3.4.5 Citation Index

The following are the bibliometric of the publications for the academic year 2016-17 based on average Citation index in Scopus and Web of Science.

Table 1: Citation Index for Publication in Scopus

S.No	Title of the paper	Name of the Authors	Title of the Journal	Year of the Publication	Citation Index
1.	Evaluation of an organic soil amendment generated from municipal solid waste seeded with activated sewage sludge	Deepesh V., Verma V.K., Suma K., Ajay S., Gnanavelu A., Madhusudanan M.	Journal of Material Cycles and Waste Management	2016	19
2.	Protective effect of Raphanus sativus on D-galactosamine induced nephrotoxicity in rats	Salai Bojan M., Rajappa R., Vijayakumar D.R.K., Gopalan J.	Nutrition Clinique et Metabolisme	2016	1
3.	Thickness dependence on structural, dielectric and AC conduction studies of vacuum evaporated Sr doped BaTiO3 thin films	Raja S., Bellan C.S., Sundaram S., Subramani G., Rajamani R.	Optik	2016	7
4.	Soret and Dufour effects on viscoelastic boundary layer ow over a stretching surface with convective boundary condition with radiation and chemical reaction	Eswaramoorthi S., Bhuvaneswari M., Sivasankaran S., Rajan S.	Scientia Iranica	2016	40

5.	Antioxidant and free radical scavenging activity of the mixture of ethanolic extracts of alpinia speciosa and alpinia calcarata rhizome	Mohanasundari L., Suja S.	International Journal of Pharmacy and Pharmaceutical Sciences	2016	5
6.	Pineapple peel waste activated carbon as an adsorbent for the effective removal of methylene blue dye from aqueous solution	Yamuna M., Kamaraj M.	International Journal of ChemTech Research	2016	9
7.	Structural and optical properties of vacuum evaporated V2O5 thin films	Raja S., Subramani G., Bheeman D., Rajamani R., Bellan C.	Optik	2016	14

Table 2: Citation Index for Publication in Web of Science

S.No	Title of the paper	Name of the Authors	Title of the Journal	Year of the Publication	Citation Index
1.	Structural and optical properties of vacuum evaporated V2O5 thin films	Raja, Sengodan; Subramani, Gopal; Bheeman, Dinesh; Rajamani, Ranjithkumar; Bellan, ChandarShekar	OPTIK	2016	13

2.	Thickness dependence on structural, dielectric and AC conduction studies of vacuum evaporated Sr doped SaTiO(3) thin films	Raja, Sengodan; Bellan, Chandar Shekar; Sundaram, Senthilarasu; Subramani, Gopal; Rajamani, Ranjithkumar	OPTIK	2016	7
3.	Screening Of Phytochemical And In-Vitro Antioxidant Property Of A Polyherbal Formulation	Kavitha, P.; Sowmia, C.	International Journal Of Pharmaceutical Sciences And Research	2016	0
4.	Neighbor Node Discovery Mechanism based Delay Aware Routing Protocol (DARP - NND) for Cognitive Radio Ad Hoc Networks	Kannan, M.; Jeetha, B. Rosiline	2016 ieee international conference on advances in computer applications	2016	2
5.	Soret and Dufour effects on viscoelastic boundary layer flow over a stretching surface with convective boundary condition with radiation and chemical reaction	Eswaramoorthi, S.; Bhuvaneswari, M.; Sivasankaran, S.; Rajan, S.	Scientia iranica	2016	18

6.	Evaluation of an organic soil amendment generated from municipal solid waste seeded with activated sewage sludge	Deepesh, V.; Verma, Virendra Kumar; Suma, K.; Ajay, Swathi; Gnanavelu, A.; Madhusudanan, M.	Journal of material cycles and waste management	2016	15

Publications in Scopus for Academic Year 2016-17

ORIGINAL ARTICLE

Evaluation of an organic soil amendment generated from municipal solid waste seeded with activated sewage sludge

V. Deepesh · Virendra Kumar Verma · K. Suma · Swathi Ajay · A. Gnanavelu · M. Madhusudanan

Received: 16 May 2014 / Accepted: 4 November 2014 / Published online: 15 November 2014

