Punyashlok Ahilyadevi Holkar Solapur University

Criterion III – Research, Innovations and Extension

3.7 Collaboration

Metric No.	
3.7.1	***Number of collaborative activities with other institutions/ research establishment/industry for research and academic development of faculty and students per year***
	• Copies of collaboration • Any additional information • Number of Collaborative activities for research, faculty etc (Data Template)

Synthetic Metals 199 (2015) 187–195

Contents lists available at ScienceDirect

Synthetic Metals

journal homepage: www.elsevier.com/locate/synmet

Microstructural, optical and electrical transport properties of WO_3 nanoparticles coated polypyrrole hybrid nanocomposites

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ARTICLE INFO

Article history:
Received 23 August 2014
Received in revised form 6 November 2014
Accepted 24 November 2014
Available online xxx

Keywords:
PPy–WO_3 hybrid nanocomposites
XRD
TEM
XPS
UV–vis spectroscopy
DC electrical conductivity

ABSTRACT

The polypyrrole films modified with different weight percentages of WO_3 nanoparticles were fabricated on glass substrate by a drop casting method. X-ray diffraction analysis showed that the broad diffraction peak of PPy becomes sharper and more intense as the WO_3 nanoparticles content in the polymer based composite increases this revealed that the hybrid composites are more crystalline than PPy. The shift in FTIR peaks of the hybrid nanocomposite compared with PPy confirms that hybrid nanocomposites are not a sample mixture but could enhance the properties of each other on a molecular level; there may be a synergic interaction between the PPy and WO_3 nanoparticles. The FESEM, TEM, AFM images of the nanocomposites shows the uniform distribution of the WO_3 nanoparticles in the PPy matrix. The chemical compositions and intermolecular interactions within the polymer nanocomposite were explored by EDX and XPS spectra. The Uv–vis study shows shift in absorption peaks of PPy–WO_3 (50%) hybrid nanocomposites towards lower wavelength implies that there is strong interaction between PPy and WO_3 nanoparticles. The DC electrical conductivity of pure PPy was observed to be dependent on percentage of WO_3 nanoparticles loading i.e., conductivity of hybrid nanocomposite increases with increase in the percentage of WO_3 nanoparticles. The increase in the DC conductivity of PPy–WO_3 (10–50%) hybrid nanocomposites may be due to increase in electrons mobility to high extended chain conformation to increase tunneling probability in all succeeding composites and attributed the versatile semiconducting behavior of WO_3.

1. Introduction

Research in the field of conducting polymers requires suitable modification of known polymers so that their applicability can be enhanced. One of the most widely applied techniques in this respect is the preparation of hybrid nanocomposites. Hybrid nanocomposites are a special class of materials formed by combination of two or more nanosized objects or nanoparticles, resulting in materials having unique physical properties compared with single material [1–5]. Progress in the field of conducting polymers has taken a commanding position since the advent of the hybrid nanocomposite materials. Organic–inorganic nanocomposites are the new class of materials receiving growing research interests in recent years due to their improved optical and electrical properties. Such nanocomposites are an advanced system because of strong electronic interaction between the individual components and can be immediately hybridized on a molecular level [4,6]. Organic materials such as polypyrrole (PPy), polyaniline (PANi) and polythiopene (PTh) have been intensively studied because of their remarkable electrical and optical properties [7–10].

Organic materials have attracted much interest as novel materials for potential applications in biosensors, capacitors, actuators, chemical catalyst and electronic devices [11–19]. Among organic materials, PPy is a p-type material and has attracted much interest because of room temperature operation, chemical stability against atmospheric conditions, excellent conductivity, low cost, structural flexibility, easy processability, convenient processing, tunable electronic properties, efficient luminescence, structural flexibility and potential for semiconducting and even metallic behavior [19–22].

Inorganic materials like ZnO, Fe_2O_3, SnO_2, WO_3 have been studied due to long term stability, high carrier mobilities, band gap tunability, thermal, mechanical stability and simple preparation methods [23–26]. Inorganic materials have been used in the field of safety engineering, energy and transportation, optical memory, reading–writing–erasing devices, environmental monitoring, flat panel displays, microelectronics and military

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http://dx.doi.org/10.1016/j.synthmet.2014.11.031
0379-6779/

Sensors and Actuators B 251 (2017) 551–563

Contents lists available at ScienceDirect

Sensors and Actuators B: Chemical

journal homepage: www.elsevier.com/locate/snb

Zinc oxide hierarchical nanostructures as potential NO_2 sensors

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ARTICLE INFO

Article history:
Received 21 January 2017
Received in revised form 20 April 2017
Accepted 17 May 2017
Available online 20 May 2017

Keywords:
Thermal evaporation
ZnO nanorods
Bunch of nanowires
NO_2 sensor
Impedance spectroscopy

ABSTRACT

A superficial thermal evaporation method has been employed for the fabrication of hierarchical zinc oxide (ZnO) nanostructured films, composed of nanorods (NR's) and bunch of nanowires (BNW's), on glass substrate and the diverse atmospheric annealing effect on their structural, morphological, compositional, and gas sensing properties has been systematically studied and reported. Structural investigation corroborates the formation of crystalline hexagonal wurtzite ZnO. The arrays of vertically aligned nanorods and bunch of nanowires of ZnO were observed on the substrate surface. As-prepared ZnO NR's and BNW's are utilized as a sensing material for detection of toxic nitrogen dioxide (NO_2). The ZnO sensors exhibit high response to NO_2 along with rapid response and recovery time values @200 °C. In addition, ZnO sensors respond to a very small exposure of NO_2 gas i.e. 1 ppm. Furthermore, the developed sensors attain excellent stability and reproducibility in response. Finally, the interaction of NO_2 gas molecules with hierarchical nanostructured ZnO sensors has successfully been studied and discussed by employing an electrochemical impedance spectroscopy measurement.

1. Introduction

Metal oxide semiconductor-based gas sensors have been extensively investigated for the purpose of monitoring environmental biodiversity and detection of explosive and toxic gases at their lower concentrations [1–3]. Also, the detection of harmful gases is extremely essential for personal safety protection. In recent years, new morphologies like single-walled carbon nanotubes [4–6], nanoparticles [7–9], and semiconducting nanowires [10–13] etc., hold exhilarating prospects in sensors application, due to of their minuscule sizes; miniature molecules are enough active to vary the electrical properties of the sensor elements when used in electronic devices. One-dimensional (1D) nanostructured sensors have received considerable attraction as compared to thin film gas sensors due to their rapid response, superior spatial resolution, and higher sensitivity that arises from the elevated surface-to-volume ratio [14]. Recently, 1D semiconductor metal oxide nanostructures such as tin oxide (SnO_2), zinc oxide (ZnO), vanadium oxide (V_2O_5), and tungsten oxide (WO_3) have demonstrated excellent sensing properties with rapid response and recovery time values [15–22]. A wurzite crystal structure and wide band gap energy (3.37 eV) of ZnO made it a potential gas sensing material, which can be synthesized by chemical vapor deposition [23–26], thermal evaporation [25], plasma reaction [26], laser ablation [27], and arc/solution methods [28,29]. Among the abovementioned methods, growth of ZnO by thermal evaporation has several advantages as the growth is free from the catalyst. Due to intrinsic properties, ZnO (II–VI type semiconductor) has widely been used in several applications such as photocatalysts [30], solar cells [31], field effect transistors [32], luminescent materials [33], and gas sensor [34] etc. Moreover, it's less toxicity, low cost, availability of diverse morphologies, optimal conductivity, and amazing stability has additional benefits while scaling up the devices, used commercially.

Different types of ZnO nanostructures have been synthesized in literature and used in gas sensing application for the detection of methane, ethanol, nitric oxide, acetone, chlorobenzene, hydrogen, ammonia, nitrogen dioxide, and chlorine etc. [35–37]. A common air pollutant nitrogen dioxide (NO_2) gas is produced throughout combustion in industrial factories, automotive engines, and power plants. According to environmental protection agency (EPA), the toxicity limit of the NO_2 gas for the environmental issue is 53 ppb [38]. Therefore, there is a need to develop highly sensitive NO_2 gas sensors that can detect low concentrations of NO_2 with excellent

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http://dx.doi.org/10.1016/j.snb.2017.05.085
0925-4005/

Journal of
Materials Chemistry C

PAPER

Cite this: J. Mater. Chem. C, 2015, 3, 9461

Simple and low-temperature polyaniline-based flexible ammonia sensor: a step towards laboratory synthesis to economical device design†

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Received 1st June 2015,
Accepted 14th August 2015

DOI: 10.1039/c5tc01483b

www.rsc.org/MaterialsC

Flexible and highly sensitive polyaniline-based (PAni) ammonia (NH_3) gas sensors were developed through *in-situ* chemical oxidative polymerization of aniline on a polyethylene terephthalate substrate at three different temperatures, *viz.* 35 °C, 0 °C and −5 °C. In the initial stage, they were characterized with respect to their structural, morphological, and compositional analysis studies and in the second stage, the selectivity towards oxidizing (nitrogen dioxide, NO_2) and reducing (NH_3, ethanol, methanol and hydrogen sulphide, H_2S) gases was tested. The sensor fabricated at 0 °C showed an optimum response of 26% to 100 ppm NH_3 gas, which was superior to those obtained for the sensors developed at 35 °C (19%) and −5 °C (23%). The as-developed low-temperature flexible gas sensor demonstrated fast response (19 s) as well as recovery time (36 s) periods, 99% reproducibility and good stability, revealing commercial application potential for example in industry where high temperature operation is prohibited. Impedance spectroscopy was used to investigate the plausible interaction mechanism of the NH_3 gas molecules with the flexible PAni. The operation of the NH_3 gas sensor device, fabricated on a laboratory scale, was tested and explored as a demo-video clip.

1. Introduction

Nowadays, a new trend towards the manufacturing of sensor films on a flexible substrate has become an interesting research topic, especially in modern electronics, where the fabrication of organic electronic devices on flexible substrates such as polyethylene terephthalate (PET) is essential for producing advanced portable consumer electronic items. Flexibility, shock resistance, low weight, and softness are merits on the record of the PET substrate.[1] Flexible and low-cost sensors have high potential for integration into smart electronic circuits used in fancy and lifestyle items.[2,3] The main challenge in the field of gas sensors is not only the fabrication of flexibility, but also maintaining other properties like sensitivity, stability, reproducibility, and mechanical and electrical strength at a desired level. The detection of toxic gases in the environment appears to dominate recent sensor research. The gases released from natural and industrial processes can cause both long term and immediate human health problems. Particularly, ammonia gas released from agricultural industries during the urea manufacturing process needs to be monitored. It has a sharp odor and if spills occur, problems like coughing and irritation follow quickly. Therefore, the development of simple and low-cost ammonia sensors for health and safety precautions is necessary.

Conducting polymers such as polyaniline (PAni), polypyrrole, and polythiophene are currently being heavily studied because of their remarkable electrical and mechanical properties, which are frequently utilised in sensors, actuators, and electronic devices.[4–6] Among the family of conducting polymers, PAni has attracted much attention due to its easy synthesis and considerable environmental stability, and also its surface charge characteristics can be easily tailored by changing the dopant during the synthesis process. In recent reports, PAni has been envisaged for the detection of various oxidizing and reducing gases. Crowley *et al.*[7] developed a PAni sensor using piezoelectric inkjet and screen printing methods which was further applied in the detection of hydrogen sulphide (H_2S), where a weak and slower response was observed. Sengupta *et al.*[8] prepared PAni by a chemical oxidative polymerization method for NH_3 gas

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† Electronic supplementary information (ESI) available: Video-clip of operation of designed the flexible PAni sensor. See DOI: 10.1039/c5tc01483b

Progress in Organic Coatings 87 (2015) 88–94

Contents lists available at ScienceDirect

Progress in Organic Coatings

journal homepage: www.elsevier.com/locate/porgcoat

Synthesis and structural, morphological, compositional, optical and electrical properties of DBSA-doped PPy–WO_3 nanocomposites

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ARTICLE INFO

Article history:
Received 16 December 2014
Received in revised form 29 April 2015
Accepted 12 May 2015

Keywords:
DBSA-doped PPy–WO_3 nanocomposites
XRD
SEM
XPS
UV–vis spectroscopy
dc Electrical conductivity

ABSTRACT

Synthesis of DBSA-doped PPy–WO_3 (organic–inorganic) nanocomposites, using a novel approach, has been proposed, and further envisaged for their structural, compositional, morphological, optical and electrical properties. DBSA-doped PPy–WO_3 nanocomposites demonstrate superior above mentioned properties than their counterparts i.e. either PPy or WO_3. The XRD spectra of nanocomposites supported to conclude that both i.e. PPy and DBSA have no impact on the crystallinity of WO_3 nanoparticles. The chemical structure of DBSA-doped PPy–WO_3 nanocomposites have been elucidated using FTIR spectra. The morphologies and surface roughnesses of the DBSA-doped PPy–WO_3 nanocomposites were confirmed using scanning electron microscope and atomic force microscope images, respectively. Interconnected type morphology and 13 nm average surface roughness were confirmed for DBSA doped PPy–WO_3 hybrid nanocomposites. The EDX and XPS analyses evidence that, the formation of DBSA doped PPy–WO_3 hybrid nanocomposites without any elemental impurities. The absorption peak of DBSA-doped PPy–WO_3 nanocomposites shift towards the lower wavelength side as compared to the PPy–WO_3 (50%) hybrid nanocomposites. Anionically charged sulfonate group which is supposed to stabilize doped state of the DBSA-PPy–WO_3 nanocomposites, may be responsible for this shift. The dc electrical conductivity of DBSA-doped PPy–WO_3 nanocomposites increases as the content of DBSA is increased from 10 to 50% this could be accounted for by the generation of conduction path through the PPy–WO_3 nanocomposites as DBSA has anionic surfactant nature by preventing an agglomeration of functional material.

1. Introduction

Organic–inorganic nanocomposites (hybrid) are a fascinating class of materials, not only due to their fundamental properties but also for a number of practical applications [1–4]. Recently, nanocomposites have been studied extensively because of their potential applications in variety fields compared to corresponding pure organic and inorganic materials. Nanocomposites often exhibit unusual physical and chemical properties as compared to their bulk counterparts depending upon their sizes, shapes and stabilizing agents. The basic idea behind nanocomposites is to blend organic and inorganic materials into nanocomposites with molecular level control over interfaces, structures, and morphologies etc. [5,6]. These nanocomposites based on combination of organic and inorganic materials demonstrate several advantages over organic materials such as flexibility, light-weight, and good-moldability and inorganic materials hold heat stability, high strength, and chemical resistance [7]. Depending upon the nature of association between the organic and inorganic components, nanocomposites are divided into two groups; one where the inorganic material is embedded into organic matrix, i.e. inorganic–in-organic composite [8] and the second, the organic polymer is confined into an inorganic material i.e. organic–in-inorganic composite [9]. These features of organic–inorganic nanocomposites help in designing various devices related to optics [10], electronics [11], gas sensors [12], mechanics [13] and photoconductors [14] etc.

In this context, we are successfully synthesized inorganic–inorganic composites where inorganic component is WO_3 nanoparticles which is well-embedded within the organic component i.e. polypyrrole (PPy). In juxtapose to this, we used DBSA as a dopent to modify the structural and the chemical properties of composites. Various sulfonic acids such as camphor sulfonic acid (CSA), dodecyl benzene sulfonic acid (DBSA), and β-naphthalene sulfonic acid (NSA) have been considered as dopents in literature [15]. Among available organic materials, PPy has attracted much interest because of its structural flexibility, excellent conductivity,

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http://dx.doi.org/10.1016/j.porgcoat.2015.05.007
0300-9440/

Journal of Colloid and Interface Science 487 (2017) 458–464

Contents lists available at ScienceDirect

Journal of Colloid and Interface Science

journal homepage: www.elsevier.com/locate/jcis

Regular Article

Electrochemical synthesis and potential electrochemical energy storage performance of nodule-type polyaniline

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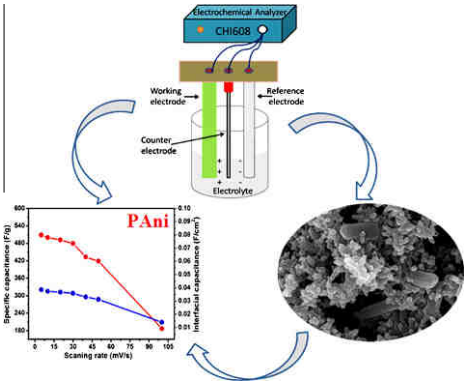
GRAPHICAL ABSTRACT



ARTICLE INFO

Article history:
Received 3 July 2016
Revised 14 September 2016
Accepted 16 September 2016
Available online 16 September 2016

Keywords:
Supercapacitor
Cyclic voltammetry
Electrosynthesis
Morphology analysis
Charge transportation

ABSTRACT

Nodule-type polyaniline (PAni) has been successfully electrosynthesized onto conducting substrate and envisaged in electrochemical supercapacitor (ES) application as a potential energy storage electrode. Various bands are confirmed from the X-ray photoelectron and Fourier transform infrared spectra. Each nodule is of ~100–200 nm in length and 20–80 nm in diameter. The ~45° surface water contact angle with water of PAni surface can be beneficial for accessing an entire electrode area with minimum interfacial resistance loss when is in contact with the aqueous electrolyte for ES application. The PAni nodule-type electrode when electrochemically characterized using cyclic-voltammetry and galvanostatic charge–discharge measurements has demonstrated a specific capacitance of ~508 F g^{-1}, a specific energy of 32.12 W h kg^{-1}, a specific power of 13.39 kW kg^{-1} and a Coulombic efficiency of 100% in 1 M H_2SO_4 electrolyte solution. An occurrence of 70% retention of initial capacity even after 5000 cycles is supporting for energy-storage application. Two separate redox reaction behaviors are confirmed in the discharge measurement.

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http://dx.doi.org/10.1016/j.jcis.2016.09.038
0021-9797/

Journal of Alloys and Compounds 708 (2017) 456–463

Contents lists available at ScienceDirect

Journal of Alloys and Compounds

journal homepage: http://www.elsevier.com/locate/jalcom

Rapid synthesis strategy of CuO nanocubes for sensitive and selective detection of NO_2

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ARTICLE INFO

Article history:
Received 17 January 2017
Received in revised form
6 March 2017
Accepted 7 March 2017
Available online 8 March 2017

Keywords:
Thermal evaporation
Quartz substrate
CuO nanocubes
Structure and morphology
NO_2 sensor
Impedance spectroscopy

ABSTRACT

In present work, copper oxide (CuO) films have been successfully synthesized onto a quartz substrate using a simple and catalyst-free thermal evaporation technique and their chemiresistive properties were carried out towards host of target gases. Structural analysis demonstrates the formation of polycrystalline single phase monoclinic CuO. Formation of nanocubes–type of surface morphology of CuO was observed from morphological investigation. Gas sensing results demonstrate that the CuO films, composed of nanocubes (NCs), are highly selective towards oxidizing nitrogen dioxide (NO_2) gas than other target gases along with rapid response and recovery times. CuO sensor films exhibit the maximum response value of 76%–100 ppm NO_2 @150 °C. In addition, CuO films are able to sense as low as 1 ppm concentration of NO_2 gas. The effect of operating temperature on the NO_2 sensing properties of CuO films was thoroughly investigated and reported. Impedance spectroscopy was used to study the interaction mechanism between CuO sensor film and NO_2 gas molecules.

1. Introduction

In recent years, the environmental air pollution has notably increased due to global industrialization, which is very harmful to the environment and human beings as well. The polluted air become hazardous due to growing in the concentration of poisonous gases like nitrogen dioxide (NO_2), carbon dioxide (CO_2), hydrogen sulfide (H_2S), carbon monoxide (CO), and sulphur dioxide (SO_2). Among these toxic gases, NO_2 is one of the most regular poisonous contaminants emitted from various fields such as combustion in automobile engines, home heaters, furnaces, and power plants [1,2]. NO_2 is also commonly generated from the many routine chemical production processes and photochemical smog, which is harmful to humans and animals. Even very low amounts of NO_2 gas are very toxic to humans and the environment as well [2]. As a result, the development of gas sensor systems, which can monitor NO_2 levels at low ppm concentrations is a challenge in the gas sensing field. In the last few years, a variety of semiconducting metal oxides such as zinc oxide (ZnO), titanium dioxide (TiO_2), tin dioxide (SnO_2), and copper oxide (CuO) have been extensively investigated to detect NO_2 gas owing to their high response and excellent chemical stability [3–6]. The typical *p-type* semiconducting metal oxides such as cobalt oxide (Co_3O_4), nickel oxide (NiO), and CuO holds their individual characteristics [7–9]. Amongst them CuO has been extensively studied because of its variety of applications such as in high critical temperature superconductors, gas sensors, batteries, solar energy conversion systems, as a catalyst, and field emitters [8–10]. Till today, several physical and chemical routes such as polyol method, hydrothermal reaction, seed-mediated solution growth, anodization, thermal oxidation, and electro-spinning have been successfully utilized to prepare hierarchical CuO nanostructures [11–16]. All above-mentioned synthesis routes require higher processing temperatures and moderately sophisticated instruments.

