

3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five year:2018-19

Sl. No.	Name of the teacher	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Year of publication	ISBN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	Ahire S.C.	Pomegranate Crop and Geo-Economics Study in Dhule District (MS) India	Geography				2018	ISBN: 13:978-613-4-96723-5		Lambert Academic Publishing
2	Ahire S.C.	Environmental Geography	Geography				2018	ISBN: 978-93-90483-		Prashant Publication
3	Ahire S.C.	Pattern and trends of urban growth in the drought orone tahsil in jalgaon district.	Geography	International research journal og geography.	vol.35, issue 1		2018	ISSN: 0971-6785		Maharashtra Bhugolshastra sanshodhan patrika
4	Bhoi S.S.	Fresh water fish fauna of Panzara and Kan rivers of SakriTahsil, Maharashtra (India).	Zoology	International Journal of Research and Analytical	vol.6,issue 1,1, RAR190N001		2019	ISSN: 2348-1269		www.ijrar.org
5	Desale S.B.	समकाळाचे प्रतिबिंब पांढर कादंबरी	Marathi	Aarhat multidisciplinary	vol.VIII, issue.IV		2019	ISSN: 2278-5655		
6	Nandre S. J.	Current and future Nanotechnology applications Nanomaterials, Nano-electronic Nano-	Physics	Journal of Emerging Technologies and Innovative	vol.6,issue 3,552		2019	ISSN: 2349-5162		www.jetir.org



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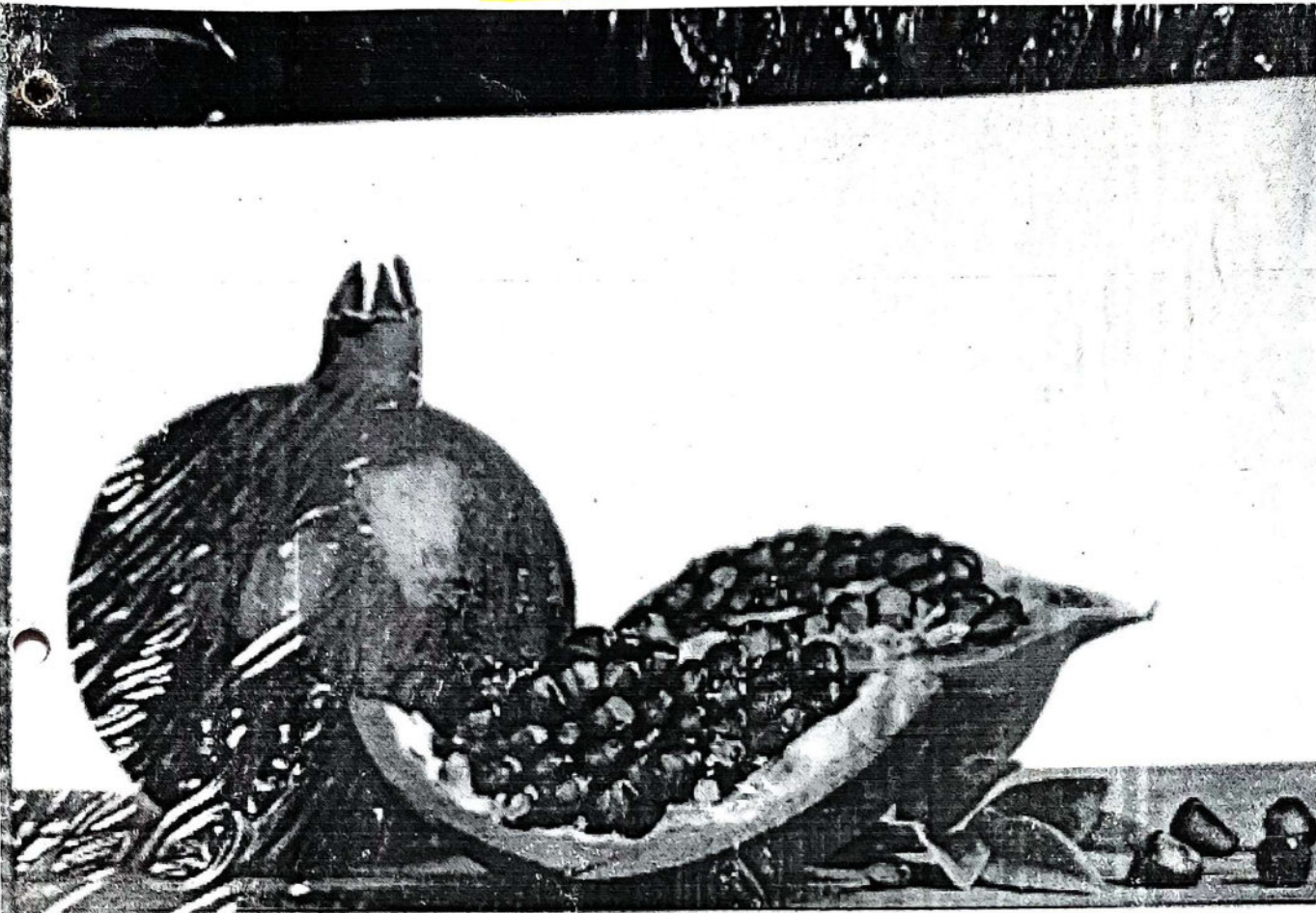
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7	Ahirrao R. B.	Hydrogen sulfid gas Sensing properties e of Pure and Cu modified SrTiO3 nanostructure thin film	Physics	Green synthesis of nanomaterials and their application			2019	ISBN:978-93-87098-24-4		
8	Ahirrao R. B.	Synthesis and Characterization of Nanocrystalline Barium Strontium Titanate Powder by Mechano Chemical Method	Physics	IOSR Journal of Applied Physics (IOSR-JAP)	doi:10.9790/4861-1102024551.		2019	ISSN: 2278-4861		www.iosrjournals.org
9	Patil V.S.	Indias challenges in waste management	Botany	Journal of Emerging technologies and Innovative Research	vol.6,issue 3,620		2019	ISSN:2349-5162		www.jetir.org
10	Patil V.S.	Women Education: Fundamental human rights	Botany	Gender equality and women empowerment			2018	ISBN:978-93-87129-95-5		