Abstract This study investigated the feasibility of using fresh activated sewage sludge as inoculum for the microbial valorization of segregated municipal solid waste and evaluated the quality of organic soil amendment generated. Organic fraction of municipal solid waste, which consisted of vegetative (vegetable, fruit and flower) wastes was seeded with activated sewage sludge and processed by rapid aerobic microbial treatment. Efficacy of microbial valorization process and quality of final product were assessed by physico-chemical analysis. Suitability of final product was assessed with regard to heavy metal content, pesticide residues, microbiological quality and phytotox-

Keywords Soil amendment · Activated sewage sludge · Microbial valorization · Composting · Municipal solid waste · Phytotoxicity

Introduction

Sound disposal of sewage sl… sewage treatment facilities is a serious environmental challenge and conventional sludge disposal practices entail considerable capital investment on treatment facilities. Sewage sludge is the major secondary waste product of

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NUTRITION CLINIQUE et MÉTABOLISME

Nutrition clinique et métabolisme 30 (2016) 22–28

Original article

Protective effect of *Raphanus sativus* on D-galactosamine induced nephrotoxicity in rats

Effet néphroprotecteur de Raphanus sativus *chez le rat après agression toxique à la D-galactosamine*

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Available online 23 February 2016

Abstract

The aim of the present study was to evaluate nephroprotective effect of *Raphanus sativus* ethanolic extract (RSEt) on tissue defense system in galactosamine (GalN) induced renal damage in rats. GalN was administered intraperitoneally at a dose of 400 mg/kg/b.w for three alternate days and the renal toxicity was manifested by a significant ($P < 0.05$) increase in the levels of renal markers such as urea, creatinine and uric acid. This was found to be associated with decreased activities of renal antioxidant enzymes such as superoxide dismutase (SOD), catalase (CAT), glutathione-S-transferase (GST), glutathione peroxidase (GPx) and glutathione reductase (GR) and depletion of renal reduced glutathione (GSH), vitamin C and vitamin E. Administration of the RSEt (850 mg/kg/body weight, oral) for 15 days to rats reduced the levels of renal markers and significantly increased the level of antioxidants. The activities of gamma glutamyl transpeptidase (GGT) and thiobarbituric acid reactive substances (TBARS) were also decreased in the kidney of RSEt treated group. Renal histology examination confirmed the damage to the kidney as it reveals severe necrosis of the proximal renal tubules with haemorrhage which was ameliorated by the treatment with RSEt. These results suggest that the *R. sativus* has protective effects on GalN-mediated nephrotoxicity and this may be related to the action of the antioxidant content of the extract.

Contents lists available at ScienceDirect

Optik

journal homepage: www.elsevier.de/ijleo

Thickness dependence on structural, dielectric and AC conduction studies of vacuum evaporated Sr doped $BaTiO_3$ thin films