In the present study, a simple and catalyst-free thermal evaporation (TE) method was successfully employed for the synthesis of CuO NCs onto quartz substrate. The TE method used for the

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http://dx.doi.org/10.1016/j.jallcom.2017.03.079
0925-8388/

RSC Advances

PAPER

Cite this: *RSC Adv.*, 2018, **8**, 11177

Ultrasensitive and bifunctional ZnO nanoplates for an oxidative electrochemical and chemical sensor of NO_2: implications towards environmental monitoring of the nitrite reaction†

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Herein, we focused on the one pot synthesis of ZnO nanoplates (NP edge thickness of ~100 nm) using a chemical emulsion approach for chemical (direct) and electrochemical (indirect) determination of NO_2. The structural and morphological elucidation of the as-synthesized ZnO NPs was carried out by X-ray diffraction (XRD), scanning electron microscopy (SEM), energy dispersive analysis of X-ray (EDAX), thermogravimetric analysis (TGA) and BET-surface area measurements. The XRD studies of the as-synthesised NPs reveal that ZnO NPs have a Wurtzite type crystal structure with a crystallite size of ~100 nm. Such ZnO NPs were found to be highly sensitive to NO_2 gas at an operating temperature of 200 °C. Electrocatalytic abilities of these ZnO NPs towards NO_2/NO_2^- were verified through cyclic voltammetry (CV) and linear sweep voltammetry (LSV) using aqueous 1 mM NO_2^- (nitrite) in phosphate buffer (pH 7) solution. The results revealed enhanced activity at an onset potential of 0.60 V *vs.* RCE, achieved at a current density of 0.14 mA cm^{-2}. These ZnO NPs show selective NO_2 detection in the presence of other reactive species including CO, SO_2, CH_3OH and Cl_2. These obtained results show that this chemical route is a low cost and promising method for ZnO NPs synthesis and recommend further exploration into its applicability towards tunable electrochemical as well as solid state gas sensing of other toxic gases.

Received 12th February 2018
Accepted 12th March 2018

DOI: 10.1039/c8ra01358f

rsc.li/rsc-advances

1 Introduction

Nitrogen dioxide (NO_2) gas is well known to be one of the irritant gases, and is a prominent intermediate product of the industrial synthesis of nitric acid. Moreover, other common and considerable contributors to NO_2 gas production are combustion engines, the burning of fossil fuels, fertiliser industries, cigarette smoke, and butane and kerosene heaters and stoves.[1] Unfortunately, NO_2 can cause respiratory infections, photochemical smog and acid rain[2] and it is injurious to human health. Exposure to unsafe and elevated levels in the body can cause severe underlying diseases such as chronic obstructive pulmonary disease or asthma. For example, NO_2 reacts with water droplets in the trachea and lungs forming droplets of nitric acid and these tiny droplets penetrate deep into the lungs causing various respiratory diseases.[3] Moreover, NO_2 exposure has also been associated with sudden infant death syndrome.[4] Thus, it is imperative to develop a sensor for detecting NO_2 gas. Significantly, many solid state gas sensors have been recently explored for NO_2 gas sensing such as WO_3,[5] VO_2,[6] NiO,[7] SnO_2 (ref. 8) and ZnO.[9] Among these, ZnO is a cheap, stable and nontoxic material and it is possible to further improve its chemical and physical properties by controlling its dimensions in a micro/nano-regime. This motivated us to develop a new, cost effective, safer synthetic method for the synthesis of its nanostructures by a chemical approach, taking into consideration energy and environmental factors. The past literature reflects that the properties and performances of ZnO based devices are significantly influenced by its structural features.[10,11] Recent studies in the literature have demonstrated that the crystal structure and its morphology have a significant influence on its surface sensitive reactions, especially gas-sensing, electronic, electrochemical and many more.[12,13] For example, one-dimensional (1D) nanostructures of ZnO, such as nanowires,[14] nanorods,[15] and nanobelts[16] and their hierarchical structures were widely used in gas sensor applications,[15] also, recently, two-dimensional (2D) structures, such as NPs, have been another common structure of ZnO.[17,18] Thus, the need for simple and cost effective ZnO based gas sensors further encourages us to design and develop a method for the synthesis

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† Electronic supplementary information (ESI) available. See DOI: 10.1039/c8ra01358f

Materials Today: Proceedings xxx (xxxx) xxx

Contents lists available at ScienceDirect

Materials Today: Proceedings

journal homepage: www.elsevier.com/locate/matpr

Synthesis of CuO thin film sensors by spray pyrolysis method for NO_2 gas detection

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ARTICLE INFO

Article history:
Received 23 March 2020
Received in revised form 16 May 2020
Accepted 21 May 2020
Available online xxxx

Keywords:
CuO
Metal oxide
Gas sensor
NO_2 gas
Spray Pyrolysis

ABSTRACT

The environmental pollution has become a major concern of today's era. Toxic gases such as CO, CO_2 and NO_2 are emitted from vehicles, industries, burning of crops etc. These gases are contributing a lot to the air pollution and also producing long term effect on lungs and respiratory system of human beings. Therefore gas sensing measurements for such toxic gases has received major attention. In this study, CuO is deposited by simple spray pyrolysis method and used for gas sensing measurements. The concentration of precursor solution is varied as 0.05 M, 0.1 M, 0.15 M and 0.2 M. The structural and morphological studies are done using XRD patterns and SEM images respectively. XRD patterns reveal the cubic structure of CuO. Gas sensing measurements have shown that the film deposited for 0.15 M concentration shows highest response of 56.23% for NO_2 gas. The lowest detection level has observed to be 5 ppm of NO_2. CuO has been found to be selective towards NO_2 gas.

Selection and Peer-review under responsibility of the scientific committee of the International Conference on Multifunctional and Hybrid Materials for Energy and Environment (MHMEE-2020).

1. Introduction

Environment has its own composition of gases and other particulate matter. The increased composition of these constituents leads to the air pollution. There are number of factors those are responsible for the increased air pollution. Emissions from industries, vehicles' emissions and burning of crops contribute major to the air pollution. Therefore there is need of identifying the level of toxic gases in the environment. At the same time it is very important to install toxic gas detectors at many chemical industries in order to avoid accidents caused due to gas leakage.

So far various materials like polymers, metal oxides, mixed metal oxides etc. have been studied for the detection of various oxidizing and reducing gases like NO_2, CO, CO_2, H_2S etc. [1–6]. Amongst all materials, metal oxides are found to be more effective as gas detectors due to its low cost, high stability, high sensitivity, suitable morphology etc.

N-Type semiconducting metal oxides like ZnO, TiO_2, WO_3, In_2O_3 [7–9] etc. have been explored to large extent as a gas sensing material. However p-type materials are less used as gas detectors. Copper Oxide (III) or Cupric Oxide (CuO) is one of the p-type semiconducting metal oxides with energy bad gap of 1.3 eV to 2.1 eV [10]. The surface area and defects introduced into the metal oxide during synthesis plays key role during gas sensing measurements. Therefore, proper selection of method for thin film deposition is very important. Deposition method should be simple, low cost and easy to handle. Spray pyrolysis is one of the advantageous techniques that provides stable thin film depositions [9].

In present investigation, we report study of NO_2 gas sensing properties of CuO thin films deposited by spray pyrolysis method for different solution concentration and effect of solution concentration on their structural, morphological and optical properties.

2. Experimental details

Copper chloride purchased from Sigma Aldrich (Purity: 99%) is used for preparing precursor solution. Copper chloride is dissolved

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https://doi.org/10.1016/j.matpr.2020.05.583
2214-7853/
Selection and Peer-review under responsibility of the scientific committee of the International Conference on Multifunctional and Hybrid Materials for Energy and Environment (MHMEE-2020).

Please cite this article as: S. Khot, S. Phalake, S. Mahadik et al., Synthesis of CuO thin film sensors by spray pyrolysis method for NO_2 gas detection, Materials Today: Proceedings, https://doi.org/10.1016/j.matpr.2020.05.583

Journal of Solid State Chemistry 281 (2020) 121043

Contents lists available at ScienceDirect

Journal of Solid State Chemistry

journal homepage: www.elsevier.com/locate/jssc

Bismuth molybdate (α-$Bi_2Mo_3O_{12}$) nanoplates *via* facile hydrothermal and its gas sensing study

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ARTICLE INFO

Keywords:
Ethanol sensing
$Bi_2Mo_3O_{12}$
Hydrothermal method

ABSTRACT

Herein, we report a facile synthesis of bismuth molybdate (α-$Bi_2Mo_3O_{12}$) nanoplates (NPs) *via* hydrothermal route and studied its gas sensing performance. The developed α-$Bi_2Mo_3O_{12}$ was analyzed by various technique for structural and morphological studies. XRD analysis showed the monoclinic crystal structure of α phase of $Bi_2Mo_3O_{12}$ with crystalline size 40 nm. The morphological features were studied using FE-SEM and FE-TEM, showed $Bi_2Mo_3O_{12}$ nanoplates of thickness 20–25 nm and also showed the signs of variation with different hydrothermal reaction time. The chemical composition and their states were studied by XPS and EDAX analysis. The material was examined for gas sensing proficiency towards various reducing gases (acetone, ethanol, propanol, xylene, trimethylamine). $Bi_2Mo_3O_{12}$ NPs corroborate good selectivity (78%) towards ethanol at an optimum operating temperature 325 °C with the response and recovery time, 1′54s and 8′30s, respectively. Furthermore, the sensor showed better reproducibility and stability in response to consecutive exposure of ethanol. The α-$Bi_2Mo_3O_{12}$ has two acidic sites and one basic site, which excel the interactions and are responsible for better gas sensing performance.

1. 1. Introduction

Bismuth molybdates are an important class of semiconducting materials having the general chemical formula of Bi_2O_3. $nMoO_3$, where n = 1–3. Accordingly, they possess three phases (α, β, and γ) such as α-$Bi_2Mo_3O_{12}$, β-$Bi_2Mo_2O_9$ and γ-Bi_2MoO_6 [1,2]. Due to their interesting properties such as corrosion resistance, high dielectric strength, unique optical band gap, well-defined geometry, morphology, and cost effectiveness, they are receiving increasing attention in the research and development [3,4]. Amongst these three phases, n-type monoclinic bismuth molybdate (α-$Bi_2Mo_3O_{12}$) is more popular in applications such as catalyst in organic transformation, oxygen evolution, and pollutant degradation [5]. The specific reason is its highly oxygen-deficient fluorite structure (Mo atoms in $(MoO_4)^{2-}$ and vacancies with Bi sites) which facilitates possible chemical reactions. The vacancies are in an ordered arrangement with Bi channels and three different Mo sites. Each of them coordinated with five O atoms favors the chemical reaction [6,7].

Historically, $Bi_2Mo_3O_{12}$ is considered as an industrial catalyst due to its various applications such as the conversion of propylene to acrylonitrile or selective oxidation of acrolein, the catalyst for oxidation of propene to acrolein, dehydrogenation of butane to butadiene [8] and literature therein. Owing to the high stability of bismuth molybdate, it is used as an active photocatalyst such as Hipólito et al., reported $Bi_2Mo_3O_{12}$ for photocatalytic nitrogen oxide (NO) removal [9] whereas, Cao, et al., and Liu et al., are prepared $Bi_2Mo_3O_{12}$/MoO_3 composites for efficient dye degradation [10], while, Mandlimath et al., explored $Bi_{2-x}RE_xMo_3O_{12}$ nanorods for dye degradation. We have also reported pyridine intercalated $Bi_2Mo_3O_{12}$ nanorods [11].

In the state of art, various synthesis routes were adopted for developing $Bi_2Mo_3O_{12}$, namely, organic electrolyte-assisted UV-light exciting

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https://doi.org/10.1016/j.jssc.2019.121043
Received 4 July 2019; Received in revised form 30 September 2019; Accepted 31 October 2019
Available online 2 November 2019
0022-4596/

Materials Chemistry and Physics 225 (2019) 192–199

Contents lists available at ScienceDirect

Materials Chemistry and Physics

journal homepage: www.elsevier.com/locate/matchemphys

Enhanced energy density and stability of self-assembled cauliflower of Pd doped monoclinic WO_3 nanostructure supercapacitor

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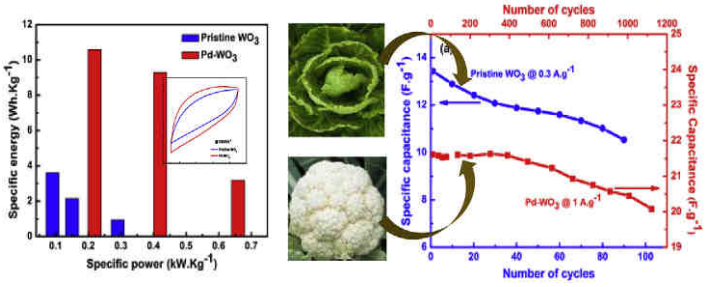
HIGHLIGHTS

- Pristine WO_3 and Pd doped WO_3 is synthesized by simple hydrothermal method.
- The WO_3 cabbage morphology converted into WO_3 cauliflower by Pd doping.
- The greater surface area, crystallinity and conductivity are observed by doping.
- Almost four times higher specific capacitance is realized in WO_3 cauliflower.
- The excellent stability almost ten times higher is achieved in WO_3 cauliflower.

GRAPHICAL ABSTRACT



ARTICLE INFO

Keywords:
Pseudocapacitors
Tungsten oxide
Nanosheets
Nanobrick
Specific capacitance
Energy density

ABSTRACT

Enhanced electrochemical performance of WO_3 nanostructures by engineering their morphology, structural and surface defect at nanoscale is feasible. Herein we report the effect of Pd doping on the morphological and electrochemical properties of WO_3 at nanoscale prepared by a simple hydrothermal method. The synthesized pristine WO_3 (cabbage like morphology) and Pd doped WO_3 (cauliflower like morphology) are examined by using XRD, XPS, Raman spectra, BET, FE-SEM, TEM. The morphological investigation shows the effective rebuilding of nanosheets assembled cabbage shaped pristine WO_3 into nanobricks assembled cauliflower shaped Pd doped WO_3 with improvement in crystallinity, surface area and conductivity. As a result, the enhancement in the electrochemical performance of cauliflower shaped Pd-WO_3 is recorded four times higher specific capacitance than pristine WO_3. Additionally, the excellent cyclic stability (almost ten times higher than pristine WO_3) up to 1100 cycles with nearly 86.95% capacity retention is observed in Pd-WO_3 attributed to Pd content and highly modified structural arrangement.

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https://doi.org/10.1016/j.matchemphys.2018.12.077
Received 21 August 2017; Received in revised form 18 November 2018; Accepted 10 December 2018
Available online 27 December 2018
0254-0584/

View Article Online
DOI: 10.1039/C5RA26041H

Journal Name

ARTICLE

Nanomorphology-dependent pseudocapacitive properties of NiO electrodes engineered through controlled potentiodynamic electrodeposition process†

Received 00th January 20xx,
Accepted 00th January 20xx

DOI: 10.1039/x0xx00000x
www.rsc.org/

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Three nickel oxide (NiO) electrdes of diferent morphologies have been successfully engineered through a controlled potentiodynamic electrodeposition process in the presence of different nickel precursors. Effect of nickel precursors on structural, morphological and pseudocapacitive properties of NiO thin film electrodes have been systematically investigated. The stucural information obtained from the X-ray diffraction patterns confirms the formation of cubic structured NiO. The field-emission scanning electron microscopic images endorses for the evolution of uniformly distributed up-grown nanoflakes, irregular nanoflake-like and a well-covered porous architecture comprised of interconnected uniform nanoflakes of NiO nanostructures with surface contact angle values 126°, 148° and 104°. The effect of the developed NiO nanostructures on pseudocapacitance behavior has been thoroughly investigated using cyclic voltammetry, chronopotentiometric charge-discharge and electrochemical impedance spectroscopy measurement techniques. The optimal specific capacitance of 893 Fg^{-1} has been achieved for NiO electrode having interconnected nanoflake-type morphology at the scan rate of 5 mVs^{-1}. Furthermore, these NiO electrodes have demonstrated long-term cycling stability in KOH electrolyte. The electrochemical impedance spectroscopy measurements carried out on developed NiO nanostructured electrodes corroborate that, NiO electrode composed of uniformly distributed interconnected nanoflakes is best and suitable electrode for good capacity electrochemical supercapacitor among others.

Introduction

The development of human civilization and advancement of modern technology have made energy at the centre of everlasting quest. An important intermediate step towards versatile and efficient energy applications includes energy storage and its transportation with minimum losses. Most effective and practical technologies, presently preferred, for electrochemical energy storage comprises batteries, fuel cells and electrochemical supercapacitors (ECs). ECs or ultracapacitors have attracted significant attention, mainly due to their high power density, long lifecycle and bridging function for the power/ energy gap between traditional capacitors (high power output) and batteries/fuel cells (high energy storage).[1-3] However, depending on the charge storage mechanism as well as active materials used, ECs are classified into two categories. One, in electrochemical double layer capacitors (EDLCs), where carbon-based active materials, graphene etc., are in general considered, which stores charges at electrode/electrolyte interface. While in second type i.e. pseudocapacitors or redox supercapacitors, charge storage in electrode materials like transition metal oxides as well as electrically conducting polymers takes place through fast and reversible surface/near-surface reactions.[4] Among various transition-metal oxides including RuO_2, IrO_2, MnO_2, NiO, Co_2O_3, SnO_2, Fe_2O_3, V_2O_5 etc.,[5-13] nickel oxide (NiO) has found considerable attention and interest, due to its high theoretical capacity (2573 F g^{-1}), low-cost, low-toxicity, low environmental impact and sufficiently large pseudo-capacitive behaviour.[14,15] There are several methods so far used to tune the size, shape and morphology of electrode used for EC. Commonly, layered nickel hydroxide ($Ni(OH)_2$) with various morphologies can be synthesized from solution methods like chemical precipitation,[16] electrodeposition,[17] followed by thermal decomposition using solutions of Ni(II). Lee *et al.* synthesized hierarchical microspheres of α- $Ni(OH)_2$ nanosheets, intercalated with desired anionic species (Cl^-, NO_3^-, OAc^-, and SO_4^{2-}), and showed change in specific capacitance as a function of size of the intercalated anion.[18] Dubal *et al.* developed different nanostructures of β-$Ni(OH)_2$ using chemical bath deposition method from different nickel precursors.[19] It is inferred that, the surface morphology and

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†Electronic Supplementary Information (ESI) available: Figure S1-S3 and Electronic circuitry parameters Table S1. DOI: 10.1039/x0xx00000x

Research article

polymers advanced technologies

Received: 26 February 2015, Revised: 20 July 2015, Accepted: 20 July 2015, Published online in Wiley Online Library

(wileyonlinelibrary.com) DOI: 10.1002/pat.3627

Dielectric properties of poly(4-vinylphenol) with embedded PbO nanoparticles

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An organic/inorganic nanocomposite film was synthesized using poly(4-vinylphenol) (PVPh) as an organic insulating polymer and PbO nanoparticles as a high-k inorganic material to serve as an organic insulator with enhanced dielectric properties. PbO nanoparticles were dispersed into propylene glycol monomethyl ether acetate, and a solution of PbO/PVPh nanocomposite was prepared by adding a crosslinker. The PbO nanoparticle content within the PVPh polymer matrix was varied, and the effects of this variation upon the properties of the resulting nanocomposite films were studied, including the properties of surface morphology, surface bonding state and dielectric characteristic. The dielectric constant increased with increasing PbO content, reaching 9.2 at 1 MHz and with dielectric loss below 0.09 for the PbO content of 6 vol%. Furthermore, the leakage current increased to only 1.3×10^{-8} A cm^{-1} at the highest nanoparticle loadings, compared to the 7.2×10^{-9} of pristine PVPh. The addition of PbO nanoparticles was found to effectively suppress the absorption of moisture on the surface of PbO/PVPh nanocomposite, although it also increased surface roughness, owing to the agglomeration and particulation of PVPh arising from an anchoring effect of the PbO nanoparticles. Copyright © 2015 John Wiley & Sons, Ltd.

Keywords: PbO; PVPh; nanocomposite; dielectric property; surface roughness

INTRODUCTION

Recently organic materials have been attracted much attention in the development of thin film transistor (TFT) for many application fields.[1,2] One of popular research area is flexible display because this application has adequate advantage of organic materials such as adhesion to flexible substrate, low manufacturing temperatures, low-cost deposition and low-power consumption.[3–5] However, these transistors have been mainly fabricated from organic semiconductors and inorganic gate insulators.[6] In gate dielectric, the inorganic and polymeric hybrid materials have been studied for an application to TFTs. The flexibility and lightness of polymers can offer them to have many advantages.[7,8] Of the polymer dielectrics reported in the literature, poly(4-vinylphenol) (PVPh) has been considered as a dielectric with the highest mobility.[9] Although the mobility is high, an organic TFT (OTFT) with PVPh as the dielectric exhibits a leakage current behavior that leads to up raising with the threshold voltage according to the gate-source voltage.[10] A hydrophobic and less polar polymer is less affected with impurities such as moisture, oxygen, and mobile charges, which can cause hysteresis.[11] Because cross-linker is helpful to overcome of these poor properties, PVPh have been reported to be used as organic material with low dielectric constant ($\varepsilon = 2.5$–2.6) for a gate dielectric in TFTs by *Knipp et al.*[12]

Recently, several research groups have investigated the leakage current or bias stress induced instability of OTFTs with SiO_2 and polymer gate dielectric films.[13–15] However, the origins of the unreliable leakage current behavior found in these two types of OTFTs are still not clear, although the leakage current observed with the OTFTs with SiO_2 is probably associated with trapped electrons at the dielectric interface.[14] To solve the matter of PVPh, PVPh nanocomposite with inorganic materials like as SiO_2, TiO_2 was investigated but these nanocomposites show low dielectric constant under 3.5–5.[4,13] Then a development of the insulation property of the gate dielectric layer of OTFT needs an adoption of high dielectric materials. Here PbO material can be a candidate inorganic material to solve these issues from its high dielectric constant. PbO has an α-phase and a β-phase, which form at low and high temperatures, respectively. α-PbO (litharge) and β-PbO (massicot) are photoactive semiconductors with gap energies of 1.92 and 2.7 eV, respectively. The narrow band gap of PbO increases the leakage current density when it is used in electronic devices, but offers a high dielectric constant: the dielectric constant of a PbO single crystal has been reported to exceed 200.[16] Therefore, because of its optical and electrical characteristics, PbO has various applications. Nanoparticulation of PbO has been studied by *Karami et al.* and *Gnanam et al.* using a sonochemical method and hydrothermal process.[17,18]

Nanocomplexing can be used to combine the desirable high dielectric constant of nanoparticles with the low leakage current density of polymers.[19] Specifically, nanoparticulating PbO and

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ICC
Iranian Chemical Communication
Original Research Article
Payame Noor University http://icc.journals.pnu.ac.ir

MWCNT incorporated silica aerogel prepared by ambient pressure drying: A recyclable catalyst for multicomponent synthesis of benzylpyrazolyl coumarin at room temperature

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Received: 21 December 2016, Accepted: 18 November 2017, Published: 18 November 2017

Abstract

Multiwalled Carbon Nanotube (MWCNT) reinforced silica aerogel was synthesized in a very simple and cost effective sol - gel method. The process was followed by ambient pressure drying, and then the aerogel material was characterized by XRD, BET, SEM, EDX and FT-IR. 2.3 x 10^{-3} wt% MWCNTs were successfully incorporated in sodium silicate based silica aerogel. This metal-free nanocomposite catalyzed a four component organic reaction among 4-hydroxy coumarin, benzaldehyde, phenyl hydrazine, and ethyl acetoacetate for synthesizing medicinally important benzylpyrazolyl coumarin at room temperature. The MWCNT/silica aerogel composite material having easy accessible active sites and high catalytic activity was easily recovered and reused. The aerogel composite when impregnated with ceria offered very efficient and selective reaction methodology.