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Dnyaneshwar Suryawanshi

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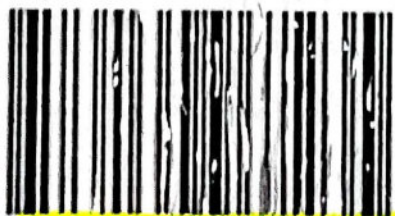
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Agriculture is not only an occupation but also a way of life. However, farmers cultivating traditional crops are incapable to harvest adequate food and grains for the livelihoods. It forces farmers to opt for alternative farming. A shift has been seen from traditional crop system to more productive and remunerative crop. Horticulture is a best way for agro economic empowerment. It is not only helpful for the homogeneous development of the individual farmer and agrarian society but also for the whole country. India stands second after china in production of the fruits. Maharashtra state is popularly known as the 'fruit bowl' of India. Geographical and economical factors have boosted the cultivation and production of pomegranate crop. The pomegranate farming in study region became popular due to many favorable factors. Agricultural economy has been changing in draught prone area, Pomegranate cultivation is increasing in Dhule study region. Average cost benefit ratio of local tahsil market is 1:1.9 and third category is higher cost benefit ratio of district market which is 1:2.6 average. Fourth category consists of national market and its cost benefit ratio is 1:2.1 average.

Dr. S. C. Ahire has been working as Vice Principal and an assistant professor in Geography. He has 21 years of teaching experience. He is also elected as member of BOS, NMU, and Jalgaon. Dr. D.S. Suryawanshi has been working as the Principal and Professor of Geography. He has 23 years of Teaching experience, written 25 reference books.



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डॉ. नामदेव नरसिंगराव गजरे
(एम.ए., बी.एड., एम.फिल., पीएच.डी., नेट)

अध्यापन : १) कला, वाणिज्य व विज्ञान महाविद्यालय, नवापूर येथे सहाय्यक प्राध्यापक म्हणून कार्यरत, २) पदवी स्तरावर १४ वर्षे अध्यापनाचा अनुभव, ३) एम.फिल. व पीएच.डी. चे मार्गदर्शक.

