerstones of nanoscience and nanotechnology. Recently, applications of nanosilica as other nanomaterials have gained great interest among the material researchers, and also in the field of food industry, catalysis, chromatography, coatings, stabilizers, emulsifiers and biological sciences [1–4].

An enormous quantity of nanosilica powder with controlled shape, size and porosity is required for large-scale engineering applications. The nanosilica powder is generally prepared by using vapour-phase reaction, sol–gel and thermo-decomposition methods. In most of the ab
methods, it is synthesized mainly using a
as raw materials, which enables easy size
purity of the material. However, they are not
cial sources of silica due to their high cost, flammability, difficulties in handling and storage and also these methods are costly, energy intensive and involve toxicity exposure from silicon alkoxide precursors [5–9]. Therefore, their replacement with a comparatively less expensive and robust inorganic silica source is desired [10–12].

Sodium silicate (water-glass) compared to the more commonly used tetraethoxysilane (TEOS) or tetramethoxysilane (TMOS) proved to be good sources of silica for commercial production of nanosilica powders. Moreover, use of water as solvent help re-

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The Dynamics of Organic Farming in Velankallu Panchayath in Thrissur

Gayathri Somasekharan
& Syamlal G.S

The most natural method of raising food is through organic farming, which excludes the use of genetically modified seeds, herbicides, or fertilizers. The word "organic farming" has received the most attention in the agricultural field during recent times. Although the pandemic had a severe impact on the world, the demand from consumers for organic products nevertheless grew, sharply generating a more urgent need for the promotion of organic agriculture. India tops the list of countries with the most organic producers, which is an impressive accomplishment. It ranks fourth among the nations in terms of the area dedicated to organic farming. In Kerala, despite its efforts to develop an organically based agriculture, many challenges, such as a low yield and a high certification cost, are impeding this endeavour. Moreover, we have a general trend of saying that organic farming is costly to the farmers as the returns do not compensate their efforts. This paper attempts to examine the reality of this popular myth by studying organic farmers in Velankallu Panchayath in the Thrissur district.

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RESEARCH ARTICLE | AUGUST 05 2021

Investigation of plasmonic properties of spin coated and spray coated IZO thin film

K. Soumya; I. Packia Selvam; S. N. Potty

+ Author & Article Information
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Plasmonics deals with the study of the interaction of nanometre-scale materials with light, has excellent potential in unique applications such as communication, subwavelength guiding, optical cloaking, etc. Metals such as gold and silver have been conventionally used as plasmonic materials because of the high carrier concentration. Their associated plasma frequency lies in the ultraviolet range. The significant absorption loss at lower frequencies across near-infrared and fixed carrier density of electron of metals forced researchers for alternative materials. The material system, such as conducting metal oxides with low loss and tunable optical properties, is considered as a potential candidate for plasmonic applications in the near-infrared. The response of electrons with photons can be understood on the basis of the dielectric permittivity of materials. The real part of this complex

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'अल ग़ज़ाला' – प्रवासी जीवन का दर्दनाक दास्तान

Dr. P. GEETHA Associate Professor & Head, Dept. of Hindi, Sri Vyasa N.S.S. College, Wadakkanchery, Thrissur Dt.. – 680623. Kerala : geethavk15@gmail.com

सारांश

भारतीय साहित्य का वर्तमान संदर्भ इस तथ्य का ठोस प्रमाण पेश कर रहा है कि किसी भी समय से ज़्यादा साहित्य की समाज-संसक्ति उसकी ज़ोरों पर है। हिन्दी साहित्य भी इससे अछूता नहीं है, या यों कहा जा सकता है कि दूसरे भाषायी साहित्य की तुलना में कुछ आगे ज़रूर है। समाज की हल्की-सी धडकनें भी आज संभावनाओं से भरी साहित्यिक रचनाओं का रूप धारण कर रही हैं। कविता, उपन्यास, कहानी जैसी केंद्र-विधाओं में यह प्रवृत्ति कुछ ज़्यादा है। इसका नतीजा यह हुआ कि हिन्दी में नये-नये विमर्शों का जन्म होता जा रहा है और उनमें कुछ बहुत कम समय में ही अपनी जडें बडी गहराई में धंसा जा रहे हैं। स्त्री-विमर्श, दलित-विमर्श और पारिस्थितिक विमर्श के बाद आज प्रवास-विमर्श इस दृष्टि से उभर आ चुका है। कथा-साहित्य में प्रवास-विमर्श का दखल अपेक्षाकृत अधिक है। नरेंद्र नागदेव की कहानी 'अल ग़ज़ाला'इस दृष्टि से एक महत्वपूर्ण रचना है, जिसमें एकदम वर्तमान संदर्भ में प्रवासी जीवन के समाजसाख्यीय और सांस्कृतिक पहलुओं का सटीक आकलन प्रस्तुत किया गया है। इस आलेख में इस कहानी के बहाने प्रवासी जीवन की वर्तमान विडंबनों को परखने की कोशिश हुई है।