Keywords: MWCNT/silica aerogel synthesis; ambient pressure drying; heterogeneous catalysis; multicomponent reaction; benzylpyrazolyl coumarin.

Introduction

Multicomponent reactions (MCR) with atom economy, cost and energy savings, selectivity to desired product, easy work-up, catalyst recyclability and the avoidance of metals and hazardous chemicals are of increasing importance among the wide range of methodologies explored in greening organic chemistry for the design and syntheses of biologically active molecules [1]. Partha P. Ghosh et

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Songklanakarin J. Sci. Technol.
40 (5), 1181-1185, Sep. - Oct. 2018

http://www.sjst.psu.ac.th

Short Communication

MWCNT/Silica aerogel: Preparation, characterization and applications in heterogeneous catalysis and decolorization of aqueous dye solutions

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Received: 23 April 2017; Revised: 23 June 2017; Accepted: 7 July 2017

Abstract

2.3 x 10^{-3} wt% multi-walled carbon nanotube incorporated silica aerogel (MWCNT/Silica aerogel) was synthesized by ambient pressure drying. The as-synthesized MWCNT reinforced silica aerogel was characterized by XRD, SEM, N_2-adsorption–desorption, etc. The MWCNT/Silica aerogel catalyzed a multicomponent reaction for synthesizing medicinally important benzylpyrazolyl coumarin derivative. And, in another application, the efficient decolorization of Eriochrome Black T and Methylene Blue from their respective aqueous solutions over MWCNT/Silica aerogel was also investigated using UV spectrophotometer. A comparison has also been made with decolorizing activities of silica gel and activated charcoal.

Keywords: MWCNT/Silica aerogel synthesis, ambient pressure drying, heterogeneous catalysis, dye decolorization

1. Introduction

Aerogel is an ultra-light synthetic porous material having unique microscopic (nanoscale skeleton) and macroscopic (condensed state matter) structural features. An aerogel is derived from gel made through sol-gel chemistry when the liquid component inside the wet gel is exchanged by air without damaging the solid microstructure (Kistler, 1931; Du, Zhou, Zhang, & Shen, 2013). Aerogels are attractive materials for their applications in thermal insulation, adsorption, chemical sensors, catalysis, and space explorations. Usually silica aerogels have poor mechanical strength and are hygroscopic in nature. Off late, silica aerogels and metal-modified aerogels have been widely employed as catalyst support and catalysts (Müller, Schneider, Mallat, & Baiker, 2001). Carbon aerogels have interesting adsorption properties, structural stability, high thermal stability and most importantly the useful electronic conductivity for their applications in catalyst carriers, oil or organic solvents' adsorption and energy storage (Biener *et al*., 2011; White, Brun, Budarin, Clark, & Titirici, 2014). Multi Walled Carbon Nanotubes (MWCNTs) were used as reinforcement to improve the mechanical properties of silica aerogels (Bangi, Kavale, Baek, & Park, 2012). MWCNT/Silica aerogel composites are useful hybrid aerogels (Bargozin, Amirkhani, Moghaddas, &

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01-10-2015 | Original Paper | Issue 10/2015

Synthesis and characterization of α-(cyclic carbonate), ω-hydroxyl/itaconic acid asymmetric telechelic poly(ε-caprolactone)

Journal: Polymer Bulletin > Issue 10/2015

Authors: Ravindra Mahadev Patil, Han Hong, Christina L. L. Chai, Anil A. Ghanwat, Satyanarayana Ganugapati, Rudhramyna Gnaneshwar

Abstract

Well-defined α-(cyclic carbonate), ω-hydroxyl asymmetric telechelic poly(ε-caprolactone)s (PCLs) were prepared with good end-group fidelity by ring-opening polymerization (ROP) of ε-CL catalyzed by $Sn(Oct)_2$ in conjunction with a renewable, functional bio-based initiator namely glycerol 1,2-carbonate (GC) in bulk at 110 °C. The end group's structure derived from the alcohol initiator was confirmed by NMR, FTIR and MALDI TOF MS. The living character of ROP of ε-CL using GC/$Sn(Oct)_2$ was demonstrated by the linear correlation of molecular weight versus monomer conversion. End-capping reaction of α-(cyclic carbonate), ω-hydroxyl asymmetric telechelic PCL with itaconic anhydride to yield α-(cyclic carbonate), ω-(itaconic acid) asymmetric telechelic PCL was presented. Five-membered cyclic carbonate end group reaction with 2-phenylethylamine enabled the hydroxyurethane end functional PCL without the use of the relatively more hazardous isocyanates and without any by-product.

Adve

CHEMICAL BIOLOGY & DRUG DESIGN

Research Article

PEG Mediated Synthesis and Biological Evaluation of Asymmetrical Pyrazole Curcumin Analogues as Potential Analgesic, Anti-Inflammatory and Antioxidant Agents

Shravan Y. Jadhav ✉,Raghunath B. Bhosale ✉,Sachin P. Shirame,Sandeep B. Patil,Suresh D. Kulkarni

First published: 16 August 2014
https://doi.org/10.1111/cbdd.12416
Citations: 13

Journal of Alloys and Compounds
Volume 680, 25 September 2016, Pages 139-145

Invoking stoichiometric protocols for chemical synthesis of CdSe thin films

G.T. Chavan [a], S.S. Kamble [a, b], N.B. Chaure [d], N.N. Maldar [c], L.P. Deshmukh [a]

Show more

https://doi.org/10.1016/j.jallcom.2016.04.069

Highlights

- Reaction additives were used to invoke the stoichiometric protocols.
- Compositional studies show stoichiometry dependency on the additive concentrations.
- Obtained CdSe thin films are of hexagonal crystal structure.
- Optical and electrical studies support established protocols.

Abstract

An attempt is made to establish the procedure for regulating stoichiometry and hence the materials properties of the chemically deposited CdSe thin films. Reliance of the structural, morphological, optical and electrical properties on the stoichiometry was studied to support

Published: 17 June 2016

Constraints for ZnSe thin film growth and stoichiometry regulation

S. T. Pawar, S. S. Kamble, S. M. Pawar, G. T. Chavan, V. M. Prakshale, N. B. Chaure, S. L. Deshmukh, N. N. Maldar & L. P. Deshmukh

Journal of Materials Science: Materials in Electronics
27, 10582–10591 (2016)

Abstract

The main theme in thin film science is to control the stoichiometry of chemical constituents to form a quality yield supporting functional applications. Here, we have attempted the constraint formulation for stoichiometry regulation of ZnSe thin films by an industry preferred chemical deposition. The as-deposited films were characterized through the elemental, compositional, structural, morphological, optical and electrical transport studies. X-ray photoelectron spectroscopy confirmed the +2 and −2 oxidation states of Zn and Se in as-grown thin films. The compositional analysis further suggested near-stoichiometric film formation for TEA = 0.3 ml, NH_3 = 17 ml and N_2H_4 = 6 ml. Structural assessment confirmed the formation of poly-microcrystalline thin films with cubic zinc blend structure. Spherical crystallites with uneven

Published: 27 May 2016

The optical and electrical transport studies of $Zn_xCo_{1-x}S$ thin films

S. S. Kamble, A. Sikora, S. L. Deshmukh, S. T. Pawar, G. T. Chavan, D. P. Dubal, N. B. Chaure, N. N. Maldar & L. P. Deshmukh

Journal of Materials Science: Materials in Electronics
27, 12302–12311 (2016)

Abstract

In an attempt to design and fabricate a suitable II–VI group material of variable optical gap, we have synthesized a series of $Zn_xCo_{1-x}S$ ($0 \le x \le 0.4$) thin films via a facile chemical solution growth technique. To gain insight of the materials properties we have opted for different characterization techniques and are reporting our observations pertaining to the elemental analysis, magneto-topography, optical and electrical transport studies. Excellent agreement of binding energy values for Co2p, Zn2p and S2p levels in elemental analysis concluded the oxidation states as Co^{2+}, Zn^{2+} and S^{2-}. Magnetic force microscopy confirmed the existence of randomly distributed magnetic domains mimicking the surface topography. The optical studies determined the high absorption coefficient ($\alpha \approx 10^4$ to 10^5 cm^{-1}) in

Chemical Biology & Drug Design / Volume 87, Issue 6 / p. 878-884

Research Article

Preparation and Pharmacological Evaluation of Novel Orally Active Ester Prodrugs of Ketoprofen with Non-Ulcerogenic Property

Valmik D. Dhakane,Vishnu N. Thakare,Sakharam B. Dongare,Pravin S. Bhale,Yoginath B. Mule, Babasaheb P. Bandgar,Hemant V. Chavan

First published: 30 December 2015
https://doi.org/10.1111/cbdd.12719
Citations: 2

Abstract

This study investigates anti-inflammatory activity with improved pharmacokinetic and non-ulcerogenic properties of various novel synthesized prodrugs of ketoprofen in experimental animals. Prodrugs **3a**, **3f** and **3k** were found to possess significant anti-inflammatory activity with almost non-ulcerogenic potential than standard drug ketoprofen (**1)** in both normal and inflammation-induced rats. The experimental findings elicited higher AUC and plasma concentration at 1 and 2 h indicating improved oral bioavailability as compared to parent drug ketoprofen. These prodrugs are found to have no gastric ulceration with retained anti-inflammatory activity. Therefore, present experimental findings demonstrated significant improvement of various pharmacokinetic properties with non-ulcerogenic potential of ester prodrugs of ketoprofen.

Journal of Energy Chemistry
Volume 25, Issue 5, September 2016, Pages 845-853

Graphene-wrapped $Ag_3PO_4/LaCO_3OH$ heterostructures for water purification under visible light

Santosh S. Patil [a, b], Mukund G. Mali [c], Animesh Roy [a], Mohaseen S. Tamboli [a], Virendrakumar G. Deonikar [a], Deepak R. Patil [a], Milind V. Kulkarni [a], Salem S. Al-Deyab [d], Yoon, Sam S. [c] ✉, Sanjay S. Kolekar [b] ✉, Bharat B. Kale [a] ✉

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https://doi.org/10.1016/j.jechem.2016.05.004

Abstract

We demonstrated a unique synthesis approach of graphene (GR)-wrapped $Ag_3PO_4/LaCO_3OH$ (APO/LCO) heterostructures by an in-situ wet chemical method. FESEM analysis reveals the formation of rhombic dodecahedrons of APO decorated with LCO and later wrapped with GR flakes. Optical studies shows two absorption edges corresponding to the band gap energies of APO (2.41 eV) and LCO (4.1 eV). Considering the absorption edge of the heterostructures in the visible region, the photocatalytic activities of photocatalysts containing different APO/LCO mass ratios were evaluated by the degradation of MB. GR-decorated composite with 20% LCO (APO/LCO20/GR) exhibited the highest photocatalytic activity for MB degradation, with a rate constant, k of 0.541 min^{-1}. The photocatalytic activity of APO/LCO20/GR more greatly enhanced than those of the individual constituents (APO, LCO, APO/LCO20). The enhanced photocatalytic activity of the heterostructure can be attributed to the co-catalytic effect of LCO as well as intriguing physicochemical properties of GR. To understand the enhanced photocatalytic activity of the heterostructures the photocatalytic reaction mechanism is proposed in detail. The recyclability of the APO/LCO/GR composite photocatalyst is further evaluated by reusing the catalyst in replicate photocatalytic experiments which shows

Microstructural characteristics of $SrTiO_3$ nanoparticles: the role of capping ligand concentration

Author(s): Uzma K.H. Bangi [1] ; Vipul M. Prakshale [1] ; WooJe Han [2] ; Hyung-Ho Park [2] ; Noor Mahmad N. Maldar [3] ; Lalasaheb P. Deshmukh [1]
View affiliations

Source: Volume 11, Issue 5, May 2016, p. 273 – 276
DOI: 10.1049/mnl.2015.0531 , Online ISSN 1750-0443

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- Table of contents
- Next Article »

Received 03/12/2015, Accepted 09/03/2016, Revised 09/03/2016, Published 01/05/2016

Article

The role of capping ligand concentration on the microstructural characteristics of strontium titanate ($SrTiO_3$ or STO) nanoparticles has been investigated. Capping the surface of primary particles with ligand having long alkyl chain protects the increase in nanoparticle size by hindering the agglomeration. Therefore, in the present work the role of ligands namely cetyltrimethyl ammonium bromide (CTAB) and polyvinylpyrrolidone (PVP) on the structure and surface morphology of STO have been studied by varying their concentrations from 0.01 to 0.08 M and 0.001 to 0.008 M respectively. The structure of STO was determined using the X-ray diffraction (XRD) and transmission electron microscopy (TEM) techniques. The surface morphologies of the different STO samples were viewed through the field emission scanning electron microscopy (FESEM). A cubic crystalline phase formation of STO has been observed as revealed from the XRD and TEM images. The typical crystallite size, strain and dislocation density determined for PVP capped STO are 29 nm, 2.08×10^{-03} and 1.194×10^{15} m^{-2}, respectively. FESEM images manifested a decrease in the grain size as a result of increase in the concentration of CTAB to 0.05 M and PVP to 0.005 M. Nearly spherical grains with some sort of fusing have been observed at lower and higher concentrations of the CTAB and PVP in both the cases.

Inspec keywords: transmission electron microscopy; internal stresses; dislocation density; crystallites; field emission electron microscopy; wide band gap semiconductors; strontium compounds; grain size; surface morphology; scanning electron microscopy; X-ray diffraction; nanoparticles

Other keywords: strain; XRD; crystallite size; TEM; FESEM; field emission scanning electron microscopy; nanoparticle size; microstructural characteristics; cubic crystalline phase formation; SrTiO3; capping ligand concentration; cetyltrimethyl ammonium bromide; dislocation density; transmission electron microscopy; grain size; polyvinylpyrrolidone; surface morphology; agglomeration; strontium titanate nanoparticles; alkyl chain; X-ray diffraction

Subjects: Solid surface structure; Etch pits, decoration, transmission electron-microscopy and other direct observations of dislocations; Microstructure; Structure of solid clusters, nanoparticles, nanotubes and nanostructured materials

Related content

Composites Part B: Engineering
Volume 85, February 2016, Pages 286-293

Synthesis and characteristics of $Zn_{1-x}Cr_xSe$ composite thin film materials

Lalasaheb Patangrao Deshmukh [a], Pandurang Chilu Pingale [a, b], Shrishail Suresh Kamble [a], Noormahmad Nabisaheb Maldar [c]

https://doi.org/10.1016/j.compositesb.2015.09.047

Abstract

ZnSe and $Zn_{1-x}Cr_xSe$ ($0 \le x \le 0.35$) composite thin films were deposited by a chemical growth technique. The energy dispersive spectroscopy, X-ray diffraction analysis, scanning electron and atomic force microscopies, optical and electrical transport techniques were used to st the characteristic properties of thin composite films. An EDS analysis showed that the exp elements (Zn, Se and Cr) exist in the thin solid films. XRD analysis confirmed hexagonal wurtzite structure with dominant preferred orientation along <100>. SEM studies revealed that, both ZnSe and $Zn_{1-x}Cr_xSe$ films grow in a definite fashion. AFM images showed formation of almost spherical crystallites of ZnSe and $Zn_{1-x}Cr_xSe$. The optical bandgaps of $Zn_{1-x}Cr_xSe$ films found to be decreased from 2.71 eV to 2.53 eV for the change of x from 0 to 0.05. The electrical conductivity of $Zn_{1-x}Cr_xSe$ films found to be increased continuously with x up to 0.05 and then decreased for higher x-values.

Journal of Macromolecular Science, Part A ›
Pure and Applied Chemistry
Volume 54, 2017 - Issue 2

Article

Synthesis and characterization of processable heat resistant co-poly(ester-amide)s containing cyclopentylidene moiety

S. S. Ankushrao, V. N. Kadam, Y. S. Patil, V. P. Ubale, N. N. Maldar & **A. A. Ghanwat**

Pages 124-132 | Received 01 May 2016, Accepted 01 Aug 2016, Published online: 11 Jan 2017

Download citation https://doi.org/10.1080/10601325.2016.1261625 Check for updates

ABSTRACT

New cyclopentylidene ring-containing diamino-diesters, 1,1-bis(3-aminobenzoyloxy phenyl) cyclopentane, was prepared through reaction of cyclopentanone with two

Journal of Macromolecular Science, Part A ›
Pure and Applied Chemistry
Volume 54, 2017 - Issue 2

Article

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ABSTRACT

New cyclopentylidene ring-containing diamino-diesters, 1,1-bis(3-aminobenzoyloxy phenyl) cyclopentane, was prepared through reaction of cyclopentanone with two

Chemical Engineering Journal
Volume 307, 1 January 2017, Pages 300-310

Mimics of microstructures of Ni substituted $Mn_{1-x}Ni_xCo_2O_4$ for high energy density asymmetric capacitors

Mohaseen S. Tamboli [a, b, 1], Deepak P. Dubal [c, 1], Santosh S. Patil [a], Asiya F. Shaikh [a], Virendrakumar G. Deonikar [a], Milind V. Kulkarni [a], Noormahamad N. Maldar [b], Inamuddin [d, e], Abdullah M. Asiri [d, e], Pedro Gomez-Romero [c] ✉, Bharat B. Kale [a] ✉, Deepak R. Patil [a] ✉

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https://doi.org/10.1016/j.cej.2016.08.086

Highlights

- Hydrothermal synthesis of hierarchical $Mn_xNi_{1-x}Co_2O_4$ nanostructures.
- Morphological transformation from 3D microcubes to 1D nanowires.
- Fabrication of asymmetric capacitor with activated carbon.
- Excellent energy density (35.2 Wh/kg (2.1 mWh/cm^3)).

Abstract

The preparation of nanostructured hierarchical $Mn_{1-x}Ni_xCo_2O_4$ metal oxides as efficient supercapacitors of different structures and configurations especially for the miniaturized electronics is still a challenge. In this context, we report template free facile hyd

Materials Letters
Volume 186, 1 January 2017, Pages 247-251

Design and fabrication of quaternary $Co_{1-x-y}Zn_xCd_yS$ thin film photoelectrochemical (PEC) cell

S.S. Kamble [a, b], A. Sikora [c], G.T. Chavan [a], S.T. Pawar [a], N.N. Maldar [d], L.P. Deshmukh [a]

Show more

https://doi.org/10.1016/j.matlet.2016.09.129

Highlights

- Improvement in topography with composition observed in $Co_{1-x-y}Zn_xCd_yS$ thin films.
- PEC cell of configuration $Co_{1-x-y}Zn_xCd_yS$/0.5 M KCl/ C is devised.
- The efficiency (η) and ff are 1.06% and 0.39 respectively for x=y=0.15.

Abstract

Quaternary semiconductor thin films are an emerging material for the development of photoelectrochemical (PEC) cells. Here, we are presenting the photoelectrochemical properties of $Co_{1-x-y}Zn_xCd_yS$ thin films. Chemical synthesis of quaternary $Co_{1-x-y}Zn_xCd_yS$ thin films has been reported previously. As-deposited thin films were studied for morphological features using atomic force microscopy (AFM). The photoelectrochemical (PEC) properti

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Applied Surface Science
Volume 426, 31 December 2017, Pages 466-479

Full Length Article

Quaternary schematics for property engineering of CdSe thin films

G.T. Chavan [a], S.T. Pawar [a], V.M. Prakshale [a], A. Sikora [b], S.M. Pawar [c], N.B. Chaure [d], S.S. Kamble [a, e], N.N. Maldar [f], L.P. Deshmukh [a]

https://doi.org/10.1016/j.apsusc.2017.07.208

Highlights

- Property engineering of CdSe thin films through quaternary schematics is realized.
- Colorimetric studies revealed that cadmium is responsible for the lightness.
- Raman spectra supports formation of quaternary Cd(Zn, S)Se thin films.
- XPS analysis revealed chemical states of the elements as Cd^{2+}, Zn^{2+}, S^{2-} and Se^{2-}.
- AFM study revealed samples to be crystalline with platykurtic nature of the surface.