लेखन : १) भूगोल, २) प्रात्यक्षिक भूगोल, ३) नकाशा पुस्तिका, ४) मानवी भूगोल, ५) हवामानशास्त्र, ६) पर्यावरण भूगोल, ७) जनरल नॉलेज, ८) आयडियल जनरल नॉलेज (एम.पी.एस.सी.), ९) लोकसंख्या भूगोल.

सदस्य : १) महाराष्ट्र भूगोलशास्त्र परिषद, पुणे, २) मराठवाडा भूगोलशास्त्र परिषद, लातूर.

पुरस्कार : १) कबची उमविधा उत्कृष्ट रासेयो कार्यक्रम अधिकारी पुरस्कार प्राप्त, २) ग्लोबल सोसायटी फॉर हेल्थ अॅण्ड एज्युकेशनल प्रोग्रॅम दिव्ही तर्फे 'भारत शिक्षा रत्न' पुरस्कार प्राप्त, ३) मनुष्यबळ विकास लोकसेवा अकादमी, मुंबई तर्फे 'राज्यस्तरीय गुणवंत शिक्षक गुरुगौरव शिक्षकरत्न पुरस्कार प्राप्त'.

इतर : राज्य, राष्ट्रीय व आंतरराष्ट्रीय पातळीवरील भूगोल चर्चासत्र व परिपदेमध्ये ५० पेक्षा अधिक शोध निबंध सादर व २० शोधनिबंध प्रकाशित.



डॉ. सुरेश चिंतामण अहिरे
(एम.ए., बी.एड., एम.फिल., पीएच.डी.)

अध्यापन : १) उत्तमराव पाटील कला आणि विज्ञान महाविद्यालय, दहिवेल, जि. धुळे येथे उपप्राचार्य व विभागप्रमुख म्हणून कार्यरत, २) एम.फिल. व पीएच.डी. चे मार्गदर्शक, ३) पदवीस्तरावर २४ वर्षे अध्यापनाचा अनुभव.

लेखन : १) महाराष्ट्रातील आपत्तीचे व्यवस्थापन, २) भूमाहितीशास्त्र, ३) प्रादेशिक नियोजन आणि विकास, ४) महाराष्ट्राचा सामाजिक आणि आर्थिक भूगोल, ५) मानवी भूगोल, ६) लोकसंख्या भूगोल. ७) भूगोल विषयावरील ३ संदर्भग्रंथ प्रकाशित

सदस्य : १) महाराष्ट्र भूगोलशास्त्र परिषद, पुणे २) डेकन जिआग्रॉफिकल सोसायटी इंडिया, पुणे.

इतर : १) कबची उत्तर महाराष्ट्र विद्यापीठ, जळगाव भूगोल अभ्यासमंडळाचे सदस्य, २) विविध राष्ट्रीय व आंतरराष्ट्रीय परिषदांमध्ये ३५ संशोधन निबंध सादर व ३० शोधनिबंध प्रकाशित