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ARTICLE INFO

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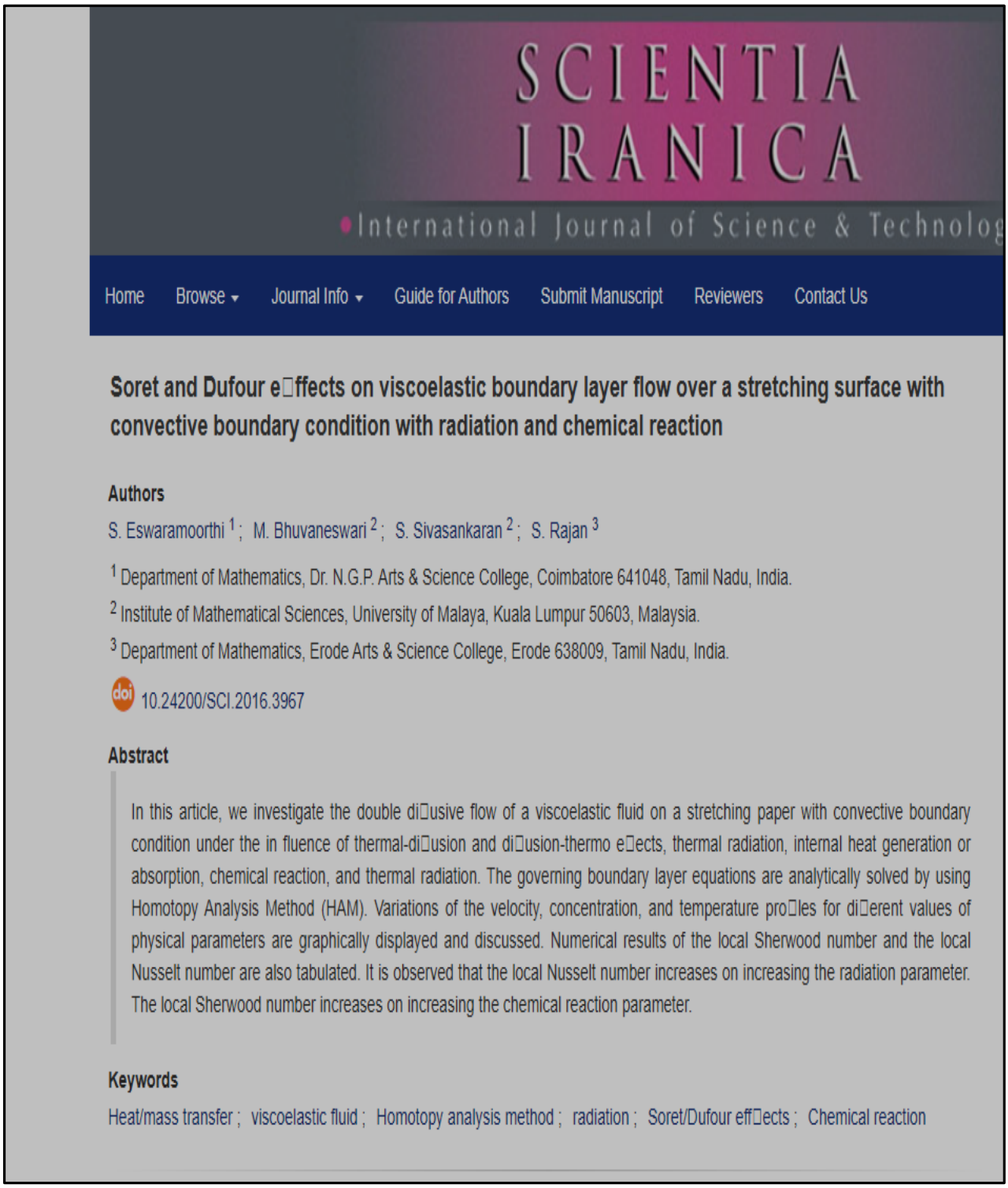
Keywords:
Barium strontium titanate
Thermal evaporation
XRD
SEM
TEM

ABSTRACT

Barium titanate ($BaTiO_3$) doped with Strontium (BST) nanoparticles prepared by using wet chemica method were thermally evaporated on to well cleaned glass substrates under the vacuum of 2×10^{-5} Tor using 12A4 Hind Hivac coating unit. The thickness of the film was measured by quartz crystal moni tor. From X-ray analysis, it has been found that $BaTiO_3$ nanoparticles possess tetragonal structure an deposited films has a polycrystalline in nature, whereas the crystallinity of film increases with increase o temperature. Surface morphology of fabricated thin film observed that very homogeneous and uniform size. The transport mechanism in these films under a.c. fields was studied in the frequency range 12 H to 100 kHz, at different temperatures (303–483 K). The dependence of dielectric constant and loss fac tor for different thickness was investigated and results are discussed. The process of a.c. conduction ha been explained on the basis of hopping conduction mechanism. The dielectric constant (ε'), temperatur co-efficient of capacitance (TCC) and temperature co-efficient of permitivity (TCP) were estimated. Th dependences of activation energy on thicknesses also studied and reported.