MWCNT incorporated silica aerogel prepared by ambient pressure drying: A recyclable catalyst for multicomponent synthesis of benzylpyrazolyl coumarin at room temperature

Document Type : Original Research Article

Authors

- Isak Rajjak Shaikh [1]
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- Caroline Sunyong Lee [3]
- Rajendra Charandeo Pawar [3]
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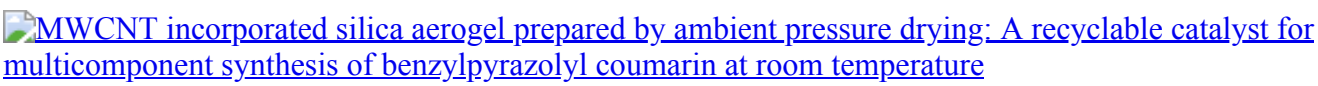
Abstract

Multiwalled Carbon Nanotube (MWCNT) reinforced silica aerogel was synthesized in a very simple and cost effective sol - gel method. The process was followed by ambient pressure drying, and then the aerogel material was characterized by XRD, BET, SEM, EDX and FT-IR. 2.3 x 10-3 wt% MWCNTs were successfully incorporated in sodium silicate based silica aerogel. This metal-free nanocomposite catalyzed a four component organic reaction among 4-hydroxy coumarin, benzaldehyde, phenyl hydrazine, and ethyl acetoacetate for synthesizing medicinally important benzylpyrazolyl coumarin at room temperature. The MWCNT/silica aerogel composite material having easy accessible active sites and high catalytic activity was easily recovered and reused. The aerogel composite when impregnated with ceria offered very efficient and selective reaction methodology.

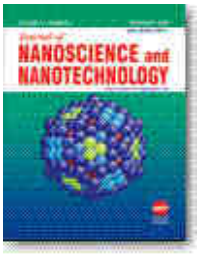
Graphical Abstract



Keywords

- MWCNT/Silica aerogel
- ambient pressure drying
- MWCNT/Silica aerogel heterogeneous catalysis
- multicomponent reaction
- benzylpyrazolyl coumarin

Main Subjects



Synthesis and Properties of Metal Oxide Aerogels via Ambient Pressure Drying

Authors: Bangi, Uzma K. H [1] ; Lee, Kyu-Yeon [2] ; Maldar, Noor Mahmad N [3] ; Park, Hyung-Ho [2] ;
Source: Journal of Nanoscience and Nanotechnology, Volume 19, Number 3, March 2019, pp. 1217-1227(11)
Publisher: American Scientific Publishers
DOI: https://doi.org/10.1166/jnn.2019.16240

21-08-2017 | Issue 23/2017

Spray synthesized hydrophobic α-Fe_2O_3 thin film electrodes for supercapacitor application

Journal: Journal of Materials Science: Materials in Electronics > Issue 23/2017

Authors: P. D. More, P. R. Jadhav, A. A. Ghanwat, I. A. Dhole, Y. H. Navale, V. B. Patil

Abstract

α-Fe_2O_3 thin films were deposited through spray pyrolysis technique with different precursor solution concentrations i.e. (0.05, 0.1 and 0.2 M) of iron nitrate at optimized 400 °C temperature. The effect of precursor concentrations on material properties such as structural, morphological, contact angle and electrochemical supercapacitive were explored. Structural analysis, using X-ray diffraction confirmed the hexagonal phase of the films polycrystalline in nature. The Scanning electron microscopy showed large area grannual morphology. Contact angle analysis of α-Fe_2O_3 thin films illustrated hydrophobic in nature. The supercapacitive performance of Fe_2O_3 thin film electrodes were explored in 1M NaOH aqueous electrolyte. The specific capacitance was decreased from 277 F g^{-1} to 196 F g^{-1} as the concentrations of precursor solution varied from 0.05 to 0.2 M.

ORIGINAL PAPER | Published: 06 June 2018

Synthesis and characterization of conjugated porous polyazomethines with excellent electrochemical energy storage performance

P. H. Salunkhe, Y. S. Patil, V. B. Patil, Y. H. Navale, I. A. Dhole, V. P. Ubale, N. N. Maldar & A. A. Ghanwat

Journal of Polymer Research **25**, Article number: 147 (2018)

Abstract

Polymer based energy storage devices have luminous advantages in comparison with currently employed supercapacitors due to the environmental friendliness, cost and versatility. In general conjugated polymers are more conductive than the inorganic battery materials and have greater power capability. In this report the electron-rich conjugated polymers, containing thiophene as the core named polyazomethines ware synthesized. It contains thiophene electron-donating unit and electron withdrawing unit in which quinoxaline integrated in benzene ring. The influence of the π-linkers of the polyazomethines materials on thermal properties, and electrochemical energy storage performance was investigated. Their outstanding electrochemical performance can be attributed to their conductive

Journal of Alloys and Compounds
Volume 692, 25 January 2017, Pages 294-300

Platinum-decorated Cu(InGa)Se_2/CdS photocathodes: Optimization of Pt electrodeposition time and pH level

Min-woo Kim [a, 1], Hyun Yoon [b, 1], Tae Yoon Ohm [a], Mukund G. Mali [a], Sung Kyu Choi [c], Hyunwoong Park [c], Salem S. Al-Deyab [d], Dong Chan Lim [e] ✉, SeJin Ahn [f] ✉, Sam S. Yoon [a] ✉

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https://doi.org/10.1016/j.jallcom.2016.08.313

Highlights

- The CIGS/CdS layers were electrodeposited with Pt using various deposition times.
- The Pt electrodeposition time of 20 min yielded –24.16 mA/cm^2 at optimum.
- The effect of the pH on the PEC performance was investigated.

Abstract

Photoelectrochemical (PEC) water splitting was performed using co-evaporated Cu(In,Ga)Se_2 (CIGS, p-type) films as the photocathode. Pt was electrodeposited on CIGS and CIGS/CdS films. The effect of the electrodeposition time was investigated to determine the optimal deposition conditions. The CIGS film was covered with a 60-nm-thick CdS layer (n-type) u

Article | Open Access | Published: 21 August 2017

One-Pot in Situ Hydrothermal Growth of $BiVO_4$/Ag/rGO Hybrid Architectures for Solar Water Splitting and Environmental Remediation

Santosh S. Patil, Mukund G. Mali, Mostafa Afifi Hassan, Deepak R. Patil, Sanjay S. Kolekar & Sang-Wan Ryu

Scientific Reports **7**, Article number: 8404 (2017)

Abstract

$BiVO_4$ is ubiquitously known for its potential use as photoanode for PEC-WS due to its well-suited band structure; nevertheless, it suffers from the major drawback of a slow electron hole separation and transportation. We have demonstrated the one-pot synthesis of $BiVO_4$/Ag/rGO hybrid photoanodes on a fluorine-doped tin oxide (FTO)-coated glass substrate using a facile and cost-effective hydrothermal method. The structural, morphological, and optical properties were extensively examined, confirming the formation of hybrid heterostructures. Ternary $BiVO_4$/Ag/rGO hybrid photoanode electrode showed enhanced PEC performance with photocurrent densities (J_{ph}) of ~2.25 and 5 mA/cm^2 for the water and sulfate oxidation, respectively. In addition, the $BiVO_4$/Ag/rGO hybrid photoanode can convert up to 3.5% of the illuminating light into photocurrent, and exhibits a 0.9% solar-to-hydrogen conversion efficiency. Similarly, the photocatalytic methylene blue (MB) degradation afforded the highest degradation rate constant value ($k = 1.03 \times 10^{-2}$ min^{-1}) for the $BiVO_4$/Ag/rGO hybrid sample. It is noteworthy that the PEC/photocatalytic performance of $BiVO_4$/Ag/rGO hybrid architectures is markedly more significant than that of the pristine $BiVO_4$ sample. The enhanced

Original Research | Published: 16 November 2016

Synthesis of novel α,α-difluoro-β-hydroxycarbonyl pyrazole derivatives as antioxidant, anti-inflammatory and anticancer agents

Salman Mukarram, Babasaheb P. Bandgar, Rafik U. Shaikh, Shriram D. Ganapure & Hemant V. Chavan

Medicinal Chemistry Research **26**, 262–273 (2017)

Abstract

A series of novel α,α-difluoro-β-hydroxyl pyrazole esters was prepared by Reformatsky reaction. Subsequently, these esters were converted to acids and hydrazides. All the synthesized compounds were evaluated for their in vitro antioxidant, anti-inflammatory and anticancer potential at various concentrations (50, 100 µM). Compounds **4d** and **6e** were found to be potent (93.19 and 90.91 %) and compounds **5d**, **6c** and **5f** were good OH radical scavengers (79.55–72.73 %) as compared to the standard drug ascorbic acid (88.63 %). Compounds **6a**, **5c**, **6f**, **4d** and **5a** showed significant 1,1-diphenyl-2-picrylhydrazyl radical scavenging activity (75.95–70.89 %). All the compounds have shown higher cyclooxygenase-1 (COX-1) inhibition over cyclooxygenase-2 (COX-2) at concentrations 100 and 50 µM. Compounds **5f**, **6b**, **4a**, **5c**, **4f**, **5**

Bioorganic & Medicinal Chemistry Letters
Volume 27, Issue 7, 1 April 2017, Pages 1502-1507

Synthesis of extended conjugated indolyl chalcones as potent anti-breast cancer, anti-inflammatory and antioxidant agents

Professor Babasaheb P. Bandgar on his 66th Birthday

Pravin S. Bhale [a, b], Hemant V. Chavan [c], Sakharam B. Dongare [a], Sadanand N. Shringare [a], Yoginath B. Mule [a], Samadhan S. Nagane [d], Babasaheb P. Bandgar [a]

https://doi.org/10.1016/j.bmcl.2017.02.052

Abstract

In the present investigation, synthesis of a series of extended conjugated δ-chloro-α-cyano substituted indolyl chalcones (**5a–p**) was accomplished by reacting 3-cyanoacetylindole **2** with 3-chloro-3-phenyl-propenal **4** in the presence of piperidine. The structural interpretations of newly synthesized compounds were based on chemical and spectroscopic evidences. Anti-tumor evaluation of the synthesized compounds *in vitro* against MCF-7 (breast carcinoma) cell line revealed that they possess high anti-tumor activities. Among them, compound **5e** and **5a** demonstrated excellent activity against breast carcinoma (GI_{50} <0.1 and 4 μM respectively) as good as adriamycin (GI_{50} <0.1 μM). The compounds were also screened against the normal Vero monkey cell line, which showed moderate selectivity against inhibition of cancer cells. The effect of extended conjugation on activity authenticated by comparing activity profile of compound **5a**, **5i** and **5m** with their simple analogues. Among the synthesized compounds, **5i** and **5l** were found to be active anti-inflammatory agents in addition to having noteworthy antioxidant potential. These results suggest the possible use of these compounds for the design and development of novel anti-breast cancer agents.

Synthesis | Published: 02 July 2018

High Performance Poly(ether-amide)s Derived from 1,1-Bis[4-(4-carboxy methylene phenoxy)-3-methyl phenyl] Cyclopentane and Aromatic Diamines

S. S. Ankushrao, V. M. Gugwad, V. P. Ubale, N. N. Maldar & A. A. Ghanwat

Polymer Science, Series B **60**, 263–272 (2018)

Abstract

A series of new methyl substituted poly(ether-amide)s were synthesized by using direct Yamazaki's phosphorylative polycondensation of novel diacid 1,1-bis[4-(4-carboxymethyl phenoxy)-3-methylphenyl] cyclopentane (BCMMP) with various aromatic diamines. These polymers were characterized by FTIR spectroscopy. Inherent viscosities of these polymers were in the range 0.25 to 0.42 dL/g indicating moderate molecular weight built-up. These polymers exhibited excellent solubility in various polar aprotic solvents such as NMP, DMSO, DMAc, DMF, pyridine, and were insoluble in THF, DCM and chloroform. X-Ray diffraction pattern of polymers showed that incorporation of methyl substituent on aromatic backbone and cardo cyclopentylidene moiety containing ether linkage and methylene spacer

Polymer-Plastics Technology and Materials ›
Volume 59, 2020 - Issue 1

Articles

Synthesis, characterization, wettability study and thermal behaviour of aromatic polyimides containing tetraphenylthiophene-quinoxaline unit.

P. H. Salunkhe, Y. S. Patil, V. N. Kadam, S. S. Ankushrao, V. P. Ubale & A. A. Ghanwat

Pages 95-105 | Received 14 Jun 2018, Accepted 27 May 2019, Published online: 06 Jun 2019

Download citation https://doi.org/10.1080/25740881.2019.1625385 Check for updates

ABSTRACT

A novel synthetic approach for designing metal-free, redox-active quinoxaline-benzimidazole-based organic polymers with high energy storage capacity†

Pravin S. Salunkhe, [ab] Yuvraj S. Patil,[a] Indrajeet A. Dhole,[c] Basavraj S. Kalshetti,[a] Vikas B. Patil, [c] Shivshankar R. Mane [b] and Anil A. Ghanwat *[a]
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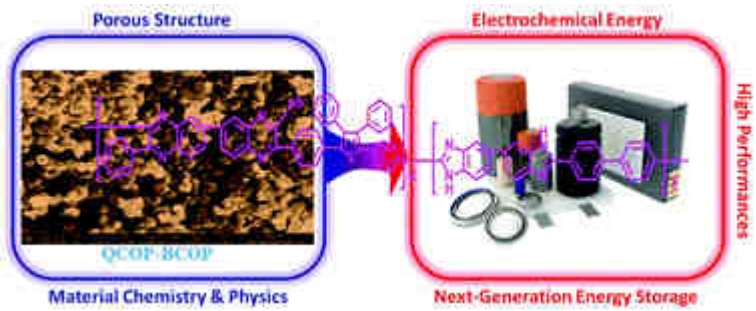
[b] Polymer Science and Engineering Division, CSIR-National Chemical Laboratory, Pune, India

[c] Functional Materials Research Laboratory, School of Physical Sciences, Solapur University, Solapur-413255, MS, India

Abstract

New organic framework materials, namely, polyphenylquinoxaline (**QOP**) and polyphenylquinoxaline-benzimidazole (**QOP-BOP**) were designed using a high-temperature (>100 °C) polymerization reaction with different monomers, *i.e.*, 2,5-bis-[(4-benzoylcarbonyl)phenyl]-3-4 diphenyl thiophene (**BbcPDT**), aromatic tetraamines and biphenyl dicarboxylic acid. The **QOP-BOP** copolymer exhibited specific capacitance (SC) of 305 F g^{-1} at the current density of 2 A g^{-1} and 88% retention of its initial specific capacitance after 1000 cycles, which resulted in good cyclic stability. This work establishes the first use of thiophene integrated with quinoxaline-benzimidazole units for energy storage applications and provides strategies for further developments in the performance of such conjugated materials. Cyclic voltammetry, charge–discharge and electrochemical impedance techniques were used to evaluate the electrochemical parameters, which demonstrated their potential in future energy storage devices.



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Synthesis of Asymmetric Thiazolyl Pyrazolines as a Potential Antioxidant and Anti-Inflammatory Agents

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Received 05 Nov 2019, Accepted 09 Jan 2020, Published online: 23 Jan 2020

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Abstract

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ISSN-0975-833X Quality Scientific Publishing: Frequency: Monthly

Wsn based sensor node deployment for lpg gas leakage detection and controlling

Author: Mujawar, T. H., Bachuwar, V.D., Kasbe, M. S., Prabhakar, P., Shaligram, A. D. and Deshmukh, L. P.
Subject Area: Physical Sciences and Engineering
Abstract:

Wireless Sensor Networks (WSN) has recently been applied in various monitoring applications including hazardous gases detection. In this paper we present a WSN for hazardous gases detection with a special emphasis given on its monitoring and controlling for home safety. LPG leak can happen, though rarely, inside a home, commercial premises or in gas powered vehicles. Leakage of this gas is dangerous as it enhances the risk of explosion. Therefore, systems should be developed that can monitor the level of LPG gas in the vicinity of the firefighters and generate appropriate alarms if levels of such gases exceed the prescribed safe levels, sending SMS on user mobile phone and turning off the gas supply valve as a primary safety measure. The system more like a First Aid, automatically uses a normally closed solenoid valve for shutting off of the gas valve before calling for help via visual display and audible alarm to those within the environment. For the purpose, we propose to set up wireless sensor nodes to monitor the leakage area by measuring the Received Signal Strength Indicator (RSSI) values received by these sensor motes strategically placed at different locations.

PDF file:
13815.pdf

Int.J.Curr.Microbiol.App.Sci (2016) *5*(6): 97-104

International Journal of Current Microbiology and Applied Sciences
ISSN: 2319-7706 **Volume 5 Number 6 (2016) pp. 97-104**
Journal homepage: http://www.ijcmas.com

Original Research Article http://dx.doi.org/10.20546/ijcmas.2016.506.012

Impact of Plant Density on the Sewage Treatment through selected Aquatic Macrophytes Using Angular Horizontal Subsurface Flow Constructed Wetland

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Keywords

Constructed wetland, Plant Biomass, Sewage treatment, Angular Horizontal Subsurface Flow, Pennisetum purpureium, pollutants removal efficiency.

Article Info

Accepted:
07 May 2016
Available Online:
10 June 2016

A B S T R A C T

Constructed wetland treatments are engineered systems that have been designed and constructed to utilize the wetland vegetation, soils and microbial populations to treat contaminants from surface water, ground water and wastewater. The use of constructed wetlands to treat wastewater is rapidly emerging as a feasible alternative at worldwide. A pilot scale study was conducted to examine the feasibility study and impact of plant density on the sewage treatment through selected wetland rooted plant species using Angular Horizontal Subsurface Flow (AHSSF) constructed wetland. In the present study *100 % sewage concentration and Cana indica, Pannicum maximum, Colocasia esculenta, Typha latifolia, Pennisetum purpureium Schumach and Eichhornia crassipes* of plant species were used and planted in equal numbers in the media bed and examined its impact on the sewage treatment. *In this investigation only plant growth and pollutants removal efficiency was studied in various seasons during sewage treatment. In this overall study the Pennisetum purpureium of emergent and Eichhornia crassipes* of free floating plants removed greatest and maximum organic and inorganic pollutants from the sewage. The constructed wetland bed of all plants shows greenery, leafier and seems flowering and also most of the faunal species were attracted towards the experimental bed.

Introduction

The system of planting aquatic plants such as reeds or bulrushes in a wet (often gravel) substrate medium for gray water recycling is called a "Constructed Wetland" or "Artificial Wetland" or "Human Engineered Wetland". Constructed wetlands with emergent vegetation have been used to treat various types of wastewaters (Wallace and Knight, 2006). They are efficient in removal of organics through microbial degradation and settling of colloidal particles. Suspended solids are effectively removed via settling

J. Mater. Environ. Sci. 7 (9) (2016) 3256-3263
ISSN : 2028-2508
CODEN: JMESC

Application of Constructed Wetland using *Eichhornia crassipes* for Sewage Treatment

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Received 28 Feb 2016, Revised 09 Jul 2016, Accepted 15 Jul 2016
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Abstract
India is facing acute shortage of clean water for drinking and other purposes. Most of the water resources are polluted by discharge of domestic sewage. The municipal sewage systems used in developed countries are often too expensive to build and operate thus low–cost; low–tech alternatives for treating wastes are needed. An alternative is to use natural or artificial wetlands to dispose of wastes. In this research constructed wetland with water hyacinth plant has been tried to reduce the pollutant load of sewage. It is found that the system is capable of removing pollutants and the hydrophyte has shown its ability to survive in high concentration of nutrients with significant nutrient removal. In all the sets of dilution of wastewater, DO (dissolved oxygen) levels increased after treatment. In 100% sewage dilution BOD (biological oxygen demand) was observed to be 230 mg/L which decreased to 120 mg/L. Reduction of metals was noticed in all treatments with reduction in Co, Cu and Fe were found to be78.78%, 28.90% and 23.42% respectively. The results obtained from analysis of treated wastewater indicated that the treated water can be useful for agriculture, washing, gardening, planting or any other purposes.

Keywords: Wetland, Water hyacinth, sewage treatment, nutrient removal

1. Introduction - Waste water generation in India and application of Constructed Wetlands
In present scenario most of our water bodies, surface as well as groundwater are suffering from pollution by manmade activities. Most of the water resources are polluted by discharge of domestic sewage [1]. Due to indiscriminate discharge of wastes the pollutant load often exceeds the natural ability of that water body to remove the undesirable material or dilute it to a harmless form [28]. Presence of sewage promotes the growth of phytoplanktons. This excessive growth depletes the oxygen of water which adversely impacts the aquatic faunal population. Sewage mostly contains a large number of inorganic and organic impurities [29] cysts of pathogens, bacteria and viruses causing waterborne diseases such as cholera, dysentery, hepatitis, typhoid, gastroenteritis, enteric fever and malaria etc [2].

Soil Geochemical Dispersion Pattern around Molybdenite Deposits in Koheda Area, Karimnagar District, Telangana.

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Abstract

The present investigation is aimed to assess the ore bearing potential of Koheda and Hausnabad mandles of Karimnagar district of Telangana covering an area of 150 Km^2 that lies between 18° 15' to 18° 05' N latitudes and 79° 02' to 79° 11' E longitudes. Geologically, the area is exposed by pink and grey archean granites with pegmatite and quartz veins associated with Cu and Mo mineralisation. Soil samples were collected in the present investigation to evaluate the secondary geochemical patterns associated with sulphide mineralisation in Koheda. Soil samples are collected in a grid pattern from a depth of 30 cms. The elements analysed from the minus 80 ASTM sieve fraction of soil samples are Cu, Pb, Zn, Ni, Cr, Co, Mo, W, Fe and Mn. It is inferred that Zn, Co and W could be regional pathfinders, while Cu and Mo can be used as local indicators in the study area. The soils having anomalous haloes of Cu and Zn at Kurella at Southwest of Kurella and Dharmasagarpalli; Zn, Cu, Co, W and Mo at Maisampalli and isolated anomalous concentration of some target elements could prove to be drilling targets for the buried mineralisation at Regonda, Arepalli, Gotlamitta, Ramachandrapuram and Ramannapet.