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● A Study Of Occupational Structure Of Population In Ahemdagar District Of Maharashtra	
Korade S. V. M., Jyotram More	1-8
● Growth Management Aspects: "a Case Study With Reference To girja Dam In Watershed Gp-3" Of Aurangabad District, Maharashtra State, India	
Pramod B. Pathrikar	9-14
● Patterns And Trends Of Urban Growth In The Drought - Prone Tahsils In Jalgaon District (Maharashtra State)	
N. A. Paul, D. S. Suryawanshi, S.C. Ahirec	15-23
● The Pattern Of Road Connectivity Index In Aurangabad Division	
Sachin Himmatrao More	24-29
● Land Use Change Detection Of Urban Area Using Gis And Rs Techniques: A Study Of Ahmednagar City, Maharashtra, India"	
S.A. Borude	30-41
● Rainfall Trend And Variability Analysis In Dhule District (M. S.)	
Sunil Gorane	42-47
● Impact Of Small Land Holdings On Rural Economy In Nandurbar District	
Litani V. Nile, Bhavsar Sandip S.	48-54
● A Geographical Study Of Landslide: A Case Study Of Malin Village Of Ambegaon Tahsil In Pune District, Maharashtra	
Vilas Patil, Ramesh Gopale	55-60
● Urban Sprawl Of Urban Agglomerat Anand-vallabh Vidya Nagar-karamsad Using Geospatial Technology	
Prakash R. Konka, Avinash V.almale, Manojath P. Mankari	61-76
● Decadal Variation in Sex Ratio in Maharashtra (1901-2011)	
Dr. Arjun H. Musmade	77-82
● Morphometric Analysis Of Vincharna River Watershed: A Comparative Study Of The Two Different Spatial Datasets.	
Ram S. Kolapkar, Lali M. Thakare	83-92
● Estimation Of Soil Loss By Using Stelik Soil Loss Equation, A Case Study Of Mutha Valley Catchment, Pune District, Western Maharashtra.	
Sumitra H. Shinde, Sunil W. Gatkwad	93-97
● Crop Diversification Regions In Sina River Basin: Maharashtra	
Mukund D. Kadam Sambhaji D. Shinde	98-103
● An Analytical Study Of Milk Production In Pune Administrative Division, Maharashtra (2005 - 2015)	
Vidya Chopade, Virendra Nagarale	104-113
● An Analysis Of Some Important Characteristics Of Rainfall In Manipur	
G. Jadumani Sharma, Vasudev Shivaji Salunke	114-120
● Site Suitability Analysis For Water Conservation Measures In Watershed Using Remote Sensing And Gis	
S. P. Cholke	121-124

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PATTERNS AND TRENDS OF URBAN GROWTH IN THE DROUGHT-PRONE TAHSILS IN JALGAON DISTRICT (MAHARASHTRA STATE)

N. A. Patil

D. S. Suryawanshi

S.C. Ahirec

Abstract

Urbanization is a form of social transformation from traditional rural societies to modern urban communities. It is long term continuous process. The level of urbanization is determined as the proportion of urban population to the total population of a region. We can express it in two ways: Percentage of urban population to the total population of a region and Percentage of decadal growth rate. It has been rightly said that the level of urbanization reflects the development of a nation. It varies from region to region and from place to place in a country. The study attempts to understand the Urbanization Process, Trend, Pattern and its Consequences based on census data during 1901-2011 in Jalgaon district. Community Development (C.D) blocks has been selected as the spatial unit for present study. The present study analyses the trend of urbanization and also detect the level of urbanization the study region on the basis of composite standardize values of some selected urbanity and socio economic indicators. The study region urban population has increased from 0.66475 lakh in 1901 to 4.02317 lakh in 2011 due to rapid industrialization and rural to urban migration. Level of urbanization in the study region was slow but it experienced high growth of urban population.

The result shows that Bhadgaon and Jamner (C.D.) blocks have been declared as the urban towns as per the census of 2011. The investigation shows that high level of urbanization has registered in Amalner and Chalisgaon tahsils, medium level of urbanization observed in Pachora tahsil, whereas low level of urbanization observed in Dharangaon, Parola and Erandol tahsils and remaining tahsils have very low level of urbanization registered in Jamner and Bhadgaon tahsils. This article reveals that there is intra spatial disparity in the urbanization level and economic activity of the selected C.D. blocks.

Keywords: Urbanization, Census component, degree of urbanization, trends and growth.

Introduction:

Urbanization is a process of population concentration, structural change and socio-cultural change affecting both people and place. The term urbanization has been used to outline the processes of alteration from a primarily rural to principally toward urban centers. The key dimensions of urbanization are a progressive concentration of people and activities towards towns and cities. Urbanization has also been stated as synonymous with urban expansion particularly the type of urban growth known as urban sprawl (Glaeser, E. L., & Kahn, M. E., 2004; (Bhatta, B., 2009) The Globalization has led to the rapid growth in the world economy and movement of the people, products, capital etc in a faster and easier manner. And because of Globalization, the one concept which comes into full swing is the urbanization. The urbanization has a concept is an integral part of the process of development. Both Industrialization and urbanization are inseparable, just as agriculture fosters villages; industry encourages growth of towns (Maheshwari, 2006). There exist a close relationship between urbanization and economic growth, and good example is the many developed and industrialized countries and also a few developing countries. As a result, many populations are living in urban areas, because cities, towns and other urban areas have facilitated the evolution of knowledge and have been the incubators of civilization and the engines of growth (Singhsoodhi, 2003). But, the urbanization process is also accompanied by number of problems, because of unmanageable growth of population in urban areas, and it is related to provision of basic facilities and services in urban areas like water supply, sanitation, housing, transport etc. In India, which is one of the fastest

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Fresh water fish fauna of Panzara and Kan rivers of Sakri Tahsil, Maharashtra (India).