1. Introduction

Barium titanate doped with strontium having perovskite structure is a common ferroelectric material with a high dielectric constant. It is an attractive material for applications such as multilayer capacitor, pyroelectric detectors, dynamic random access memory device, non-volatile memories, integrated circuit technology, energy storage devices, field-effect transistors, energy harvesters and positive temperature coefficient of resistance [PTCR] sensor [1]. Several novel devices have been fabricated based on Sr doped $BaTiO_3$ thin films, which include phase shifter, thin film capacitors, photovoltaic devices, optoelectronic devices and [5] and the solid state reaction of mixed oxide route [6]. Amon this method wet chemical method is a promising technique tha offers relative low cost, uniform size and homogenous particles A detailed survey of the literature reveals that even though som work on dielectric properties has been carried out to prepare thi film of strontium doped barium titanate such as sol–gel metho [7,8], r.f. – sputtering [9], pulsed laser ablation [10] and metal organic chemical vapor deposition [11]. No work is found in th literature about to preparation of thin films by vacuum evaporatio method using glass substrate. Hence the present paper discusse the structure, dielectric and a.c. conduction mechanism in vacuum evaporated Sr doped $BaTiO_3$ thin films.



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Soret and Dufour e□ffects on viscoelastic boundary layer flow over a stretching surface with convective boundary condition with radiation and chemical reaction

Authors

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Abstract

In this article, we investigate the double di□usive flow of a viscoelastic fluid on a stretching paper with convective boundary condition under the in fluence of thermal-di□usion and di□usion-thermo e□ects, thermal radiation, internal heat generation or absorption, chemical reaction, and thermal radiation. The governing boundary layer equations are analytically solved by using Homotopy Analysis Method (HAM). Variations of the velocity, concentration, and temperature pro□les for di□erent values of physical parameters are graphically displayed and discussed. Numerical results of the local Sherwood number and the local Nusselt number are also tabulated. It is observed that the local Nusselt number increases on increasing the radiation parameter. The local Sherwood number increases on increasing the chemical reaction parameter.

Keywords

Heat/mass transfer; viscoelastic fluid; Homotopy analysis method; radiation; Soret/Dufour eff□ects; Chemical reaction

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Original Article

ANTIOXIDANT AND FREE RADICAL SCAVENGING ACTIVITY OF THE MIXTURE OF ETHANOLIC EXTRACTS OF *ALPINIA SPECIOSA* AND *ALPINIA CALCARATA* RHIZOME

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ABSTRACT

Objective: The present study was aimed to investigate the antioxidant and free radipotentials of the mixture ethanolic extract of rhizomes of *Alpinia speciosa* and *Alpinia calcarata*.

Methods: The ethanolic mixture extract of rhizomes was prepared in the ratio of 50:50 of *Alpinia speciosa* and *Alpinia calcarata* was subjected to the analysis of phytochemicals, total phenolics and flavonoid contents and free radical scavenging activities such as DPPH, Nitric oxide radical, Superoxide radical, Hydroxyl radical, Ferric reducing antioxidant power, reducing power and Metal ion-chelating activities were determined.

Results: The rhizome mixture extract showed total antioxidant content, good flavonoid and moderate amounts of phenolics content. In DPPH, Nitric oxide and Superoxide radical scavenging activity, IC_{50} was found 136.22±3.44 µg/ml, 53.67±0.47µg/ml, 74.20±1.48µg/ml respectively with the standard ascorbic acid [3.61±0.20 µg/ml, 49.06±0.18 µg/ml and 39.81±0.22 µg/ml]. For the Hydroxyl radical scavenging activities, the IC_{50} values were 42.02±2.51 µg/ml with the standard Rutin [17.15±0.02 µg/ml]. The Ferric reducing antioxidant power was found 497.32±7.49 mmol/Fe (II)g

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Pineapple peel waste activated carbon as an adsorbent for the effective removal of methylene blue dye from aqueous solution

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[2]Department of Biotechnology, School of Biological and Chemical Sciences and Technology, Addis Ababa Science and Technology University, Addis Ababa-16417, Ethiopia

Abstract: In present study, the use of low-cost, locally available, highly efficient, and eco-friendly adsorbent pineapple peel has been investigated as an ideal alternative to the current expensive methods of removing Methylene Blue from aqueous solution. Chemical modification of the adsorbent was done for enhancing its sorption capacity by increasing its chelating power using sulphuric acid. Various factors which control the rate of sorption process like; initial dye concentration, adsorbent dose, contact time, agitation time and pH have been studied. The results showed that as the amount of the adsorbent increased, the degree of adsorption increased accordingly and equilibrium adsorption was attained in 30mins. Desorption studies were carried out using HCl for regenerating adsorbent. The results revealed that pineapple peel waste activated carbon (PPWAC) is an effective sorbent and can be used for removing cationic dyes like Methylene Blue from waste water.
Keywords: pineapple, sorbent, adsorption, aqueous, dye.