Keywords: Koheda , Archean granites, secondary dispersion pattern, target elements

Introduction

Koheda area was selected because of the presence of suitable rock type for hosting copper and molybdenum mineralisation. The aim of investigation is to carry out systematic orientation geochemical survey with a view to develop reliable prospecting tools in secondary geochemical landscape. It is envisaged to study abnormal geochemical signatures in soil developed over granites. For the purpose, it is proposed to carry out soil-geochemical survey. The ultimate goal of any such investigation is, of course, to find clues that will help in locating hidden ore deposits within granites. Rose et al., (1979) reviewed the usefulness of soil geochemical exploration in identification of base metal and molybdenite deposits and stated that in the secondary environment a geochemist plays diametrically opposite games of exploration. In the soil surveys the higher values are assumed to be in situ and the anomalies in the soils are close to the target. Fifty soil samples were collected in the present investigation to evaluate the secondary geochemical patterns associated with sulphide mineralisation in Koheda area.

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APPLICATION OF REMOTE SENSING AND GIS OF VARIOUS INDICES: A REVIEW OF MANGALWEDHA TAHSIL, DISTRICT SOLAPUR, MAHARASHTRA

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Abstract:
There is a high potential for the use of GIS and RS techniques on indices calculation using spatial analysis techniques. While the satellite data provides the subjective opinions of people about the convenience to public processing, services and analyzing the geospatial technologies based information provides essential contributions in considerate the objective dimension of the accessibility to health, emergency and transportation facilities. The present research work, indices are calculated from satellite imageries such as Normalized Difference Vegetation Index (NDVI), Normalized Difference Built Index (NDBI), Normalized Difference Water Index (NDWI), Normalized Difference Soil Index (NDSI), Normalized Burn Ratio (NBR), Visible Atmospherical Resistant Index (VARI), Normalized Difference Moisture Index (NDMI) and Soil Adjusted Vegetation Index (SAVI). The NDVI, NDBI and NDWI have indices value ranges from -1 to 1.

Keywords: Indices, RS and GIS, Spatial boundary, Mangalwedha, etc.

Introduction

There is a high potential for the use of GIS and RS techniques on indices calculation using spatial analysis techniques. Remote sensing materials in the form of aerial photographs and satellite images are usually converted into useful information such as land cover maps using two conventional methods: manual interpretation and computer-assisted digital processing. During manual interpretation analogue photographs or satellite images are visually interpreted and the results delineated directly on the photographs or images or on tracing paper placed over them (Jha, et al., 2003). Similar to other cities in the developing world, Mangalwedha city has been progressively increasing both physically as well as in terms of its population (Xu et al., 2000).

The various indices are discussed below

Normalized Difference Vegetation Index (NDVI)

The NDVI is easy graphical indicator that can be used to evaluate remote sensing measurements, usually but not essentially from a space platform, and evaluate whether the target being observed contains live green vegetation or not. The importance of NDVI comes from the fact that it gives information about a primary production (vegetation) over time (Francesco, et al., 2014). NDVI is a vegetation index to monitor the condition of vegetation or vegetation health. The chlorophyll content of vegetation absorbs strongly the red wavelength of sunlight and reflects in near-infrared wavelengths. In red band (620 – 750 nm) there is maximum absorption of sunlight and in near-infrared (750 to 1400 nm) maximum of sunlight is reflected back.

Mathematically NDVI is calculated using the below formula:

NDVI = (NIR - Red) / (NIR + Red)

Normalized Difference Water Index (NDWI)

NDWI may refer to one of at least two remote sensing -derived indexes related to liquid water. The Normalized Difference Water Index (NDWI) (Gao, 1996) is a satellite-derived index from the Near-Infrared (NIR) and Short Wave Infrared (SWIR) channels. The amount of water available in the internal leaf structure largely controls the spectral reflectance in the SWIR interval of the electromagnetic spectrum. SWIR reflectance is therefore negatively related to leaf water content (Tucker 1980).

Mathematically NDWI is calculated using the below formula:

NDWI = (GREEN - NIR) / (GREEN + NIR)

Normalized Difference Builtup Index (NDBI)

One of the main problems in mapping urban areas is assessing the change in land usage from non-residential to residential. Mapping the built-up and bare land in urban areas is important because the existence of these types of land can be used as an indicator of urban development and environmental quality [Weng, Q., 2008]. The mapping process applies different remotely sensed data and spectral values based on the land use category [Xu, H., 2008].

Mathematically NDBI is calculated using the below formula:

NDBI = (SWIR – NIR) / (SWIR + NIR)

Normalized Difference Soil Index (NDSI)

The developments of soil indices, are challenging due to several reasons. Firstly, soil is a complex material with various physical and chemical compositions, and the spectra of soil

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REMOTE SENSING AND GIS APPLICATION TO ASSESS THE RAINWATER HARVESTING POTENTIAL IN NORTH SOLAPUR TAHSIL, SOLAPUR DISTRICT, MAHARASHTRA

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Abstract:

Rain Water Harvesting and Conservation, is the activity of direct collection of rain water collected can be stored for direct use or can be re-charged into the Ground Water. Solapur district is received less amount of rainfall during monsoon season. The groundwater is highly depleted and receives less amount of water from rain. The North Solapur tahsil is dry area and belongs to over exploited category. Solapur city is belongs to smart city along with NH- 65 and NH - 9 identified as suitable area for global city project. This will increase demand and pressure on already depleting water resource many folds. Studies need to be conducted for identification of catchment areas with good storage recharge potential and ground water aquifers with good retention and community level projects be developed & implemented, so that sustainability of water resource can be assured. Due to rapid urbanization and industrialization in the study area, demand for water consumption has increased at an unprecedented rate. Statistics on water availability in the study area has already revealed that water table has gone down remarkably in last 2-3 decades. Nevertheless, the area has sufficient potential to feed on the ever increasing demand of water if harvest and conserve properly. Site selection for RWH is carried out by overlying the slope, soil, landuse/land cover & buffered stream order maps. The study area is having full scope for percolation tanks, farm ponds and check dams. Produced map will help in the selection of the suitable location of harvesting structures and hence, help in water conservation in water depleted area.

Keywords: Rain Water Harvesting, groundwater, RS and GIS, Solapur etc.

Introduction

1. Water is the life of any society. It is a necessary component in every aspect of life and must be esteemed and safeguarded. It is essential for the food, environment and sustainable development. All civilization has growing with water source as their base. Water supply is the main important source of urban services. Drinking water and requirement of sanitation practices are the essential minimum requirements for all healthy living. Rainwater is a prime source of freshwater and the movement of accumulating rainwater directly for useful or recharging it into the ground to recover groundwater storage in the aquifer is known as rainwater harvesting (RWH). The groundwater demand has increased tremendously (1,2). When there is a total imbalance between the natural recharge and over pumping of water over a period of time, the decline of the water table becomes important with decrease of yield [3]. India is blessed with sufficient rainfall but many regions are dry and drought prone. In many areas the quality of groundwater is not good. Solapur region having quite even rainfall but there is also problem of a severe scarcity of drinking water. This is because we have rainfall in small spells of more intensity. Due to this intensity and small duration of heavy rain, majority of the rain falling on surface tends to flow away rapidly and leaving very slight for the recharge of ground. Therefore, it is essential for users to store and collect rainwater.

Study Area

Solapur is a city located in the south-eastern region of the Indian state of Maharashtra. Solapur is located on major road and rail routes between Mumbai and Hyderabad, with a branch line to the cities of Bijapur and Gadag in the neighbouring state of Karnataka. It is well known for textile production such as bed sheet, blanket, towels etc. It is 49th most populous city in India and 43rd largest urban agglomeration. Solapur city lies between 17^0 36'0" N to 17^0 44' 0"N latitude and $75^0$48'0" E to $76^0$4'0" E longitude (fig.1).

Materials and Methods

2. The study area lies in the geological survey of India (GSI) toposheet no. 47 O/13 and 56 C/01.The toposheets are 1:50000 scale with contour interval of 20 meter. Erdas Imagine - 2011 has been used for image classification. ArcGIS Desktop 10.0 for Vector and Raster based analysis such as Map Overlay, Proximity Analysis, Local and Zonal Function, Rainfall

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Articles

Nitrate associated health risks from groundwater of Kadava River Basin Nashik, Maharashtra, India

Vasant Madhav Wagh, Dipak Baburao Panaskar, Shrikant Vitthal Mukate, Manesh Laxman Aamalawar & Uday Laxman Sahu

Pages 654-672 | Received 12 Aug 2018, Accepted 23 Sep 2018, Published online: 15 Jan 2019

Download citation https://doi.org/10.1080/10807039.2018.1528861 Check for updates

RJC

RASĀYAN *J. Chem.*
Vol. 12 | No. 4 |1864 - 1871| October - December | 2019
ISSN: 0974-1496 | e-ISSN: 0976-0083 | CODEN: RJCABP
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A NOVEL POROUS ACTIVATED CARBON COMPOUND PREPARED FOR ADSORPTION OF COBALT (CO (II)) FROM AQUEOUS SOLUTION FOR ENVIRONMENTAL POLLUTION MITIGATION

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ABSTRACT

The eco-friendly and sustainable technique was developed to resolve the problem of heavy metal pollution. In the present study, the removal of cobalt (Co (II)) was carried out using the activated carbon (AC). Activated carbon compound was prepared using selected plants such as *Ficus benghalensis (FB), Mangifera indica (MI), Tamarindus indica (TI), Azadirachta indica (AI) and Syzygium cumini (SC).* The characterization of the products was done by using the scanning electronic microscope (SEM) in order to know the microstructure of AC. It shows that prepared activated carbons (PACs) are porous in nature having the elevated surface area for effective adsorption and applicable for the mitigation of heavy metals. The study involves the effect of dose, concentration and contact time for removal of Co (II) and to assess the efficiency of PACs. The results reveal that the adsorption of Co (II) observed to be highest at 5g PAC-AI, PAC-MI and 6g for PAC-TI, PAC-FB, PAC-SC dose, respectively. Maximum adsorption was exhibited in a solution containing 25 mg/L concentration of Co (II) after addition of a mixed dose of PACs. The comparable adsorption was observed at contact time for PAC-AI, PAC-TI, PAC-FB, PAC-SC at 120 minutes and PAC-MI for 30 minutes respectively. Moreover, it is a need for continuous monitoring and further research for the development of an eco-friendly and advanced method to remove heavy metals.

Keywords: Cobalt (Co (II)), Porous activated carbon, Bio-adsorbent, Plant material

INTRODUCTION

Anthropogenic activities are mostly responsible for causing serious threats to environmental spheres such as air, land, and water. The rapid industrial development is the main cause of increase in concentration of heavy metals and their disposal into the environment. It is important to mention that more than 20 heavy metals are considered lethal, and fifty percent of these are discharged into the environment in a huge quantity and that can pose dire consequences on human health.[1] The numbers of conventional methods have been developed over the last few years for the removal of heavy metals from industrial wastewater. The predominant methods are coagulation and flocculation.[2] Other traditional techniques were used for removal of heavy metal ions from aqueous solutions are chemical precipitation, ion exchange, chemical oxidation/reduction, reverse osmosis, electrodialysis, ultrafiltration, etc. However, these methods have their own limitations such as less efficiency, sensitive operating conditions, production of secondary sludge and also the disposal is a costly affair.[3] The precipitation, ion exchange, electrochemical processes, and membrane technology are well-known chemical methods that are economically not feasible and less competent than the biosorption process.[4] Moreover, these methods create environmental pollution by increasing the pollution load of heavy metals through the disposal of byproduct.[1]

The cost-effective and non-conventional adsorbents such as agriculture byproducts such as nutshells, wood, bone, peat coconut shells have converted into activated carbons and biomass like *Aspergillus tereus, Rhizopus aehizus*.[1,5,6] However, these materials can be used as effective adsorbents for the

http://dx.doi.org/10.31788/RJC.2019.1245324

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THIS AGREEMENT, dated as of is entered into by and between Trialect Inc. USA (existing under laws of California, USA). (hereinafter referred to as "Trialect") and Ravindra S. Hegadi ,(hereinafter referred to as "Host" which is based in the India with Solapur University, Solapur, India

Please note that while host institute may not sign and may not be a party to this contract, you, by signing this contract, are ensuring that your host institute has no objection to accepting health professionals to educate and train them through Trialect.

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Term: This Agreement shall be in effect beginning 01/04/2018 and shall continue until 31/03/2019 The term of this Agreement may not exceed one (1) year unless renewed or extended in writing by Host and mutually agreed by Host and Trialect.

Renewal: Renewal or extension of this Agreement is dependent upon satisfactory progress of the relationship between Trialect and the Host as determined solely by the Host. In any event, nothing herein contained shall be construed to confer upon Host an automatic right to extension of this Agreement for a subsequent year.

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IN WITNESS WHEREOF, the parties hereto accept the terms and conditions herein and have caused this Agreement to be executed on the day and year herein above first written.

Date

Ravindra S. Hegadi
Type name here and sign above
Host

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Date 3/10/2018

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Essays of the study course "Future Sustainable Energy Challenges"

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ISBN 978-952-249-497-9
ISSN 1797-1322

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10 जनवरी विश्व हिंदी दिवस

कार्यक्रम वृत्तांत

'10 जनवरी' विश्व हिंदी दिवस के उपलक्ष्य में 21 जनवरी, 2020 को पुण्यश्लोक अहिल्यादेवी होलकर सोलापुर विश्वविद्यालय, सोलापुर भाषा एवं वाङ्मय संकुल, हिंदी विभाग और बैंक ऑफ इंडिया के सयुक्त तत्वावधान में आयोजित 'छात्र संगोष्ठी' विषय–'भारतीय नागरिकों के मौलिक कर्तव्यों की प्रासंगिकता एवं प्रभाव'। इस संगोष्ठी में विश्वविद्यालय के विभिन्न संकुल तथा महाविद्यालय के छात्र–छात्रों ने हिस्सा लिया और 'भारतीय नागरिकों के मौलिक कर्तव्यों की प्रासंगिकता एवं प्रभाव'इस संगोष्ठी में उपस्थित छात्रों के प्रतिभागियों को कविताओं का भी पठन किया गया। तो कुछ छात्र–छात्राओं ने स्वयं लिखी हुई कविताएँ भी सुनाई। इस कार्यक्रम के लिए अध्यक्ष के रूप में पालि विभाग के प्रा.विजयकुमार झुबंरे यह उपस्थित रहे। तो कार्यक्रम की भूमिका डॉ.अनंत वडघणे ने रखी। सूत्रसंचालन प्रा.ममता बोल्ली ने किया।

17 सितम्बर 2019 को 'हिंदी भाषा एवं संस्कृति' इस विषय पर विशेष व्याख्यान का आयोजन किया गया। जिसमें प्रमुख अतिथि के रूप में प्रा.डॉ.भगवान आदटराव, विभागाध्यक्ष, हिंदी विभाग, संतोष भिमराव पाटील महाविद्यालय, मुद्रप उपस्थित रहे हैं। कार्यक्रम की अध्यक्षता प्रा.डॉ. प्रभाकर कोळेकर, संचालक, भाषा एवं वाङ्मय संकुल ने की। कार्यक्रम की भूमिका डॉ. अनंत वडघणे ने रखी तो सूत्रसंचालन प्रा.ममता बोल्ली ने किया। इस कार्यक्रम में भाषा एवं वाङ्मय संकुल छात्र–छात्राओं और अध्यापकों ने हिस्सा लिया।

हिंदी विभाग

लोकमत

वक्तृत्व स्पर्धेत श्वेता झंवर प्रथम

लोकमत न्यूज नेटवर्क

सोलापूर : पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठात हिंदी विभागातर्फे वक्तृत्व स्पर्धा घेण्यात आली. वक्तृत्व स्पर्धेचा विषय 'भारतीय नागरीकों के कर्तव्यों की प्रासंगिकता एवम प्रभावछ असा होता. या स्पर्धेत हिराचंद नेमचंद वाणिज्य महाविद्यालयाची श्वेता झंवर हिने प्रथम क्रमांक मिळवला.

विद्यापीठाचे वित्त व लेखाधिकारी श्रेणीक शहा यांनी या कार्यक्रमाचे उद्घाटन केले. ते म्हणाले आजच्या काळात संवादाची अतिशय गरज आहे. एकमेकांशी संवाद साधण्यासाठी वक्तृत्व तसेच विविध कार्यक्रमांची, स्पर्धांची गरज असते.

अध्यक्षीय मनोगत व्यक्त करताना डॉ. कोळेकर म्हणाले, कोणताही उपक्रम करण्यासाठी राजाश्रय, लोकाश्रय आणि धनाश्रय मिळतो. तेव्हा या उपक्रमाला एक वेगळी उंची देता येते. प्रमुख पाहुणे म्हणून बँक ऑफ इंडियाचे क्षेत्रीय प्रबंधक अजय कडू हे उपस्थित होते. कार्यक्रमाला बँक ऑफ इंडियाचे राजभाषा अधिकारी रमेश गच्छी, भाषा संकुलातील प्राध्यापक उपस्थित होते.

उद्घाटनानंतर वक्तृत्व स्पर्धा घेण्यात आली.या स्पर्धेत विविध महाविद्यालयातील विद्यार्थी मोठ्या संख्येने सहभागी झाले होते. स्पर्धेनंतर पारितोषिके वितरित करण्यात आली. पारितोषिक वितरण समारंभाला क्रीडा संचालक डॉ. एस. के. पवार उपस्थित होते.

स्पर्धेचा निकाल : या स्पर्धेत श्वेता झंवर प्रथम तर द्वितीय क्रमांक पूजा खपाले (हिराचंद नेमचंद वाणिज्य महाविद्यालय), तृतीय क्रमांक मयुरी वाघमारे (सोलापूर विद्यापीठ अधिविभाग) हिने पटकावला. उत्तेजनार्थ पारितोषिके स्मिता गदगे (सोलापूर विद्यापीठ), उजमा फारुक(सोशल कॉलेज, सोलापूर), शिवराज मिटकरी यांनी मिळवला. कार्यक्रमाचे सूत्रसंचालन डॉ. अनंत वडघणे यांनी केले तर आभार प्रा. गणेश संकपाळ यांनी मानले.

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पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर

भाषा व वाडमय संकुल, उर्दू विभाग

व

खादीमाने उर्दू फोरम सोलापूर

एक दिवसीय राज्यस्तरीय कार्यशाळा: तर्जुमा निगारी

08.01.2020 बुधवार

अहिल्यादेवी होळकर या उत्तम प्रशासक होत्या त्यांच्या प्रशासनाचा अजेंडा सर्व भारतभर होता भारतात भाषिक विविधता आहे. त्यामुळे त्यांच्यावरील साहित्य हे प्रत्येक भाषेत अनुवादित होणे गरजेचे असल्याचे मत पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठाच्या कुलगुरू डॉक्टर मृणालिनी फडणवीस यांनी व्यक्त केले.

पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ भाषा व वाडमय संकुल उर्दू विभाग व खादीमाने उर्दू फोरम सोलापूर यांच्या संयुक्त विद्यमाने हा अनुवाद शास्त्र या राष्ट्रीय कार्यशाळे प्रसंगी कुलगुरू डॉक्टर मृणालिनी फडणवीस बोलत होत्या. यावेळी व्यासपीठावर खादीमाने उर्दू फोरम चे सचिव डॉक्टर शफी चोपदार, फोरमचे अध्यक्ष वकार अहमद शेख, वकार कादरी, निजामुद्दीन शेख, भाषा संकुलाचे संचालक डॉक्टर प्रभाकर कोळेकर उपस्थित होते.

पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर विद्यापीठ, सोलापूर व खादीमाने उर्दू फोरम यांच्या संयुक्त विद्यमाने तर्जुमा निगारी हे एक दिवशीय राज्यस्तरीय कार्यशाळा घेण्यात आली. या कार्यशाळासाठी सोलापूर विद्यापीठाच्या माननीय कुलगुरू प्राध्यापक डॉक्टर मृणालिनी फडणवीस तसेच प्रमुख उपस्थिती म्हणून खादीमाने उर्दू फोरमचे अध्यक्ष विकार अहमद शेख व उर्दू भाषेचे प्रसिद्ध

अनुवादक उर्दू साहित्य अकादमी महाराष्ट्र चे माजी सदस्य वकार कादरी आ ण भाषा व वाडमय संकुल चे संचालक प्राध्यापक डॉक्टर प्रभाकर कोळेकर, खादीमाने उर्दू फोरमचे सेक्रेटरी व अभ्यास मंडळाचे अध्यक्ष डॉक्टर मोहम्मद शफी चोपदार व भाषा संकुलाचे सर्व प्राध्यापक गण आ ण सर्व वद्यार्थी या कार्यशाळेत उपस्थित होते.