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Abstract

The present study has shown that Panzara and Kan rivers supported 41 fish species belonging to 7 orders, 13 families and 29 genera. The order Cypriniformes was dominant with 23 (56%) species followed by Perciformes with 7 (17%) species, order Suliformes with 5 (12%) species, Synbranchiformes 3 (7%) species and Osteoglossiformes, Clupeiformes and Beloniformes with single species each. Fish diversity was assessed by calculating the various indices such as Shannon-Weiner index (H), Simpson's Dominance Index (D), Simpson's index of diversity (1-D) and Pielou's Evenness index of species richness. It can be concluded that Panzara and Kan rivers flourish with rich fish fauna. It requires proper management and conserves this fish health.

Key Words: Biodiversity indices, Fish fauna, Simpson's index, Conservation etc.

Introduction

Panzara Kan (Panzara + Kan) rivers are life line of Sakri tahasil, these acts as important fish reserves (Patole and Patil, 2009). Fish is sensitive to changes in water chemistry due to different anthropogenic activities from their catchments. Fish responses to environmental disturbances, including hydro-morphological factors are different in time and space in comparison to simpler organisms, as they tend to be integrated over larger intervals. Fish has been identified as suitable for biological assessment due to its easy identification and economic value (Goswami and Mankodi, 2010). Fish assemblages have widely been used as ecological indicators to assess and evaluate the level of degradation and health of water bodies at various spatial scales (Mandal, 2010). Earlier workers like Madhusudan et al. (2011) studies on diversity of fish in Gondoor and Nakane lakes in Dhulia (M. S.). Jaiswal and Ahirrao (2012) studied on ichthyofaunal diversity of Rangavali dam, Navapur district Nandurbar (M.S.).

Fish diversity comprises of species richness (number of species in a defined area), species abundance (relative number of species) and phylogenetic diversity i. e. relationships between different groups of species (Kharat, *et al.*, 2012). Narsimha and Banergee, (2013) observed that there are many advantages of using fish assemblage as biological indicator. Therefore, it is essential to conserve the diversity of fish from freshwater reservoirs and tanks (Khodake *et al.*, 2014). Patole (2014) reported ichthyofaunal diversity of Nandurbar district (Northwest Khandesh region) of Maharashtra (India). Fish diversity is also a good bioindicators of water quality like zooplankton and phytoplankton species considered as biological tool for further bio-monitoring and assessing trophic status of water bodies (Kawade and Pandarkar, 2015). Recently Patole (2015) noted ichthyofaunal diversity of Tapi River flows through Dhule and Nandurbar district of Northwest Khandesh (Maharashtra). Aquatic ecosystems consist of a biotic and biotic component which directly affects the diversity of flora and fauna of water bodies (Borane, 2015). Very recently, Kawade and Pandarkar (2016) studies diversity indices of fish Heterogeneity of Kalu dam, Ahmednagar, Maharashtra. Fishes are one of the good and cheapest sources of protein food for all classes of people. Fishes are the important vertebrate group of animal's world contributing to the biodiversity of animals (Rawal and Deshmukh, 2016; Deepali Sonawane and Patole, 2017).