1. Introduction:

Organic dyes are the major pollutants which are generally create pollution in the ecosystems and they are difficult to treat because of their different and complicated molecular structures. Many industries, such as textile, dyestuff manufacturing, leather tanning, food preparation, paper production, and printing, use dyes that produce highly colored waste effluents. These dyes are directly or indirectly toxic to microbial populations and can even be carcinogenic to mammals by consume the dissolved oxygen required by aquatic life[1]. Textile industry use dyes and pigments to colour their products. There are more than 100,000 commercially available dyes with over 7x105 tonnes of dyestuff are produced annually[2].

Methylene Blue (MB) is a cationic dye. It is generally used for dying cotton, wood and silk. Its chemical formula is $C_{16}H_{18}N_3SCl.3H_2O$[3]. Methylene blue has wide applications, which include paper coloring, temporary hair colorant, dying cottons, and wools. Although not strongly hazardous, it can cause some harmful effects in humans such as heartbeat increase, vomiting, shock, cyanosis, jaundice, quadriplegia, and tissue necrosis[4].

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Structural and optical properties of vacuum evaporated V_2O_5 thin films

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ABSTRACT

Thin films of vanadium pentoxide (V_2O_5) have been deposited on to well-cleaned glass substrates under a vacuum of 10^{-5} torr using 12A4 Hind Hivac coating unit. The thickness of the films was measured by the multiple beam interferometry technique and cross checked by using capacitance method. The structural, morphological and optical properties of deposited V_2O_5 films were determined by XRD, SEM and UV – vis analysis. XRD pattern indicates the amorphous nature of the film. Absorption co-efficient (α), extinction co-efficient (K_f) and refractive index were calculated from the optical transmission spectrum. The transmittance is found to decrease with the increase in thickness. The band gap of the film is found to decrease with increasing film thickness.

1. Introduction

phase transition at 257 ± 5 °C. A large change in electrical behavior

Publications in Web of Science for Academic Year 2016-17

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Sengodan Raja [a], Gopal subramani [a], Dinesh Bheeman [b], Ranjithkumar Rajamani [c], ChandarShekar Bellan [d,*]

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1. Introduction

Vanadium has various valence states and results in a number of oxide forms of vanadium oxide. V_2O_3, VO_2 and V_2O_5 films have much attention in recent years due to their optical properties, which make them interesting for various applications such as photocatalysis, gas sensors, as a window for solar cells, for electrochromic devices, color filters, reflectance mirrors, smart windows and surfaces with tunable emittance for temperature control of space vehicles and in the synthesis of nanocomposites [1,2]. Amorphous V_2O_5 is a potential candidate for the fabrication of thin-film batteries (TFBs) with high cycle performance and an phase transition at 257 ± 5 °C. A large change in electrical behavior accompanies the phase change and thermally activated electrical switches have been fabricated from this material. Since optical and electrical behaviors are coupled, V_2O_5 may have potential use in optical switches and write – erase media as well. V_2O_5 is especially interesting in thin film form because of the possibility of integration into microelectronics circuit. Alternatively V_2O_5 films can be employed in conjunction with electrochromic tungsten oxide films in charge-balanced devices for display purposes in informatics, for variable-reflectance mirrors, for variable-transmittance (smart) windows in energy-efficient buildings and for variable emittance surfaces for temperature control of space vehicles. Recently, a con-

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Thickness dependence on structural, dielectric and AC conduction studies of vacuum evaporated Sr doped $BaTiO_3$ thin films

Sengodan Raja[a], Chandar Shekar Bellan[b,*], Senthilarasu Sundaram[c], Gopal subramani[a], Ranjithkumar Rajamani[d]