यावेळी प्रमुख पाहुण्यांचा परिचय व खादीमाने उर्दू फोरम ची ओळख करून देताना डॉक्टर मोहम्मद शफी चोपदार म्हणाले की उर्दू भाषेच्या वकासासाठी अनेक उपक्रम व कार्यक्रम आ ण कार्यशाळा घेतल्या जातात. खादीमाने उर्दू फोरमच्या कार्याचे उल्लेख करताना डॉक्टर शफी चोपदार म्हणाले गेल्या चार वर्षापासून शहरात व वध सामाजिक, साहित्यिक व शक्षण संस्था सोबत आश्रा उर्दू दहा दिवसीय उर्दू भाषा संवर्धन कार्यक्रम आयोजित करण्यात आलेला आहे. याचा प्रमुख हेतू उर्दू भाषा साहित्य आ ण उर्दू माध्यम शी निगडीत व वध अडचणी शोधने व त्याचे निराकरण करणे असा आहे. उर्दू साहित्याचे प्रचार व प्रसार करत आहे. तसेच वद्यार्थ्यांमधील लुप्त गुणांना उजागर करून त्यांना स्कॉलर शप देणे शक्षकांना नवीन टेक्नॉलॉजीची जोडणे. उर्दूला वज्ञान, टेक्नॉलॉजी, इतिहास, भूगोल, अर्थशास्त्रशी जोडणे आ ण वद्यार्थ्यांच्या व्यक्तिमत्व वकासासाठी प्रयत्न करणे. अन्य भा षक लोकांना उर्दू शकवणे व उर्दू साहित्य आ ण शक्षा क्षेत्रांमध्ये वशेष प्रा वण्य प्राप्त साहित्यकार यांना आ ण वद्यार्थ्यांना प्रेरणादायी ब क्षसे देऊन सन्मान करणे. हा खादीमाने उर्दू फोरमचा उद्देश आहे.

खादीमाने उर्दू फोरमचे अध्यक्ष वकार अहमद शेख यांनी या एक दिवसीय राज्यस्तरीय कार्यशाळा बद्दल माहिती देताना म्हणाले की अनुवादानाची कला वद्यार्थ्यांमध्ये अवगत करण्यासाठी आ ण अनुवाद हे करियर म्हणून निवडण्य हेतू या कार्यशाळे चे आयोजन करण्यात आले आहे. या चर्चासत्रात आपले बित भाषक म्हणून मनोगत व्यक्त करताना वकार कादरी म्हणाले तर्जुमा हे चालू पढीला अत्यंत उपयुक्त आहे. कारण यामुळे नव्या पढीतील लोकांना व वध साहित्य काय आहेत हे माहिती होईल आ ण इतर भाषांचा प्रसारही तर्जुमा करून आपण करू शकतो. वकार कादरी याबद्दल सखोल माहिती देत होते. वकार अहमद शेख हे आपल्या मनोगतात म्हणाले की कोणत्याही भाषेने इतर भाषेतील शब्द सामावून घेतले तर ती भाषा समृद्ध होते अनुवादातून भाषा जवळ येतात .या साहित्य व्यवहारातून वेगवेगळे भा षक लोक जवळ येतात व त्यातून राष्ट्रीय एकात्मता टिकवली जाते असे त्यांनी नमूद केले त्यानंतर प्र सद्ध अनुवादक वकार कादरी यांनी अनुवादाचे महत्व अधोरे खत केले.

पुण्यश्लोक अहिल्यादेवी होळकर सोलापूर वद्यापीठाच्या माननीय कुलगुरू डॉक्टर मृणा लनीफडणवीस यांनी खादीमाने उर्दू फोरम यांच्याशी चर्चा करताना अशी इच्छा व्यक्त केली की

त्यांनी अहिल्यादेवी होळकर यांच्या जीवन चरित्राचा उर्दू मधून अनुवाद करावा. ज्यामुळे उर्दू व इतर भाषेतील वद्यार्थ्यांना अहिल्यादेवी होळकर यांच्या आयुष्याची माहिती वद्यार्थ्यांपर्यंत पोहोचवता येईल. तसेच उर्दू व इतर भाषांचे प्रसार होणे गरजेचे आहे. वद्यापीठाचे प्राध्यापक डॉक्टर प्रभाकर कोळेकर म्हणाले उर्दू व मराठी भाषेच्या अनुवादाची ही एक मोठी कार्यशाळा संपन्न झाली आहे.

कार्यक्रमाच्या अध्यक्ष प्राध्यापक डॉक्टर मृणा लनीफडणवीस कुलगुरू सोलापूर वद्यापीठ सोलापूर यांनी खादीमाने उर्दू फोरम सोलापूर यांच्यासोबत सामंजस्य करार करण्याचेही घो षत केले. त्यांनी खादीमाने उर्दू फोरम कडून अनुवादासाठी जास्तीत जास्त प्रयत्न व्हावे अशी आशा व्यक्त केली.

प्रमुख पाहुणे वकार कादरी माजी सदस्य उर्दू साहित्य अकादमी महाराष्ट्र यांनी तर्जुमा कसे करावे त्याचे महत्त्व व तर्जुमा शकण्यासाठी व वध सूत्रे सां गतली. तसेच वेगवेगळे शब्द प्रयोग करून दाखवले. त्यांनी स्वतः खूप पुस्तकांचे अनुवाद केलेले असून त्यांचे अनेक पुस्तके व साहित्य वाचकांसाठी उपलब्ध करून दिली आहेत. या तर्जुमा मधून ंवा अनुवादातून समाजात जागृती निर्माण करण्याचे मोठे कार्य केलेले असून अजूनही अनुवादाचे खूप सारे मार्ग मोकळे आहेत असे ते म्हणाले.

कार्यक्रमाच्या अध्यक्ष प्राध्यापक डॉक्टर मृणा लनीफडणवीस कुलगुरू सोलापूर वद्यापीठ सोलापूर यांनी खादीमाने उर्दू फोरम सोलापूर यांच्यासोबत सामंजस्य करार करण्याचेही घो षत केले. त्यांनी खादीमाने उर्दू फोरम कडून अनुवादासाठी जास्तीत जास्त प्रयत्न व्हावे अशी आशा व्यक्त केली.

कार्यक्रमाचे सूत्रसंचालन सोलापूर वद्यापीठाच्या भाषा व वाडमय संकुलाच्या प्राध्यापक आयेशा पठाण ने केले तर आभार डॉक्टर सुमय्या बागबान यांनी मानले. यावेळी डॉक्टर शफी चोपदार, नजीर मुनशी, श्रीरामपूर हुन आलेले प्रमुख पाहुणे मोहम्मद उमर बागबान सर व त्यांच्या समवेत उर्दू वभागाचे वद्यार्थी आ ण भाषा व वाडमय संकुलाचे सर्व वषयांचे प्राध्यापक गण इत्यादींनी ही कार्यशाळा यशस्वी करण्यासाठी प्रयत्न केले.


पाचवा वार्षिक अहवाल-ए-उर्दू निमित्त
खादिमान उर्दू फोरम, सोलापूर
भाषा संकल उर्दू विभाग
खादिمانِ اُردو فورم شولاپور
پانچواں سالانہ عشرۂ اُردو 2020
یک روزہ ریاستی سمینار بعنوان
فنِ ترجمہ نگاری


پدمبھوشن شلوک ابلیا دیوی ہولکر
شولا پور یونیورسٹی شولا پور۔
بھاشا سنکول شعبۂ اُردو
خادمانِ اُردو فورم شولا پور
کے زیر اہتمام
پانچواں سالانہ عشرۂ اُردو 2020
کے تحت
یک روزہ ریاستی سمینار بعنوان
فن ترجمہ نگاری
क अहिल्यादेवी होळकर
र विद्यापीठ सोलापूर
संकुल उर्दू विभाग
व
ने उर्दू फोरम, सोलापूर
च्या संयुक्त विद्यमाने
र्षिक अशर-ए-उर्दू निमित्त
सीय राष्ट्रीय कार्यशाळा
य : अनुवाद शास्त्र
धवार दि. 08/01/2020

YASHODHARA
SUPER SPECIALITY HOSPITAL PVT. LTD.

NABH Safe-I™ FOR HOSPITAL INFECTION CONTROL

Date: 11/03/2020

To,
The Director,
School of Allied Health Science,
PAH Solapur University
Solapur.

Respected Sir/Madam,

This is to certify that, following student have satisfactorily completed one month internship program in department of Dietetics at, Yashodhara Superspecility Hospital Solapur from 01/01/2020 to 31/01/2020

Thanking You,

Dr. Vijay Desai
Administrator

Dr. B. S. Kolur
Chairman

School of Allied Health Scien...
Inward No. 86
Date 16/03/2020
Clerk
Director 16.3.2020

Regd. Off. : 6158, Siddheshwar Peth, Near Zilla Parishad, Solapur - 3. MH Ph. : (0217) 2323001, 2323002, 2323003, Fax:(0217)2323003
CIN U 85110 PN 2005 PTC 021347 Website : www.yashodharahospital.org • E-mail : yashodharahospital@gmail.com

Student List

Sr. No.	Name of the Students
1	DONGARKAR DEVIKA AJIT
2	GHATE PRATIMA DILIP
3	GADADE VAISHALI BHARATRAO
4	HIRANANDANI KIRAN LAXMANDAS
5	HIREMATH VEENA MALLINATH
6	INGOLE ROHINI SHESHRAO
7	JADHAV MEGHNA GUNVANT
8	JAGTAP HARSHALI MADHUKAR
9	KAKADE MEGHA BHAUSAHEB
10	KALE RUPALI AMBADAS
11	MORE RAJASHRI RAMRAO
12	MALAGE TEJAWINI CHANDRASHEKAR
13	NANAWARE MANJUSHA PRAVIN
14	NANAWARE PRAVIN GANPAT
15	NAVLE DEEPA RAHUL
16	NALLAMANDU NIKHAT RUHI
17	PAWAR SUPRIYA SURESH
18	SHETI SHUBHANGI AJIT
19	SHINDE MOHINI ASHOK
20	SURYAVANSHI ASMITA VIDYADHAR
21	WAWARE ANJALI VASANT

For Yashodhara Super-Speciality Hospital (P) Ltd.

Dr. Basavaraj S. Kolur

आरोग्य केंद्र

दि.५/६/२०१८

विषय: एक्युप्रेशर प्रशिक्षण शिबीर आयोजित करण्यास प्रशासकीय मान्यता मिळणेबाबत

सादर,

उपरोक्त विषयास अनुसरून मा.कुलगुरू महोदय यांच्या दालनात झालेल्या चर्चेनुसार मा.कुलगुरू महोदयांनी विद्यापीठातील तसेच विद्यापीठाशी संलग्नित सर्व महाविद्यालये यांच्यातील सर्व विद्यार्थी, शिक्षक व शिक्षकेतर कर्मचारी तसेच सोलापुरातील नागरिक यांच्या करता विद्यापीठामार्फत एक्युप्रेशर प्रशिक्षण शिबीर आयोजित करण्याचे निर्देश दिलेले होते. यासाठी त्यांनी श्री.पराग कुलकर्णी (एक्युप्रेशर तज्ञ , नागपूर) यांचे नाव सुचविलेले असून त्यांचाशी संपर्क केला असता त्यांनी २ आठवड्यांच्या प्रशिक्षण शिबिर कार्यक्रमाचा आराखडा पाठविलेला आहे. सदर आराखडा अवलोकनी घ्यावा.या आराखड्यानुसार श्री.पराग कुलकर्णी व त्यांचे एक सहकारी अशी दोन जण या.दि.२ जुलै ते दि. १५ जुलै असे २ आठवड्यांच्या कालावधीत शिबिरात प्रशिक्षण देणार आहेत. सदर प्रशिक्षण शिबिराची सुरुवात दि.२ जुलै रोजी श्री.पराग कुलकर्णी यांच्या व्याख्यानाने होईल. हे व्याख्यान हे विद्यापीठाच्या सभागृहात आयोजित करावायचे आहे. या व्याख्यानासाठी व्याख्यात्यांचे मानधन व सत्कार या पोटी अंदाजे रु.१५००० (व्याख्यात्यांचे मानधन, प्रवास खर्च, २ आठवड्यांचा जेवण खर्च इत्यादी) इतका खर्च अपेक्षित आहे. सदर व्याख्यान हे सर्व विद्यार्थी,शिक्षक व शिक्षकेतर कर्मचारी तसेच सोलापूर शहरातील सर्व नागरिक यांच्यासाठी खुले असेल.तसेच सदर व्याख्यान झाल्यानंतर २ आठवड्याच्या प्रशिक्षण शिबिराची सुरुवात होणार असून सदर शिबीर विद्यापीठ आरोग्य केंद्रात आयोजित करण्यात येणार आहे. सदर प्रशिक्षण शिबीर हे सशुल्क ठेवून विद्यार्थ्यांसाठी रु.५०० तर इतर इच्छुकांसाठी रु.१००० इतके शुल्क आकारणे योग्य राहील असे वाटते.

सबब,

१. दि.२-१५ जुलै या कालवधीत विद्यापीठात सशुल्क एक्युप्रेशर प्रशिक्षण शिबीर आयोजित करण्यास प्रशासकीय मान्यता मिळावी.
२. दि.२ जुलै रोजी विद्यापीठ सभागृहात श्री.पराग जोशी यांचे उद्घाटनपर व्याख्यान आयोजित करण्यास मान्यता मिळावी.
३. सदर व्याख्यान आयोजित करण्यासाठी येणारा अंदाजे रु.१५००० इतका खर्च आरोग्य केंद्राच्या Health Camp/Lecture Expenses या बजेट हेड मधून करण्यास प्रशासकीय मान्यता मिळावी.
४. सदर प्रशिक्षण शिबिराची माहिती सर्व महाविद्यालयांना पत्र पाठवून कळविण्यास मान्यता असावी.

बजेट हेड- Health Camp/Lecture Expenses

तरतूद- रु.५००००

पुढील आदेशार्थ सादर,

5/6/2018

वैद्यकीय अधिकारी

कुलसचिव 4.6.18

मा.कुलगुरू 5-6-2016

NAAC Accredited-2015
'B' Grade (CGPA 2.62)

सोलापूर विद्यापीठ, सोलापूर

परिपत्रक

प्रस्तुत विद्यापीठातील सर्व शिक्षक, प्रशासकीय अधिकारी, कर्मचारी, विद्यार्थी व विद्यार्थीनी यांना आदेशान्वये कळविण्यात येते की, विद्यापीठ कौशल्य विकास केंद्र व विद्यापीठ आरोग्य केंद्र यांच्या संयुक्त विद्यमाने दि.०२/०७/२०१८ ते १५/०७/२०१८ या कालावधीमध्ये एक्यूप्रेशर चिकित्सा पध्दती या विषयावर प्रशिक्षण शिबीर विद्यापीठातील आरोग्य केंद्र येथे आयोजित केले आहे. सदर प्रशिक्षण देण्यासाठी नागपूर येथील प्रसिध्द एक्यूप्रेशर तज्ञ श्री. पराग कुलकर्णी व त्यांचे सहकारी हे उपस्थित राहणार आहेत.

सदर शिबीराची सुरुवात दि.०२/०७/२०१८ रोजी श्री. पराग कुलकर्णी यांच्या व्याख्यानाने होणार असून सदर व्याख्यान विद्यापीठ सभागृहात सकाळी ११:०० वा. आयोजित करण्यात आलेले असून व्याख्यान सर्वांसाठी खुले आहे. दिनांक ०३/०७/२०१८ पासून प्रत्यक्ष प्रशिक्षण शिबिरास सुरुवात होणार आहे. प्रशिक्षण शिबिर हे सशुल्क आहे त्याची माहिती खालील प्रमाणे आहे.

१) विद्यार्थ्यांकरिता शिबिरासाठी नोंदणी शुल्क रु.५००/-

२) शिक्षक व प्रशासकीय अधिकारी / कर्मचारी यांच्यासाठी नॉंदणी शुल्क रु.१०००/-

३) प्रशिक्षण शिबिर पूर्ण करणाऱ्यांना सोलापूर विद्यापीठ कौशल्य विकास केंद्रामार्फत प्रमाणपत्र देण्यात येईल.

४) विद्यापीठातील शिक्षक व प्रशासकीय अधिकारी/कर्मचारी यांना सदर प्रशिक्षण शिबिरासाठी नाव नोंदणी करावयाचे आहे त्यांनी दि.२५/०६/२०१८ पर्यंत वैद्यकीय अधिकारी डॉ. अभिजित जगताप (संपर्क क्र.९७३०१०५९६१) अथवा सहायक कुलसचिव डॉ. शिवाजी शिंदे (संपर्क क्र.९३७०६२१४७५) यांच्याकडे स.१०:२० ते संध्या. ६:०० या वेळेत नोंदणी करावी.

५) प्रशिक्षण शिबिराचे वेळापत्रक व माहिती सोबत जोडले आहे.

कुलसचिव

जा.क्र. सोविसो/आस्था/२०१८/ 5195

दिनांक : 21 JUN 2018

प्रति,

१ सर्व प्रशासकीय विभाग प्रमुख, प्रस्तुत विद्यापीठ
२ सर्व शैक्षणिक विभाग प्रमुख, प्रस्तुत विद्यापीठ
३ नोटीस बोर्ड

} सदर परिपत्रक आपल्या विभाग/संकुलातील सर्व शिक्षक, प्रशासकीय अधिकारी, कर्मचारी व विद्यार्थ्यांच्या निदर्शनास आणून द्यावे.

कृपया सर्वांनी नोंद घ्यावी

Inward No :-2996
Jr. Clerk
21 JUN 2018
DIRECTOR
Asst. Registrar Dy. Registrar

सोलापूर विद्यापीठ कौशल्य विकास केंद्र व आरोग्य केंद्र यांच्या संयुक्त विद्यमाने आयोजित

एक्यूप्रेशर प्रशिक्षण शिबीर

कालावधी – दि.२ ते १५ जुलै २०१८

प्रशिक्षक : श्री.पराग कुलकर्णी (नागपूर)

Time Table of Acupressure Training Program				
Date	Program	Timing	Venue	Participant
2nd July 2018	Introductory Lecture on Acupressure	11.00 am	University Auditorium	Open to all
3rd July 2018	History & Introduction to Acupressure	Morning Afternoon	University Health Centre	Registered Candidates
4th to 6th July 2018	Reflexology	Morning Afternoon	University Health Centre	Registered Candidates
7th July 2018	Basics of Acupressure	Morning Afternoon	University Health Centre	Registered Candidates
8th to 14th July 2018	Meridianology	Morning Afternoon	University Health Centre	Registered Candidates
15th July 2018	Epilogue Session & Certificate Distribution	11.00 am	University Auditorium	

Registration Details:

Fees: Rs.500 for all students (Identity Card or Bonafied Certificate is necessary)

Rs.1000 for teaching, non teaching staff and outside common people

Contact Details for Registration:

Name	Designation	Mobile Number	Email
Dr. Abhijeet Jagtap	Medical Officer	9730105961	ahjagtap@sus.ac.in
Dr. Shivaji Shinde	Asst. Registrar	9370621475	snshinde@sus.ac.in

सोलापूर विद्यापीठ
॥ विद्या संकल्प ॥
NAAC Accredited-2015
'B' Grade (CGPA-2.62)

कौशल्य विकास केंद्र व आरोग्य केंद्र

सोलापूर विद्यापीठ, सोलापूर

आयोजित

एक्यूप्रेशर चिकित्सा पद्धती प्रशिक्षण शिबीर

दि. २ जुलै ते १५ जुलै २०१८

स्थळ : आरोग्य केंद्र सोलापूर विद्यापीठ

सदर शिबीरामध्ये तज्ञ मार्गदर्शकांद्वारे एक्यूप्रेशर चिकित्सा पद्धतीचे शास्त्रशुद्ध प्रशिक्षण देण्यात येणार असून प्रशिक्षण पूर्ण करणाऱ्या व्यक्तींना सोलापूर विद्यापीठ कौशल्य विकास केंद्राकडून प्रमाणपत्र देण्यात येणार आहे. सदर शिबीराबाबतची विस्तृत माहिती सोलापूर विद्यापीठाच्या http://su.digitaluniversity.ac/ या संकेतस्थळावर "कौशल्य विकास केंद्र" या शीर्षकाअंतर्गत उपलब्ध आहे. सदर प्रशिक्षणासाठी विद्यार्थ्यांना रु. ५०० तर इतर व्यक्तींसाठी रु. १००० इतके शुल्क असून ज्या इच्छुकांना सदर शिबीरात नाव नोंदवायचे आहे त्यांनी विद्यापीठ वैद्यकीय अधिकारी डॉ. अभिजीत जगताप यांच्याशी ९७३०१०५९६१ अथवा (०२१७-२७४४७७४ - Ext.१२६) या क्रमांकावर संपर्क साधावा.

Acupressure Training Workshop Registration list - 2 to 15 July 2018.