बीज शब्द : नरेंद्र नागदेव, अल ग़ज़ाला, प्रवास, कहानी।

साहित्य - समीक्षा

प्रवासी साहित्य ने हिंदी को एक नई ज़मीन दी है। दलित विमर्श, स्त्री-विमर्श, पारिस्थितिक विमर्श, आदिवासी विमर्श आदि के समान प्रवासी-विमर्श भी आज खूब चर्चा का विषय हो चुका है। विद्वानों का मत है कि प्रवासी साहित्य को हिंदी की मुख्यधारा में स्थान दिया जाना चाहिए। असल में प्रवासी हिंदी साहित्य ने पूरे संसार में अपनी अलग भूमिका बाँधी है। भारत से सुदूर रहकर हिंदी साहित्य की प्रगति के लिए प्रखरत साहित्यकारों को प्रवासी हिंदी साहित्यकार कहते हैं। वर्तमान दौर में जब प्रवासी साहित्य प्रौढ से प्रौढतर अवस्था की ओर अग्रसर है, तब 'प्रवास' शब्द की व्युत्पत्ति, व्याख्या जैसी बातें उतनी वज़नदार साबित नहीं होती है। इसके बदले उस विपुल साहित्य में प्रतिबिंबित सांस्कृतिक, समाजशास्त्रीय, भौगोलिक और भाषागत मूल्य-स्थितियों का विश्लेषण अधिक समीचीन एवं प्रीतिकर होगा। इस मार्मिक मुद्दे के परिप्रेक्ष्य में ही इस आलेख का रूपायन किया गया है।

नरेंद्र नागदेव द्वारा रचित 'अल ग़ज़ाला', प्रवासी जीवन पर आधारित एक मार्मिक कहानी है। वे एक आर्किटेक्ट हैं। वे1978 से 1981 के बीच विदेश में आर्किटेक्ट रहे तथा उन्होंने यूरोप में भ्रमण किया है। 'तमाशबीन', 'उसी नाव में', 'बीमार आदमी का इकरारनामा' (कहानी-संग्रह),'अन्वेषी (उपन्यास) आदि उनकी मुख्य रचनाएँ हैं।

प्रवासी मानसिकता पर आधारित कहानियाँ हिंदी में नया उपक्रम नहीं हैं, क्योंकि 'नई कहानी' के दौर में निर्मल वर्मा, कृष्णबलदेव वैद जैसे साहित्यकारों ने काफी संख्या में और उषा प्रियंवदा जैसे रचनाकारों ने अल्प संख्या में ऐसी अनेक कहानियाँ लिखी हैं। लेकिन 'अल ग़ज़ाला' में खींची गई प्रवासी मानसिकता कई पहलुओं में 'नई कहानी' की उपरोक्त कहानियों में चित्रित स्थितियों से भिन्न है। 'नई कहानी' में प्रतिपादित प्रवासी मानसिकता का एक ठोस सामाजिक परिप्रेक्ष्य नहीं था, अक्सर व्यक्ति की मानसिक दुनिया की अंदरूनी परतों के ईद-गिर्द मंडरानेवाली जीवन-स्थितियाँ इन कहानियों में कलात्मकता के साथ लाई गई थीं। 'अल ग़ज़ाला' में इससे बिल्कुल भिन्न एक ठोस सामाजिक परिदृश्य है, जिसकी छोटी सी धड़कन का असर भी व्यक्ति की मानसिकता पर पड़ता है।यहाँ व्यक्ति-मन का आंतरिक धरातल एकदम उपेक्षित नहीं है बल्कि इस आंतरिक धरातल का बाहरी वास्तविक दुनिया से स्पष्ट संबंध दिखाया गया है।