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उत्तमराव पाटील महाविद्यालय दाहिवेल, ता. साकी जि. धुळे

प्रस्तावना :

समाजजीवन नेहमीच परिवर्तनशील असते. काळानुरूप त्यात बदल होत असतात. ती एक नैसर्गिक प्रक्रिया आहे. या बदलत्या समाजजीवनाचा प्रभाव प्रत्येक घटकावर पडत असतो व लेखकही त्याच समाजाचा एक घटक असतो, म्हणूनच लेखक ज्या काळात, वातावरणात, परिस्थितीत जीवन जगतो त्या समकालीन जीवनाचा प्रभाव आपोआपच त्याच्या सहित्यावरही पडतो. लेखकाच्या आजुबाजूची तत्कालिन सामाजिक, धार्मिक, आर्थिक, सांस्कृतिक, राजकीय परिस्थिती व समाजाचे नैतिकमूल्य या सर्व गोष्टींचा समाजाबरोबरच लेखकावरही प्रभाव पडतो परिणामतः त्या प्रभावच्या दबावातून निर्माण झालेल्या सहित्यात या सर्व गोष्टींचे चित्रण आपोआप येत असते त्याला आपण समकाळाचे चित्रण म्हणू शकतो.

साहित्यात समाजाचे प्रतिबिंब पडलेले असते म्हणूनच साहित्याला समाजाचा आरसाही म्हटले जाते. मात्र सहित्य हे समाजाच्या बाह्यमना बरोबरच अतर्मनाचेही प्रतिबिंब दाखवित असते. लेखक जीवन जगत असताना ज्या समकालीन सामाजिक अनुभवातून तो संपन्न होतो. त्या अनुभवांचे प्रकटीकरण तो आपल्या साहित्यातून करतो, मात्र त्यांच्या अनुभव मांडणीतून तो समाजाला नवी मूल्यदृष्टी देण्याचे काम करीत असतो.

समकाळ आणि साहित्यिक :

समकाळाचा अर्थ अनेक पध्दतीने घेतला जातो. त्याचा सरळ अर्थ घेतला तर एकाच काळात राहणारे किंवा त्याच काळात घडणारे व उत्पत्ति, स्थिती इत्यादीच्या दृष्टिने एकाच काळात झालेले किंवा जो ज्या काळात जीवन जगतो आहे त्याच काळात इतरांचे वास्तव असने, अशा पध्दतीने समकाळाविषयीचे व्यवहार पातळीवर समकाळाविषयी सांगता येते. समकालीन सहित्य या शब्दाचा इतिहास तपासाला तर हा शब्द दुसऱ्या महायुद्धानंतर रुळलेला दिसतो. तर भारतात तो ऐंशीच्या दशकानंतर वापरला जाऊ लागला असे विद्वानांना ठाटते. समकाळ हा शब्द सहित्यासंदर्भात वापरतांना त्यातून सुचित होणारा अर्थ हा घडणारा बदल असा आहे कि विचार असा घ्यावा हा प्रश्न उरतो, कारण समकाळातील सहित्य जेव्हा वर्तमानातील चांगल्या वाईट बदलांचे चित्रण करते तेव्हा त्यातून विचारांचीही मांडणी झालेली असते. म्हणूनच समकाळाच्या मांडणीतून जेव्हा समकालीन विचारांची मांडणी होते तेव्हा त्यातून रचनात्मक दबाब जाणवतो, कारण त्यातून मांडलेले विचार हे सामान्य माणसांचे असतात. म्हणूनच त्या विचारांचा तो दबाब असतो. समकाळाच्या साहित्यात जसे त्या काळाचे प्रश्न, समस्या, सामाजिक संघर्ष मांडलेले असतात त्याच बरोबर विचारांची ही मांडणी केलेली असते. समकाळाच्या सहित्याला एक ऐतिहासिक भूमिकाही असते. त्यातून सांस्कृतिक व पारंपारिक विचारधारा मांडली जात असते आणि त्यातून समाजात नव्या विचारधारेचे धारण केले जात असते. उदाहरणादाखल सांगवयाचे झाल्यास समकालीन आधुनिकतेतून होणाऱ्या बदलांची मांडणी करीत असतांना निसर्गाची होणारी हानी त्यातून पर्यावरणाचे होणारे असंतुलन व त्याचे परिणाम याची मांडणी करून भोगाव्या लागणाऱ्या परिणामांची जाणीव करून दिली जाते. त्याच बरोबर नैतिकमुल्याचा होणारा हास आणि समाजविचारांची

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SJIF Impact Factor 6.236

Peer Reviewed

Journal

Aarhat Multidisciplinary International Education Research Journal (AMIERJ)

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Dahivel, Tal. Sakri, Dist. Dhule.