Sr.no.	Name	Age	Sex	Category	Form no.	Receipt no	Amount
1	Gajendragadkar v.j.	58	M	general	1	2790	1000
2	Dhokte M.S.	51	M	nonteaching	2	2877	1000
3	Rokade A.M.	40	F	general	3	4016	1000
4	Chormale P.R.	42	M	nonteaching	4	2853	1000
5	Dr.Mente R.S.	49	M	teaching	5	3117	1000
6	Mehenkar V.N	25	M	student	6	4204	500
7	Shaikh M.M	34	M	naonteaching	7	3263	1000
8	Kolekar A.N.	39	M	nonteaching	8	3262	1000
9	Pawar S.K.	55	M	nonteaching	9	3499	1000
10	Dr.Shah R.M	57	M	general	10	3915	1000
11	Boddu S.J.	49	M	general	11	3916	1000
12	Dr.Patil A.B.	53	M	general	12	3682	1000
13	Dr.Chokakkar K.T.	43	M	nonteaching	13	3681	1000
14	Sartape V.S.	39	F	nonteaching	14	3970	1000
15	Kamble P.A.	21	F	student	15	3796	1000
16	Dr.Shetasandhi M.U.	60	M	general	16	3798	1000
17	Pawar A.B.	39	M	nonteaching	17	3859	1000
18	Dr.Kurde S.V.	32	M	nonteaching	18	4206	1000
19	Aghar G.R.	28	F.	general	19	3929	1000
20	Deshmane S.V.	59	F	general	20	3927	1000
21	Katakdhond R.N.	53	M	teaching	21	4207	1000
22	Upadhye A.D.	58	M	general	22	3926	1000
23	Aher J.D.	37	M	general	23	3933	1000
24	Jawale P.M.	56	M	nonteaching	24	3919	1000
25	Sabale K.K.	55	F	general	25	4423	1000
26	Parekar M.S.	38	F	nonteaching	26	3344	1000
27	Dr.Shinde S.N.	27	M	nonteaching	27	3425	1000
28	Jadhav S.S.	27	F	nonteaching	28	3343	1000
29	Gadmire V.R.	45	F	nonteaching	29	4186	1000
30	Naikwadi F.M.	48	F	nonteaching	30	3408	1000
31	Sawant P.L.	38	F	nonteaching	31	3688	1000
32	Kaladgi A.M.	35	F	nonteaching	32	4049	1000
33	Dr.Vhankade P.G.	35	M	teaching	33	3923	1000
34	Dr.Kolekar P.N.	37	M	teaching	34	3922	1000
35	Dr.Gadhve R.A.	35	M	teaching	35	3974	1000
36	Bombdyal D.Y.	33	M	nonteaching	36	3981	1000
37	Tate N.N.	37	M	nonteaching	37	3979	1000
38	Sonkamble N.Y.	43	M	nonteaching	38	3980	1000
39	Patthan J.R.	39	M	nonteaching	39	3982	1000
40	Paskanti G.S.	48	M	general	40	4067	1000
41	Harwalkar K.A.	39	F	general	41	4065	1000
42	Meharkar S.N..	48	F	general	42	4063	1000
43	DR.Malji U.P.	37	M	general	43	4061	1000
44	Bugde U.S.	58	M	general	44	4072	1000
45	Rathod K.V.	31	M	general	45	4070	1000
46	Gade A.S.	43	M	general	46	4181	1000
47	Kavhekar V.R.	62	M	general	47	4060	1000
48	Vadavrao S.S.	40	F	nonteaching	48	4112	1000
49	Dr.Kulkarni R.P.	41	M	general	49	4187	1000

51	Pawar M.V.	46	F	general	51	4069	1000
52	Joshi A.M.	44	M	general	52	4073	1000
53	Deshpande S.S.	65	F	general	53	3930	1000
54	Neel A.B.	33	F	nonteaching	54	4048	1000
55	Dalvi B.P.	70	M	general	55	3924	1000
56	Tabbasum L.A.	32	F	general	56	3951	1000
57	Bharate J.V.	34	M	general	57	3940	1000
58	Gadad S.S.	41	F	general	58	4183	1000
59	Adakul R.S.	50	F	general	59	4066	1000
60	Rajaram S.K.	36	F	general	60	4131	1000
61	Belure S.Y.	19	F	general	61	4205	1000
62	Khapale R.U.	40	M	nonteaching	62	4229	1000
63	Joshi J.D.	62	M	general	63	4326	1000
64	Adakul P.S.	23	M	student	64	4059	500
65	Hulle A.M.	19	F	student	65	4121	500
66	Sakhare S.V,	59	M	general	66	3928	1000
67	Kadam L.S.	54	M	nonteaching	67	4003	1000
68	Swami R.U.	28	M	general	68	4039	1000
69	Gujjeti B.T.	32	M	general	69	4068	1000
70	Ankad S.S.	26	M	general	70	4037	1000
71	Koravi C.M.	29	M	nonteaching	71	4038	1000
72	Adakul S.S.	52	M	general	72	4071	1000
73	Boddu U.B.	41	M	general	73	4062	1000
74	Tallare V.M.	33	M	general	74	4064	1000
75	Kodam R.B.	37	M	general	75	4178	1000
76	Dontul B.L.	41	M	general	76	4074	1000
77	Dontul S.B.	19	F	student	77	4058	500
78	Talwar S.T.	21	M	general	78	4424	1000
79	Gade A.A.	27	F	general	79	3934	1000
80	Kalaskar N.S.	19	F	student	80	4120	500
81	Patil V.S.	49	M	nonteaching	81	4011	1000
82	Rathod M.J.	47	M	student	82	3931	500
83	Tarapure S.P.	36	F	nonteaching	83	4300	1000
84	Ankad S.s.	23	M	student	84	4036	500
85	Jadhav A.B.	49	M	nonteaching	85	4209	1000
86	Dr.Gajdhane A.S.	33	M	teaching	86	3975	1000
87	Chippa P.A.	27	F	teaching	87	3976	1000
88	Joshi M.M.	40	F	nonteaching	88	3971	1000
89	Bhaske A.L.	38	M	teaching	89	3973	1000
90	Sonkawade M.M.	38	F	nonteaching	90	3969	1000
91	Dr. Patil M.J.	52	F	teaching	91	3972	1000
92	Bhosle R.R.	50	F	general	94	4014	1000
93	Pandhre D.N.	34	F	nonteaching	95	4015	1000
94	Dr.Mane M.V.	61	F	nonteaching	96	4042 & 4043	1000
95	Nimbalkar D.A.	34	M	nonteaching	97	4013	1000
96	Salunke A.S.	39	F	nonteaching	98	4772	1000
97	DR.Bhosle R.B.	56	M	teaching	99	4034	1000
98	Dr.Lawand A.S.	48	F	teaching	100	4106	1000
99	Bhadule S.D.	42	M	nonteaching	101	4199	1000

91,000/-
3,500/-
94,500/-

सोलापूर विद्यापीठ
॥ विद्यया संपन्नता ॥

NAAC Accredited-2015
'B' Grade (CGPA 2.62)

Acupressure Training Workshop Report

Organized by: Skill Development Centre and Health Centre of Solapur University

Duration: Two weeks, starting from 2nd July upto 15th July 2018

Trainer: Mr. Parag Kulkarni Acupressure Expert (PKAT Nagpur)

Mr. Bhawtik Joshi Acupressure Trainer Nagpur

Coordinator: Dr. Abhijeet Jagtap – Medical Officer Solapur University

Aims & Objectives:

1. To introduce the acupressure related diagnostic and therapeutic skills to the students.
2. To develop a pool of young aspirant students to pursue advanced training in acupressure in future.
3. To enable students to start earning while learning with help of basic acupressure therapeutic skill.

Registration Charges: Rs.500 for all UG/PG students

Rs.1000 for teaching, non teaching staff and common citizens

Summary of the Workshop:

Acupressure training workshop received tremendous response from all the strata of society. Total 100 individuals registered themselves for the workshop. As many as 7 doctors, 3 yoga teachers, 15 teachers, 12 house wives, 40 non teaching government employees, 8 college students and 5 retired employees were registered for the workshop. Workshop was conducted in 2 batches. One batch was trained in Post Graduate Centre of Solapur University located in the heart of city and another batch was trained in the Health Centre of Solapur University. To enable these registered candidates to gain practical hand on training University started acupressure treatment consultancy in the health centre. Patients were examined and treated on OPD basis in the consulting room.

Outcome:

- Solapur University generated amount of Rs.96000 as registration fees from the registered candidates.
- University earned Rs.32050 as consultancy fees from the OPD patients.
- University created a pool of 100 well trained acupressure experts who can start their own acupressure treatment centre and start their own earning.
- All students gave a positive feedback and made a demand that University should start a proper training course in acupressure of 6month- 1 year duration.

SOLAPUR UNIVERSITY, SOLAPUR

सोलापूर विद्यापीठ
॥ विद्यया अमृतम् ॥
NAAC Accredited-2015
'B' Grade (CGPA-2.62)

Skill Development Centre

Acupressure Training Workshop

2nd - 15th July 2018

CERTIFICATE

Sr. No. SDW/7/2018 -

This is to certify that Mr./Ms. _____ has attended and successfully completed **Acupressure Training Workshop** *organized by Skill Development Centre, Solapur University from 2nd - 15th July 2018.*

Shri. Parag Kulkarni	Dr. Abhijeet Jagtap	Prof. Dr. Vikas Patil	Dr. Mrunalini Fadnavis
Acupressure Trainer	Workshop Co-ordinator	O.S.D. Academic Research & Development	Hon. Vice-Chancellor


Skill Training & Enhancement Program
'Building Capable & Sustainable workforce'
' Organized by '
Skill Development Centre
apur University


Skill Training & Enhancement Program


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Skill Training & Enhancement Program
'Building Capable & Sustainable workforce'
' Organized by '
Skill Development Centre

विद्यापीठ ॲक्युप्रेशर कोर्स सुरू करणार : डॉ. फडणवीस

ॲक्युप्रेशर कार्यशाळेचे समारोप उत्साहात

प्रतिनिधी,
सोलापूर, दि. १६ जुलै-

सोलापूर विद्यापीठ ॲक्युप्रेशरच्या संदर्भात सहा महिन्याच्या प्रमाणपत्र अभ्यासक्रमासह विविध अभ्यासक्रम सुरू करणार असून सोलापूर हे पुढील काळात ॲक्युप्रेशरच्या संदर्भात ओळखले जावे अशी अपेक्षा कुलगुरू डॉ. मृणालिनी फडणवीस यांनी व्यक्त केली आहे.

विद्यापीठांमध्ये मागील पंधरा दिवसांपासून सुरू असलेल्या ॲक्युप्रेशर कार्यशाळेचा समारोप विद्यापीठाच्या मुख्य सभागृहात संपन्न झाला. याप्रसंगी कुलगुरू डॉ. फडणवीस बोलत होत्या. मंचावर नागपूर येथील प्रसिद्ध ॲक्युप्रेशर तज्ज्ञ पराग कुलकर्णी ,विद्यापीठाचे कुलसचिव डॉ.गणेश मंझा, विशेष कार्यासन अधिकारी डॉ.व्ही.बी. पाटील, परीक्षा व मूल्यमापन मंडळाचे संचालक बी.पी. पाटील, शेवाळे, वैद्यकीय अधिकारी डॉ. अभिजित जगताप आदी उपस्थित होते.

पुढे बोलताना कुलगुरू डॉ. फडणवीस म्हणाल्या की, विद्यापीठाने ऑगस्ट २०१८ पासून सहा महिन्याचा ॲक्युप्रेशर प्रमाणपत्र अभ्यासक्रम सुरू करण्याचा निर्णय घेतला आहे. एक व दोन वर्षांचे अभ्यासक्रम सुरू करण्याबाबत विचार सुरू आहे. मात्र त्यासाठी काही संस्थांसमवेत सामंजस्य करार करून, अभ्यासक्रमांची आखणी करण्यात येईल असे मत व्यक्त केले आहे.

याप्रसंगी प्रातिनिधिक स्वरूपात प्रमाणपत्रांचे वितरणही करण्यात आले. कार्यक्रमाचे सूत्रसंचालन कक्षाधिकारी आनंद पवार यांनी केले. संयोजक विश्लेषक प्रशांत चौरमले यांनी आभार मानले. कार्यक्रमास नागरिक, कर्मचारी, अध्यापक, विद्यार्थी मोठ्या संख्येने

यावेळी चंदू देडिया, श्रीनिवास बोहू, जयंत जोशी, जगन्नाथ भराटे, आरती हुळळे, देशमाने ,परीक्षा व मूल्यमापन विभागाचे संचालक बी. पी. पाटील आदींनी आपले अनुभव सांगून ॲक्युप्रेशर कार्यशाळेचा केवळ स्वत:लाच नव्हे तर कुटुंबीय आणि इतरांना उपयोग झाला आहे. त्यामुळे आरोग्यावर आणि मनावर सकारात्मक बदल झाल्याचे मनोगत व्यक्त केले.

पुन्हा ॲक्युप्रेशर कार्यशाळा घेतली जाईल

कार्यशाळेस १०० पेक्षा अधिक जणांनी नोंदणी केली. मिळालेल्या उत्स्फूर्त व प्रचंड प्रतिसादामुळे २ ते १५ जुलै दरम्यान विद्यापीठ परिसरात व शहरातील विद्यापीठ अभ्यासकेंद्रात अशा दोन ठिकाणी वेगवेगळ्या वेळात कार्यशाळा घेण्यात आली. पराग कुलकर्णी आणि त्यांचे सहकारी भक्तिक जोशी यांच्याकडून ॲक्युप्रेशर उपचार घेण्यासाठीही रुग्णांची रेज गर्दी होत होती. यापुढच्या काळातही ॲक्युप्रेशर कार्यशाळा आयोजित केली जाईल.

-डॉ. अभिजित जगताप, आरोग्य केंद्र प्रमुख

लोकमत

ॲक्युप्रेशर निरोगी जीवनास उपयुक्त चिकित्सा

पराग कुलकर्णी : सोलापूर विद्यापीठातील १५ दिवसीय कार्यशाळेचे उद्घाटन

लोकमत न्यूज नेटवर्क

सोलापूर : ॲक्युप्रेशर ही संपूर्ण भारतीय व स्वयंचिकित्सा पद्धती असून यामुळे निरोगी जीवन जगणे शक्य होते. या ज्ञानाचा अवलंब प्रत्येक व्यक्ती सहजपणे करू शकते, असे मत नागपूर येथील प्रसिद्ध ॲक्युप्रेशरतज्ज्ञ पराग कुलकर्णी यांनी व्यक्त केले.

सोलापूर विद्यापीठात कौशल्य विकास केंद्राच्यावतीने आयोजित केलेल्या १५ दिवसीय ॲक्युप्रेशर कार्यशाळेच्या उद्घाटनप्रसंगी ते बोलत होते. अध्यक्षस्थानी कुलगुरू डॉ. मृणालिनी फडणवीस होत्या. मंचावर शैक्षणिक संशोधन व विकास विभागाचे विशेष कार्यासन अधिकारी डॉ. व्ही. बी. पाटील, वित्त व लेखा अधिकारी डॉ. बी. सी. शेवाळे, वैद्यकीय अधिकारी डॉ. अभिजीत जगताप होते. हा उद्घाटन समारंभ सोमवारी सकाळी ११ वाजता विद्यापीठाच्या मुख्य सभागृहात संपन्न झाला.

याप्रसंगी पुढे बोलताना पराग कुलकर्णी म्हणाले, ॲक्युप्रेशर ही भारतात प्राचीन काळात विकसित झालेली चिकित्सा पद्धती आहे. त्याला मर्मविद्या असे नाव आहे. निसर्गोपचार पद्धतीचाच हा उपभाग आहे.

कुलगुरू डॉ. फडणवीस आपल्या भाषणात म्हणाल्या की, आजच्या काळात प्रत्येकाच्या जीवनात ताणतणाव खूप आहेत, तसेच विविध व्याधी जडण्याचे प्रमाणही मोठे आहे. अशा काळात औषधांवर अवलंबून जगण्यापेक्षा औषधाविना निरोगी जगण्याचा चांगला मार्ग ॲक्युप्रेशर आहे. जवळपास ४० व्याधींसाठी ही चिकित्सा पद्धती उपयोगी सिद्ध झालेली आहे. या चिकित्सा पद्धतीचा अवलंब करून विविध व्याधींपासून मुक्त झालेली अनेक उदाहरणे मी पाहिली आहेत. या चिकित्सा पद्धतीबाबत सोलापूर विद्यापीठातर्फे प्रमाणपत्र अभ्यासक्रमासह एखादा पदवी अभ्यासक्रमही सुरू करता येईल काय? याचा विचार विद्यापीठ करणार आहे.

प्रारंभी विद्यापीठाचे वैद्यकीय अधिकारी डॉ. अभिजीत जगताप यांनी पाहुण्यांचा परिचय करून दिला. सहायक कुलसचिव डॉ. शिवाजी शिंदे यांनी सूत्रसंचालन केले. कार्यक्रमास व्यवस्थापन परिषद सदस्य, विविध संकुलांचे संचालक, शिक्षक व शिक्षकेतर कर्मचारी, विद्यार्थी, नागरिक मोठ्या प्रमाणात उपस्थित होते.

१५ दिवस कार्यशाळा

◆ **ही ॲक्युप्रेशर कार्यशाळा ३ ते १५ जुलैदरम्यान चालणार आहे. सोलापूर शहरातील नागरिकांनाही याचा लाभ घेता यावा, यासाठी रंगभवन परिसरातील विद्यापीठ अभ्यास केंद्रात दररोज सकाळी ८ ते १० या वेळेत तर विद्यापीठात दुपारी २.३० ते ४.३० या वेळेत कार्यशाळा होईल .**

पुढारी

ॲक्युप्रेशर पद्धतीमुळे निरोगी जीवन शक्य

पराग कुलकर्णी; सोलापूर विद्यापीठात ॲक्युप्रेशर कार्यशाळेचे उद्घाटन

सोलापूर : प्रतिनिधी

ॲक्युप्रेशर ही संपूर्ण भारतीय व स्वयंचिकित्सा पध्दती असून यामुळे निरोगी जीवन जगणे शक्य आहे. याचा अवलंब प्रत्येक व्यक्तीने करावा, असे मत नागपूर येथील प्रसिध्द ॲक्युप्रेशर तज्ज्ञ पराग कुलकर्णी यांनी व्यक्त केले.

सोलापूर विद्यापीठात कौशल्य विकास केंद्रातर्फे ॲक्युप्रेशर कार्यशाळेचे उद्घाटन २ जुलै रोजी सकाळी ११ वाजता विद्यापीठाच्या मुख्य सभागृहात झाले. त्याप्रसंगी ते बोलत होते. कार्यक्रमाच्या अध्यक्षस्थानी कुलगुरु डॉ. मृणालिनी फडणवीस होत्या. व्यासपीठावर शैक्षणिक संशोधन व विकास विभागाचे विशेष कार्यासन अधिकारी डॉ. व्ही. बी. पाटील, वित्त व लेखा अधिकारी डॉ. बी. सी. शेवाळे, वैद्यकीय अधिकारी डॉ. अभिजित जगताप होते.

पंधरा दिवसांची कार्यशाळा

सदरची ॲक्युप्रेशर कार्यशाळा ३ ते १५ जुलै २०१८ दरम्यान होईल. शहरातील नागरिकांनाही याचा लाभ घेता यावा, यासाठी रंगभवन परिसरातील विद्यापीठ अभ्यासकेंद्रात दररोज सकाळी ८ ते १० यावेळेत, तर विद्यापीठात दुपारी २.३० ते ४.३० यावेळेत कार्यशाळा होईल. ज्यांना यामध्ये सहभाग घ्यावयाचा आहे, त्यांनी विद्यापीठाचे वैद्यकीय अधिकारी डॉ. जगताप यांच्याशी संपर्क साधावा.

पुढे ॲक्युप्रेशर तज्ज्ञ कुलकर्णी म्हणाले, ॲक्युप्रेशर ही भारतात प्राचीन काळात विकसित झालेली चिकित्सा पध्दती आहे. त्याला मर्मविद्या असे नाव आहे. निसर्गोपचार पध्दतीचाच हा एक भाग आहे. ॲक्युप्रेशर चिकित्सा पध्दतीत नेमके काय केले जाते ते स्पष्ट करताना ते म्हणाले, आपले हात आणि पाय यात काही ठराविक केंद्र असतात. या केंद्रांवर ठराविक पध्दतीने दाब दिला की, अनेक दुखणी कायमची संपुष्टात येतात. यात कुठलाही खर्च नाही, आपण स्वत:च आपला उपचार करु शकतो. विद्यार्थ्यांपासून वृध्दांपर्यंत कोणीही कोणत्याही वयात ही उपचार पध्दती शिकून निरोगी जगण्यासाठी उपयोगात आणता येते. पराग कुलकर्णी यांनी यासंदर्भात प्रात्यक्षिकेही दाखविली.

कुलगुरु डॉ. फडणवीस म्हणाल्या, आजच्या काळात प्रत्येकाच्या जीवनात ताण-तणाव खूप आहेत. त्यामुळे विविध व्याधी जडण्याचे प्रमाणही अधिक आहे. अशा काळात औषधांवर अवलंबून जगण्यापेक्षा औषधाविना निरोगी जगण्याचा चांगला मार्ग ॲक्युप्रेशर आहे.

विद्यापीठाचे वैद्यकीय अधिकारी डॉ. अभिजित जगताप यांनी पाहुण्यांचा परिचय करुन दिला. सहाय्यक कुलसचिव डॉ. शिवाजी शिंदे यांनी सूत्रसंचालन केले. कार्यक्रमास व्यवस्थापन परिषद सदस्य, विविध संकुलांचे संचालक, शिक्षक व शिक्षकेतर कर्मचारी, विद्यार्थी व नागरिक उपस्थित होते.

Solapur Edition
3 July, 2018 Page No. 2
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विद्यापीठ ॲक्युप्रेशर कोर्स सुरू करणार : डॉ. फडणवीस

ॲक्युप्रेशर कार्यशाळेचे समारोप उत्साहात

प्रतिनिधी,
सोलापूर, दि. १६ जुलै-

सोलापूर विद्यापीठ ॲक्युप्रेशरच्या संदर्भात सहा महिन्याच्या प्रमाणपत्र अभ्यासक्रमासह विविध अभ्यासक्रम सुरू करणार असून सोलापूर हे पुढील काळात ॲक्युप्रेशरच्या संदर्भात ओळखले जावे अशी अपेक्षा कुलगुरू डॉ. मृणालिनी फडणवीस यांनी व्यक्त केली आहे.

विद्यापीठांमध्ये मागील पंधरा दिवसांपासून सुरू असलेल्या ॲक्युप्रेशर कार्यशाळेचा समारोप विद्यापीठाच्या मुख्य सभागृहात संपन्न झाला. याप्रसंगी कुलगुरू डॉ. फडणवीस बोलत होत्या. मंचावर नागपूर येथील प्रसिद्ध ॲक्युप्रेशर तज्ञ पराग कुलकर्णी ,विद्यापीठाचे कुलसचिव डॉ.गणेश मंझा, विशेष कार्यासन अधिकारी डॉ.व्ही.बी. पाटील, परीक्षा व मूल्यमापन मंडळाचे संचालक बी.पी. पाटील, वित्त व लेखाधिकारी डॉ. बी.सी. शेवाळे, वैद्यकीय अधिकारी डॉ. अभिजित जगताप आदी उपस्थित होते.