[a] Department of Physics, Kumaraguru College of Technology, Coimbatore 641049, Tamil Nadu, India
[b] Departments of Physics, Kongunadu Arts and Science College, G.N-Mills, Coimbatore 641029, Tamil Nadu, India
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ARTICLE INFO

Article history:
Received 31 August 2015
Accepted 11 December 2015

Keywords:
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ABSTRACT

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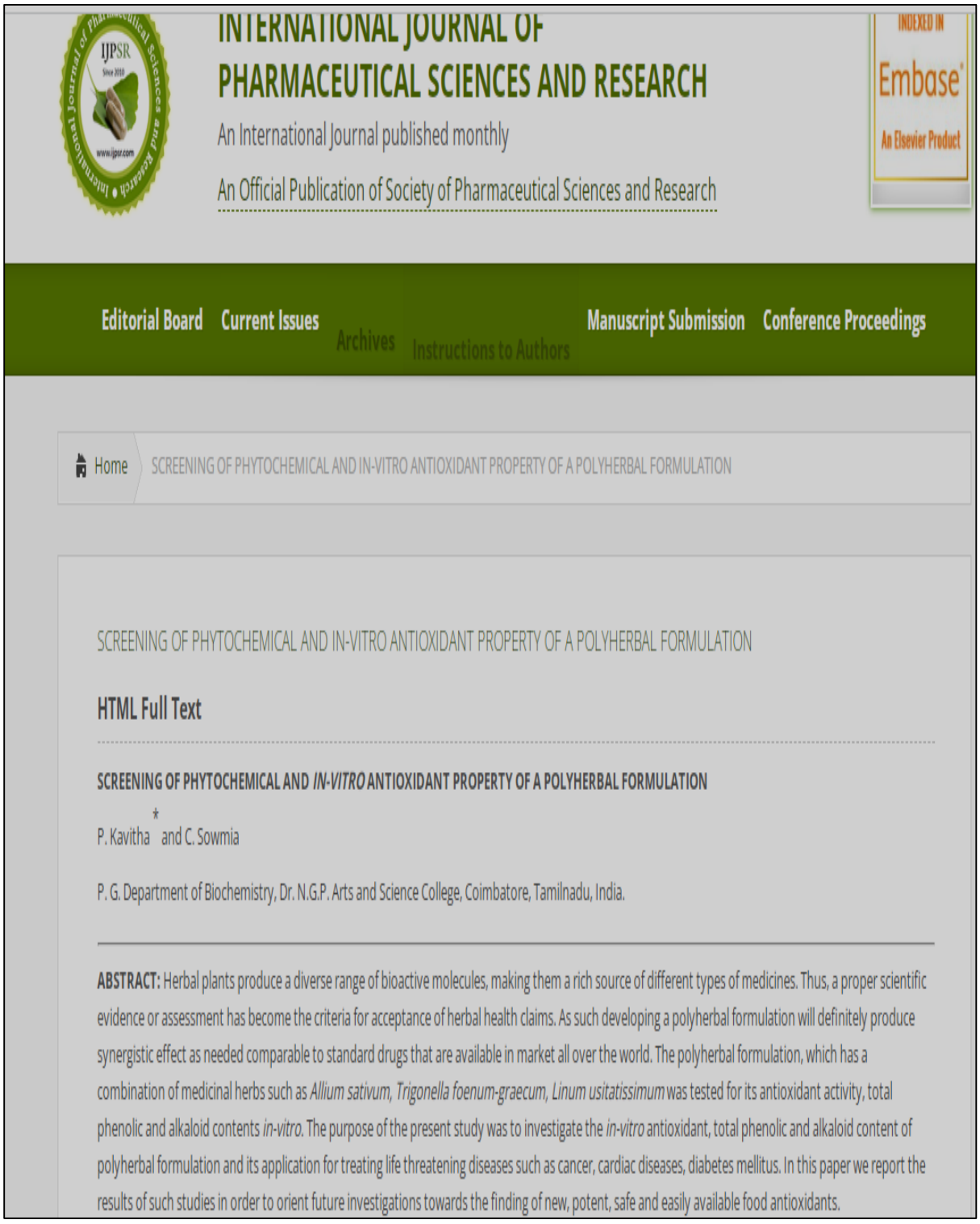
1. Introduction