NANOTECHNOLOGY APPLICATIONS: Current and future Nanotechnology applications Nanomaterials, Nano-electronic Nano-medecine and bio nanotechnology applications

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Abstract

Currently, nanotechnology is described as revolutionary discipline in terms of its possible impact on industrial applications. Nanotechnology offers potential solutions to many problems using emerging nanotechniques. Depending on the strong interdisciplinary character of nanotechnology there are many research fields and several potential applications that involve nanotechnology. In this section we provide a brief overview about some nanotechnology and nanoscience current developments. Obviously it can't provide an exhaustive report of the developments in nanoscience and nanotechnologies in all scientific and engineering fields. We are going to consider three main categories (broad nanotechnology categories).

Key words –nano-wire, carbon tubes nano-powder

Introduction

- Nanomaterials;
- Nano-electronic (information and communication technology);
- Nano-medecine and bio nanotechnology.

We can define nanomaterials as those which have nanostructure components with at (less than 100nm). Materials with one dimension in the nanoscale are layers, such as a thin films or surface coatings. Materials that are nanoscale in two dimensions are nanowires and nanotubes. Materials that are nanoscale in three dimensions are particles quantum dots (tiny particles of semiconductor materials). Nanocrystalline materials, made up of nanometer-sized grains, also fall into this category. Two principal factors cause the properties of nanomaterials to differ significantly from other materials: increased relative surface area, and quantum effects. These factors can change or enhance properties such as reactivity, strength and electrical properties, optical characteristics. Nanomaterials and Nanotechnology applications

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Hydrogen sulfide gas-sensing properties of Pure and Cu modified SrTiO₃ nanostructured thin films

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Abstract: Nanostructured pure and Cu-doped SrTiO₃ thin films were prepared by spray pyrolysis technique. Thin films were deposited on glass substrates by spraying precursor solution of strontium chlorate hexahydrate Sr(ClO₄)₆·6H₂O and Ti(Cl₃) with Cu(Cl₂)₆·6H₂O at 350°C. The XRD, UV-visible spectroscopy and FE-SEM techniques were employed to establish the structural, optical and morphological characteristics of the thin films. These films are investigated systematically for various gases at different operating temperature. The Cu modified STO thin films were showed gas response to H₂S gas with enhanced response.

Keywords: STO thin films, Cu-STO, H₂S response, Active region.

1.0 Introduction

The monitoring and control of toxic Hydrogen sulfide (H₂S) gas is important in laboratories and industrial areas where it is used as a process gas or generated as a byproduct. [1-3]. The H₂S is most famous toxic gas because of bad smell can be perceived at a concentration lower than 0.1 ppm. It is often produced in coal, coal oil or natural gas manufacturing. The use of advanced sensor film preparations has resulted in considerable progress [4]. At low temperatures Metal oxides react vigorously with the moisture in the air [5-6]. Metal oxide sensors find a range of application including the monitoring of traffic pollutants or food quality in specially designed electronic noses [7-8]. These Metal oxide materials have successfully been employed to detect a range of gas vapours, particularly ethanol, methanol, ammonia, hydrogen sulphide [9-14]. Thick film technology is often used to fabricate sensors and possesses many advantages, such as low cost, simple construction, small size and good sensing properties [15-16]. In addition, this approach provides reproducible films consisting of a well-defined microstructure with grains and grain boundaries that can be studied easily [17]. H₂S has a density similar to air [18]. The sensors work on the principle of a change in electrical conductance on exposure to the gas which is to be detected. In order to obtain selectivity and to improve gas response, SrTiO₃ has been doped with different elements like Ba, Cr, Cu, etc. The CuO-doped SrTiO₃ thick films are found to exhibit extraordinary sensing characteristics for H₂S. Therefore, reliable sensors with low cost, low energy consumption having high sensitivity, selectivity and operable in sub ppm (ppb) range of H₂S sensors are in high demand for environmental safety and industrial control purpose.