पुढे बोलताना कुलगुरू डॉ. फडणवीस म्हणाल्या की, विद्यापीठाने ऑगस्ट २०१८ पासून सहा महिन्याचा ॲक्युप्रेशर प्रमाणपत्र अभ्यासक्रम सुरू करण्याचा निर्णय घेतला आहे. एक व दोन वर्षाचे अभ्यासक्रम सुरू करण्याबाबत विचार सुरू आहे. मात्र त्यासाठी काही संस्थांसमवेत सामंजस्य करार करुन, अभ्यासक्रमांची आखणी करण्यात येईल असे मत व्यक्त केले आहे.

याप्रसंगी प्रातिनिधिक स्वरूपात प्रमाणपत्राचे वितरणही करण्यात आले. कार्यक्रमाचे सूत्रसंचालन कार्यालयीन अधिकारी आनंद पवार यांनी केले. यावेळी विश्लेषक प्रशांत चोरमले यांनी आभार मानले. कार्यक्रमास नागरिक, कर्मचारी, अध्यापक, विद्यार्थी मोठ्या संख्येने उपस्थित होते.

यावेळी चंदू देडिया, श्रीनिवास बोडू, जयंत जोशी, जगन्नाथ भराटे, आरती हुळळे, देशमाने ,परीक्षा व मूल्यमापन विभागाचे संचालक बी. पी. पाटील आदींनी आपले अनुभव सांगून ॲक्युप्रेशर कार्यशाळेचा केवळ स्वत:लाच नव्हे तर कुटुंबीय आणि इतरांना उपयोग झाला आहे. त्यामुळे आरोग्यावर आणि मनावर सकारात्मक बदल झाल्याचे मनोगत व्यक्त केले.

पुन्हा ॲक्युप्रेशर कार्यशाळा घेतली जाईल

कार्यशाळेस १५० पेक्षा अधिक जणांनी नोंदणी केली. मिळालेल्या उत्स्फूर्त व प्रचंड प्रतिसादामुळे २ ते १५ जुलै दरम्यान विद्यापीठ परिसरात व शहरातील विद्यापीठ अभ्यासकेंद्रात अशा दोन ठिकाणी वेगवेगळ्या वेळात कार्यशाळा घेण्यात आली. पराग कुलकर्णी आणि त्यांचे सहकारी भवतिक जोशी यांच्याकडून ॲक्युप्रेशर उपचार घेण्यासाठीही रुग्णांची रेल गर्दी होत होती. यापुढच्या काळातही ॲक्युप्रेशर कार्यशाळा आयोजित केली जाईल.

-डॉ. अभिजित जगताप, आरोग्य केंद्र प्रमुख

कौशल्य विकास केंद्र
सोलापूर विद्यापीठ, सोलापूर

आयोजित

Therapeutic Nutrition & Dietetics Training Workshop
(पोषण व आहारशास्त्र प्रशिक्षण शिबीर)

दि.३ ते ९ ऑक्टोबर २०१८

स्थळ: ऑडीटोरीयम, यशोधरा हॉस्पिटल, जिल्हा परिषद जवळ, सोलापूर

सदर शिबिरामध्ये तज्ञ मार्गदर्शकांद्वारे Therapeutic Nutrition and Dietetics (पोषण व आहारशास्त्र)या विषयावर शास्त्रशुद्ध प्रशिक्षण देण्यात येणार असून प्रशिक्षण पूर्ण करणाऱ्या व्यक्तींना सोलापूर विद्यापीठ कौशल्य विकास केंद्राकडून प्रमाणपत्र देण्यात येणार आहे. सदर शिबिराबाबतची विस्तृत माहिती सोलापूर विद्यापीठाच्या http://su.digitaluniversity.ac/ या संकेतस्थळावर "कौशल्य विकास केंद्र" या शीर्षकाअंतर्गत उपलब्ध आहे. सदर प्रशिक्षणासाठी विद्यार्थ्यांना रु.२५० तर इतर व्यक्तींसाठीरु.७५० इतके शुल्क असून ज्या इच्छुकांना सदर शिबिरात नाव नोंदवायचे आहे त्यांनी विद्यापीठ वैद्यकीय अधिकारी डॉ.अभिजित जगताप यांच्याशी ९७३०१०५९६१ अथवा (०२१७-२७४४७७४ –Ext.२२८) या क्रमांकावर संपर्क साधावा.

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सोलापूर विद्यापीठ,कौशल्य विकास केंद्रामार्फत आयोजित

थेरपेटिक न्यूट्रीशन व आहारशास्त्र प्रशिक्षण शिबीर

दि.३ ते ९ ऑक्टोबर,२०१८

स्थळः-ऑडीटोरीयम,यशोधरा हॉस्पिटल,जिल्हा परिषद जवळ,सोलापूर

वेळः सकाळी ८:०० ते १०.३०

थेरपेटिक न्यूट्रीशन हे अन्नाशी संबंधित शास्त्र आहे. पोषक द्रव्ये,अन्नघटक व पोषकता आणि त्यांचा शरीरावर होणारा परिणाम याचाच अभ्यास या शास्त्रात होतो. अन्नाबाबतीतील प्रत्येक गोष्ट,खाण्यापासून ते त्याचा निचरा होईपर्यतच प्रत्येक गोष्ट न्यूट्रीशन मध्ये अंर्तभूत आहे. अन्नघटकांचे आरोग्यातील महत्व तसेच विविध आजारांमधील पोषण कसे असावे याचा अभ्यास थेरपेटिक न्यूट्रीशन या शास्त्राद्वारे केला जातो.

"आहार शास्त्र" हे योग्य आहार घेण्याची कला शिकवणारे शास्त्र असून विविध वयोगटातील,वेगवेगळया परिस्थितील लोकांच्या आरोग्य परिस्थितीनुसार व त्यांच्या आहाराच्या व पोषकतेच्या तत्वांचा यामध्ये अभ्यास केला जातो. समतोल आहार हे निरोगी जीवनाचे मूळ आहे. त्यामुळे शरीरप्रकृती चांगली रहाते, व रोगांपासूनही संरक्षण होते.

सोलापूर शहर झपाटयाने वाढत आहे. फास्ट फूड संस्कृती हळूहळू सोलापूर शहरात रूजत आहे आणि अशावेळी चुकीच्या आहारामुळे सामान्य जनतेस मधुमेह,उच्च रक्तदाब अशा लाईफस्टाईल आजारास सामोरे जावे लागत आहे. अशावेळी प्रत्येक व्यक्तीस आहार व पोषण यासंबंधी माहिती असणे गरजेचे आहे. नेमकी हीच गरज ओळखून सोलापूर विद्यापीठ कौशल्य विकास केंद्राने दि.३ ते ९ ऑक्टोबर,२०१८ या कालावधीत पोषण व आहारशास्त्र या विषयावबर प्रशिक्षण शिबीराचे आयोजन केलेले आहे.

सदर प्रशिक्षण सर्वांसाठी खुले असून विशेषत:वैद्यकीय,नर्सिंग विद्यार्थी तसेच शारीरिक शिक्षण प्रशिक्षक यांच्यासाठी उपयुक्त असून सदर प्रशिक्षण शिबिरासाठी विद्यार्थ्यांना रू.२५०/- तर इतर व्यक्तीसांठी रू.७५०/- इतके नोंदणी शुल्क आकारण्यात येणार आहे. प्रशिक्षण शिबीर पुर्ण करणाऱ्या विद्यार्थ्यांना/व्यक्तींना विद्यापीठ कौशल्य विकास केंद्रामार्फत प्रमाणपत्र दिले जाणार आहे. सदर शिबीरासाठी नाव नोंदणी चालू झालेली असून ज्यांना नाव नोदणी करावयाची आहे, त्यांनी शिबीर समन्वयक डॉ.अभिजीत जगताप यांच्याशी ९७३०१०५९६१ अथवा (०२१७-२७४४७७४-Ext No-२२८) या क्रमांकावर संपर्क साधावा.

सोलापूर विद्यापीठ सोलापूर

NAAC Accredited-2015
' B ' Grade (CGPA-2.62

सोलापूर विद्यापीठ ,सोलापूर
शैक्षणिक, संशोधन व विकास
कौशल्य विकासकेंद्र

परिपत्रक

परिपत्रकाअन्वये आपणास कळविण्यात येते की, विद्यापीठ, कौशल्य विकासकेंद्रामार्फत दि.३ ते ९ ऑक्टोबर,२०१८ या कालावधीत थेरपेटिक न्युट्रीशन व आहारशास्त्र या विषयावर प्रशिक्षण शिबीर आयोजित करण्यात आले आहे. या प्रशिक्षण शिबीरामध्ये सर्व इच्छूक शिक्षक/शिक्षकेत्तर कर्मचारी तसेच विद्यार्थी/विद्यार्थीनी यांना सहभागी होता येईल. सदर प्रशिक्षण सशुल्क असून सहभागी होवू इच्छिणाऱ्या विद्यार्थी/विद्यार्थीनी यांना रू.२५०/- तर इतरांसाठी रू.७५०/- इतके नोंदणी शुल्क आकारण्यात येईल. याबाबत अधिकची माहिती डॉ.अभिजित जगताप,शिबीर समन्वयक यांच्याशी संपर्क साधावा. ज्या शिक्षक व शिक्षकेत्तर कर्मचारी यांना सदर शिबीरास सहभागी व्हायचे आहे त्यांनी आपल्या विभाग प्रमुख/संचालक यांची पुर्व परवानगी घ्यावी जेणे करून विभागातील दैनंदिन कामकाजावर परिणाम होणार नाही.

डॉ.प्रभाकर कोळेकर
समन्वयक
कौशल्य विकासकेंद्र

सोविसो/कौशल्य विकासकेंद्र/२०१८/ 8349

दिनांकः- 25 SEP 2018

स्थळः-ऑडीटोरीयम,यशोधरा हॉस्पिटल,जिल्हा परिषद जवळ,सोलापूर.

वेळः- सकाळी ८:०० ते १०:००

कौशल्य विकास केंद्र

दि.१९/०९/२०१८

विषय: Therapeutic Nutrition and Dietetics प्रशिक्षण शिबिराच्या आयोजनाबाबत

सादर,

उपरोक्त संदर्भित विषयास अनुसरून विद्यापीठ कौशल्य विकास केंद्रामार्फत दि.३ ते ९ ऑक्टोबर २०१८ या कालावधीत Therapeutic Nutrition and Dietetics या विषयावर प्रशिक्षण शिबीर आयोजित केले आहे. सदर शिबीर हे विद्यापीठाशी संलग्नित विविध संस्थामधील पॅरामेडिकल अभ्यासक्रमांच्या विद्यार्थ्यांसाठी उपयुक्त असल्याने सर्व संस्थाना त्यांच्या विद्यार्थ्यांना सदर शिबिरासाठी नावनोंदणी करण्याच्या सूचना दिलेल्या आहेत. सदर प्रशिक्षण शिबीर शहरातील मध्यवर्ती ठिकाणी ठेवल्यास सदर शिबिरासाठी नाव नोंदणी करण्यास चांगला प्रतिसाद मिळेल असे वाटते. या संदर्भात मा.कुलगुरू महोदय यांच्या परवानगीने सोलापूर शहरातील यशोधरा सुपर स्पेशालिटी हॉस्पिटल यांच्याशी संपर्क केला असता त्यांनी त्यांच्या सभागृहात सदर शिबीर आयोजित करता येऊ शकेल असे सांगितले आहे. सदर प्रशिक्षण शिबिर यशोधरा हॉस्पिटल येथे आयोजित करून शिबिराच्या समारोपाचा कार्यक्रम विद्यापीठाच्या मुख्य सभागृहात कारणे उचित राहील असे वाटते.

सबब दि.३ ते ९ ऑक्टोबर २०१८ या कालावधीत Therapeutic Nutrition and Dietetics या विषयावरील प्रशिक्षण शिबीर यशोधरा सुपरस्पेशालिटी हॉस्पिटल सोलापूर यांच्या सभागृहात आयोजित करण्यास प्रशासकीय मान्यता असावी.

19/9/2018

शिबीर समन्वयक

समन्वयक

कौशल्य विकास केंद्र

19.9.2018

विशेष कार्यासन अधिकारी

शैक्षणिक संशोधन व विकास

19/9/18

मा.कुलगुरू

LD3/285

कौशल्य विकासकेंद्र
दि.२७/०९/२०१८

विषय:- Therapeutic Nutrition and Dietitics प्रशिक्षण शिबीराची द्वित्तीय बॅच सुरू करण्यास प्रशासकीय मान्यता मिळणेबाबत.

सादर,

उपरोक्त विषयास अनुसरून कौशल्य विकासकेंद्रामार्फत दि.३ ते ९ ऑक्टोबर,२०१८ या कालावधीत Therapeutic Nutrition and Dietitics या विषयावरील प्रशिक्षण शिबीराचे आयोजन यशोधरा सुपरस्पेशालिटी हॉस्पिटल,सोलापूर येथे करण्यास मा.कुलगुरू महोदय यांनी दि.१९/०९/२०१८ रोजीच्या टिपणी अन्वये मान्यता दिलेली आहे.

मा.प्राचार्च,आर.वाय.पाटील,कॉलेज ऑफ फार्मसी,जुळे सोलापूर येथील विद्यार्थ्यांचा प्रतिसाद पाहता त्यांच्या विद्यार्थ्यांसाठी सदर प्रशिक्षण शिबीर दि.३ ते ९ ऑक्टोबर,२०१८ या कालावधीत संबंधित कॉलेज मध्ये दुपारी ४ ते ६ या वेळेत आयोजित करण्यात यावे अशी विनंती केली आहे.

कॉलेज ऑफ फार्मसी येथे प्रशिक्षण शिबीर दि.३ ते ९ ऑक्टोबर,२०१८ या कालावधीत संबंधित कॉलेज मध्ये दुपारी ४ ते ६ या वेळेत द्वित्तीय बॅच सुरू केली तर प्रशिक्षकांचे वाढीव मानधन करण्यासाठी खालीलप्रमाणे खर्च अपेक्षित आहे.

अ.क्र.	बाब	तपशील	अपेक्षित अंदाजे खर्च
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सबब,

१.सदर प्रशिक्षण शिबीरसाठी द्वित्तीय बॅच कॉलेज ऑफ फार्मसी येथे दि.३ ते ९ ऑक्टोबर,२०१८ या कालावधीत दुपारी ४:०० ते ६०० या वेळेत घेण्यास मान्यता असावी.

२.सदर प्रशिक्षण शिबीरासाठी वाढीव मानधन व इतर खर्च मिळून रू.१००००/- खर्चास मान्यता असावी.

लिपिक

डॉ.ए.एच.जगताप
शिबीर समन्वयक

डॉ.प्रभाकर कोळेकर
समन्वयक
कौशल्य विकासकेंद्र

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Skill Development Centre

Therapeutic Nutrition & Dietetics Training Workshop

3rd - 9th October 2018

CERTIFICATE

Sr. No. SDW/10/2018 - 294

This is to certify that Mr./Ms. Shaikh Simran A. Jabbar *has attended and successfully completed* **Therapeutic Nutrition & Dietetics Training Workshop** *organized by Skill Development Centre, Solapur University from 3rd - 9th October 2018.*

Dr. Manali Kane	Dr. Abhijeet Jagtap	Dr. P. N. Kolekar	Prof. Dr. Vikas Patil	Dr. Mrunalini Fadnavis
Nutrition & Dietetics Trainer	Workshop Co-ordinator	Co-ordinator SDC	O.S.D. (A R & D)	Hon. Vice-Chancellor

Therapeutic Nutrition and Dietetics Workshop - 3rd-9th Oct 2018.

List of Students.

Sr. No.	Student Name	Signature
1	Aamtekar Priya Babu	
2	Aher Jaysing Dadarao	
3	Ajnalkar Pallavi Sanjay	
4	Aken Gopal Sudarshan	
5	Anande Babu Shivaji	
6	Arkhed Rehanu Riyaz	
7	Atanur Preeti Shridhar	
8	Atanur Priya Shridhar	
9	Atanur Shridhar Sidramappa	
10	Atkare Anjali Gautam	
11	Awatade Trupti Ramesh	
12	Bagalkote Zainab Altaf Husain	
13	Bagwan Munzareen M. Hanif	
14	Bali Pragati Sandeep	
15	Bandgar Aditi Ramchandra	
16	Bandi Ambadas Krishnashri	
17	Bansode Archana Bhimashankar	
18	Bansode Sandip Shidaram	
19	Bansode Sneha Sanjeev	
20	Belpawar Shubhangi Anil	
21	Bhaiyya Surbhi Rahul	
22	Bhalerao Stefy Robert	
23	Bhalerao Supriya Sunil	
24	Bhandari Radha Hanmantu	
25	Bhurke Akshay Ravindra	
26	Birajdar Naina Dinkar	
27	Boddu Venktesh	
28	Boga Deepa Ambadas	
29	Chanda Misbah Akhlaque Ahmed	
30	Chandramore Vanita Sanjay	
31	Chanmal Mayuri Shriniwas	
32	Chavan Swapnil Ratulal	
33	Chumalkar Samart Kalpesh	
34	Dalal Amruta Rajesh	
35	Dalvi Bhagwat Pandhari	
36	Dange Poornima Dattatray	

37	Davada Manisha Paresh	
38	Deshmukh Namita Amol	
39	Dhanwade Manali Shashikant	
40	Dhavane Pooja Gahininath	
41	Dhawale Pratiksha Milind	
42	Dhaware Neha Ramdas	
43	Dhonake Kirti Vishwas	
44	Dhone Bhujappa Shidappa	
45	Dhupargude Visha Prafulla	
46	Dhutenavaru Dipali Shrimant	
47	Dindore Onkar Arvind	
48	Dongaraje Parameshwar Shrishail	
49	Dr. Bhosale Baban Dada	
50	Dr. Hiranandani Kiran L.	
51	Dudhanikar Yogesh Chandrakant	
52	Gadagi Vaishnavi Tukaram	
53	Gade Akshay Suresh	
54	Gaigavali Yashoda Vishal	
55	Gaikawad Kirti Sudhakar	
56	Gaikawad Shatabdi Arjun	
57	Gaikwad Nikita Vijaykumar	
58	Gaikwad Prerana Lingraj	
59	Gaikwad Upasana Shamuwel	
60	Gajdhane Anita Subhash	
61	Ganjale Ashwini Siddaram	
62	Gaud Nilima Mohan	
63	Gavali Jayshree Kalyani	
64	Gavali Santosh Shankar	
65	Gham Pooja Manohar	
66	Gharge Swati Dattatraya	
67	Ghodake Vanita Annarao	
68	Godam Pooja Murlidhar	
69	Golekar Anjali Ambadas	
70	Golekar Asmita Ambadas	
71	Gore Vaidehi Chandrashekhar	
72	Gubayad Shivam Shivling	
73	Gujale Akanksha Vijaykumar	

74	Gujale Mangal Khajappa	
75	Gund Shivani Ganesh	
76	Gurav Pooja Appasaheb	
77	Harhare Swapnil Sunil	
78	Hattarge Ashwini Shivanand	
79	Hibare Nitin Ashok	
80	Hirke Amol Laxman	
81	Honamore Dipali Dharappa	
82	Honmane Pallavi Dattatray	
83	Hotgi Farhat Jahan Iqbal	
84	Ingale Aishwarya Sadanand	
85	Ingale Dhanashri Shantaram	
86	Jadav Amit Anil	
87	Jadhav Chaitali Babasaheb	
88	Jamadar Rajat Nitin	
89	Jangam Suvarta Pawraj	
90	Jetithor Surekha Navnath	
91	Jirage Siddharam Basvanappa	
92	Jogipethkar Namrata C.	
93	Joshi Meghana Mukund	15/11/2018
94	Kadam Megha Pravin	
95	Kadam Pratiksha Jivanrao	
96	Kakade Onkar Vijay	
97	Kalburgi Shweta Sanjay	
98	Kale Sapana Okshit	
99	Kale Sneha Sudhir	
100	Kalshetti Aishwarya Ashok	
101	Kamalapure Nagesh Rajshekhar	
102	Kambale Dipali Mahadeo	
103	Kamble George Ajay	
104	Kamble Laxmi Santosh	
105	Kamble Reshma Sachin	
106	Kamle Nida Bashir	
107	Kankure Sushmita Satish	
108	Kantode Rajaram Laxman	
109	Karajagikar Tahsin Hamid	
110	Kargule Mamta Prashant	

111	Kasabe Nikita Mahalappa	
112	Kasar Mahesh Chandrakant	
113	Katkar Amruta Rajkumar	
114	Keshav Amruta Shriniwas	
115	Khairate Rupali Chanabasappa	
116	Khalsode Dip Bharat	
117	Khandekar Mallikarjun Raju	
118	Khandekar Mayura Rajgopal	
119	Khandekar Nikita Santosh	
120	Kharadi Saniya Javeed	
121	Khare Ashwini Sopan	
122	Kirtane Aparna Manikrao	
123	Kodam Raju	
124	Kokate Priti Chandrakant	
125	Koli Jayashree Balbheem	
126	Koli Priyanka Vitthal	
127	Koli Rajashree Sunil	
128	Koli Shrutika Ashok	
129	Koli Vidya Sunil	
130	Kore Louis Anil	
131	Kore Rupali Shivsharan	
132	Korwan Mansi Sidharud	
133	Kshirsagar Amita Pandurang	
134	Kshirsagar Manisha Krushnant	
135	Kumbhar Shambhuling Sudhakar	
136	Kumbhar Vidyashree R.	
137	Lakhade Rahul Dhondiba	
138	Lamkane Punam Rajkumar	
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169	More Archana Jeevan	
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