Barium titanate doped with strontium having perovskite structure is a common ferroelectric material with a high dielectric constant. It is an attractive material for applications such as multilayer capacitor, pyroelectric detectors, dynamic random access memory device, non-volatile memories, integrated circuit technology, energy storage devices, field-effect transistors, energy harvesters and positive temperature coefficient of resistance [PTCR] sensor [1]. Several novel devices have been fabricated based on Sr doped $BaTiO_3$ thin films, which include phase shifter, thin film capacitors, photovoltaic devices, optoelectronic devices and humidity sensors. Due to the desirable properties and applications, over the last few decades, synthesis of $BaTiO_3$ nanoparticles and thin film has attracted great attention. Most of the experimental work carried out so far relate to preparation of nanoparticles like polymeric precursor method [2] co-precipitation, alkoxide hydrol-[5] and the solid state reaction of mixed oxide route [6]. Among this method wet chemical method is a promising technique that offers relative low cost, uniform size and homogenous particles. A detailed survey of the literature reveals that even though some work on dielectric properties has been carried out to prepare thin film of strontium doped barium titanate such as sol–gel method [7,8], r.f. – sputtering [9], pulsed laser ablation [10] and metal-organic chemical vapor deposition [11]. No work is found in the literature about to preparation of thin films by vacuum evaporation method using glass substrate. Hence the present paper discusses the structure, dielectric and a.c. conduction mechanism in vacuum evaporated Sr doped $BaTiO_3$ thin films.

2. Experimental details

2.1. Synthesis of $BaSrTiO_3$ nanoparticles



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SCREENING OF PHYTOCHEMICAL AND IN-VITRO ANTIOXIDANT PROPERTY OF A POLYHERBAL FORMULATION

HTML Full Text

SCREENING OF PHYTOCHEMICAL AND *IN-VITRO* ANTIOXIDANT PROPERTY OF A POLYHERBAL FORMULATION

P. Kavitha * and C. Sowmia

P. G. Department of Biochemistry, Dr. N.G.P. Arts and Science College, Coimbatore, Tamilnadu, India.

ABSTRACT: Herbal plants produce a diverse range of bioactive molecules, making them a rich source of different types of medicines. Thus, a proper scientific evidence or assessment has become the criteria for acceptance of herbal health claims. As such developing a polyherbal formulation will definitely produce synergistic effect as needed comparable to standard drugs that are available in market all over the world. The polyherbal formulation, which has a combination of medicinal herbs such as *Allium sativum, Trigonella foenum-graecum, Linum usitatissimum* was tested for its antioxidant activity, total phenolic and alkaloid contents *in-vitro*. The purpose of the present study was to investigate the *in-vitro* antioxidant, total phenolic and alkaloid content of polyherbal formulation and its application for treating life threatening diseases such as cancer, cardiac diseases, diabetes mellitus. In this paper we report the results of such studies in order to orient future investigations towards the finding of new, potent, safe and easily available food antioxidants.

Neighbor node discovery mechanism based delay aware routing protocol (DARP – NND) for cognitive radio ad hoc networks

Publisher: IEEE

Cite This

PDF

M. Kannan ; B. Rosiline Jeetha All Authors

1 Paper Citation

110 Full Text Views

Abstract

Document Sections

I. Introduction

II. Related Works

III. Proposed Work

IV. Simulation Settings and

Abstract:

Cognitive Radio ad hoc network is a sort of wireless network. Cognitive radios have the ability to sense the wireless medium. Routing is the major research area and ensuring quality-of-service (QoS) is a challenging problem. This paper proposes a neighbor node discovery mechanism based delay aware routing protocol in order to provide QoS in such network. Primary QoS metrics such as throughput and delay can be put into consideration for evaluating the performance of the proposed protocol DARP-NND. Simulations are passed out by means of NS2 and the outcomes confirm that the proposed protocol achieves improvement in provisions of increased throughput and reduced delay.

SCIENTIA IRANICA

Soret and Dufour effects on viscoelastic boundary layer flow over a stretching surface with convective boundary condition with radiation and chemical reaction

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KEYWORDS
Heat/mass transfer;
Viscoelastic fluid;
Homotopy analysis method;
Radiation;
Soret/Dufour effects;
Chemical reaction.

Abstract. In this article, we investigate the double diffusive flow of a viscoelastic fluid on a stretching paper with convective boundary condition under the influence of thermal-diffusion and diffusion-thermo effects, thermal radiation, internal heat generation or absorption, chemical reaction, and thermal radiation. The governing boundary layer equations are analytically solved by using Homotopy Analysis Method (HAM). Variations of the velocity, concentration, and temperature profiles for different values of physical parameters are graphically displayed and discussed. Numerical results of the local Sherwood number and the local Nusselt number are also tabulated. It is observed that the local Nusselt number increases on increasing the radiation parameter. The local Sherwood number increases on increasing the chemical reaction parameter.

1. Introduction

The study of viscoelastic boundary layer flow over a stretching surface has attracted considerable attention in the past few years due to many practical applications in industry and technology, e.g. polymer sheet extrusion from a dye, glass fiber, drawing of plastic films, and paper production. The manufacturing processes at high temperature need cooling and the flow may need viscosity to produce a good effect or to reduce the temperature. Heat and mass transfer of a viscoelastic fluid past a stretching vertical sheet was numerically studied by Hayat et al. [1]. They found that the velocity of the fluid and thickness of its boundary layer increased on increasing the viscoelastic parameter. MHD free Chowdhury and Islam [2]. Hayat et al. [3] analyzed the mass transfer of a viscoelastic fluid. The results of the analytical and numerical solutions were compared and established to be in excellent conformations. The mixed convection of a viscoelastic fluid flow over an isothermal flat spherical tube was numerically investigated by Anwar et al. [4]. It was found that the temperature and thermal boundary layer thickness increased when increasing the value of viscoelastic parameter. The effects of variable viscosity and heat transfer of a viscoelastic fluid in a porous medium were numerically studied by Chin et al. [5]. The heat and mass transfer of a viscoelastic fluid was analyzed by Sanjayanand and Khan [6]. It was found that increase

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ORIGINAL ARTICLE

Evaluation of an organic soil amendment generated from municipal solid waste seeded with activated sewage sludge

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Abstract This study investigated the feasibility of using fresh activated sewage sludge as inoculum for the microbial valorization of segregated municipal solid waste and evaluated the quality of organic soil amendment generated. Organic fraction of municipal solid waste, which consisted of vegetative (vegetable, fruit and flower) wastes was seeded with activated sewage sludge and processed by rapid aerobic microbial treatment. Efficacy of microbial valorization process and quality of final product were assessed by physico-chemical analysis. Suitability of final product was assessed with regard to heavy metal content, pesticide residues, microbiological quality and phytotoxicity. Quality of the soil amendment generated was compared with the control product generated with a commercial microbial inoculum. Phytotoxicity experiments indicated the stimulatory effect of sewage sludge seeded soil amendment on plant growth but inhibition was observed in closed growth test due to the evolution of gaseous phytotoxic agents. The study suggests that segregated municipal solid waste can be effectively valorized with activated non-dewatered sewage sludge as inoculum and the quality of soil amendment generated was comparable to compost intended for unrestricted applications.

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Keywords Soil amendment · Activated sewage sludge · Microbial valorization · Composting · Municipal solid waste · Phytotoxicity

Introduction

Sound disposal of sewage sludge generated from extensive sewage treatment facilities is a serious environmental challenge and conventional sludge disposal practices entail considerable capital investment on treatment facilities. Sewage sludge is the major secondary waste product of municipal wastewater treatment facilities [1]. It is the semi-solid or liquid residue generated during the treatment of domestic wastewater, which must be periodically wasted or removed from the system to ensure optimal performance of biological treatment processes. Due to rapid urbanization, more domestic wastewater treatment plants are pressed to operation, and existing facilities upgraded, generating large quantities of sludge which is a serious environmental menace to be managed. Now, environmentally acceptable and viable management of sewage sludge is a critical issue [2] with regard to enormous sludge generation by extensive wastewater treatment facilities [3–5]. Sewage sludge or sewage biosolids are disposed in many ways including, but not limited to, incineration, land filling [1, 6], land