Research for new good gas sensing materials and the new properties of conventional materials has become an active research field. Concerning the detection of dilute H₂S less than 1ppm, thick film sensors using CuO-SnO₂ [19-20] is possible. The known H₂S gas sensors BaTiO₃ [21], (Ba_{0.8}-Sr_{0.1})TiO₃-BSF [22], Cu-BSF and Cr-BSF [23], CuO-SnTiO₃ [24], CuO-ZnO-SnO₂ [25], WO₃ [26-28], and CuO-doped SnO₂-ZnO [29] have been reported to excellent performance. Heterocontact CuO modified SnO₂ and CuO-BSF based H₂S gas sensors have been reported for the detection of ppb level of H₂S gas at room temperature [30]

2. Experimental

2.1. Preparation of spraying solutions

All the chemicals used in the work were of analytical grade. Strontium nitrate (Sigma Aldrich, USA) and Titanium (IV) oxyacetylacetonate (95 % w, Sigma Aldrich, USA) dissolved in the double distilled water and ethanol (20 ml) to obtain 0.05 M precursor solution and

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Synthesis and Characterization of Nanocrystalline Barium Strontium Titanate Powder by Mechano-Chemical Method

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Abstract: The nanocrystalline Barium Strontium Titanate (BST) powders were synthesized by mechanochemical method using barium carbonate (BaCO_3), titanium dioxide (TiO_2) and strontium carbonate (SrCO_3) as the precursors. Conventional ball-milling also preferred to get average particle size. The powder was sintered at 600°C , 750°C and 800°C . X-ray Diffraction (XRD) technique was used to know structural properties of BST powder and EDAX is used for quantitative elemental analysis. The decomposition and crystalline behavior of BST were examined by Thermogravimetric and Differential Thermal Analysis (TG-DTA). Scanning Electron Microscopy (SEM) investigation was performed to examine grain size and microstructural properties of BST powder. The UV-Vis spectrum used for band gap calculation. Raman spectroscopy was used for the confirm the phase. The samples were characterized by infrared spectroscopy method (FT-IR). The results showed that the obtained crystallite sizes were 33 and 37 nm for BST powder sintered at 750°C and 800°C , respectively.

Keywords: Mechanochemical synthesis, sintering, BST nanopowder, Particle size, XRD

Date of Submission: 18-03-2019

Date of acceptance: 02-04-2019

I. Introduction

Perovskite-oxides have been extensively studied due to their excellence in electrical [1] and optical properties [2-3]. Recently, perovskite-oxides have attracted great interest in their use as nanocatalysts in the photocatalytic decolorization of methylene blue applications such as BaTiO_3 [4], SrTiO_3 [5], CaTiO_3 [6-7], and $\text{Ba}_{1-x}\text{Sr}_x\text{TiO}_3$ (BST) [8].

Since the report that ferroelectric materials can be used to fabricate large scale integrated circuit (VLSI) memory, Post-Gbit dynamic random access memory (DRAM) capacitors prepared via ferroelectric materials have attracted considerable attentions in recent years. Barium strontium titanate (BST) is an attractive capacitor material for dynamic random access memories and infrared detectors due to its chemical stability, excellent structure and dielectric properties compared to other ferroelectric materials such as BaTiO_3 , PbTiO_3 , etc. [9-14]. BaTiO_3 and SrTiO_3 are representative ABO_3 model perovskite materials and BST is also a solid solution system between BaTiO_3 and SrTiO_3 , i.e., $\text{Ba}_{1-x}\text{Sr}_x\text{TiO}_3$ simultaneously has the advantages of the high dielectric constant of BaTiO_3 and the structural stability of SrTiO_3 . At room temperature, it is known that the solid solution system is in a ferroelectric phase when Ba content $1-x$ is in a range from 0-0.7 [15-16]. Furthermore, the electrical properties of BST such as dielectric constant, dielectric loss, depend upon the composition, dopant, microstructure, etc. and the electrical properties and kinetic behaviours of undoped and doped BST have been fully investigated [17-18]. However, the characterizations of doped BST, especially manganese, which has an influence on the grain boundary resistance [19-21], have been insufficiently investigated. It is concluded that dopant can significantly modify the dielectrical and electrical properties of ferroelectric materials such as barium strontium titanate (BST), lead zirconate titanate (PZT), etc.

Barium strontium titanate (BST) or BaTiO_3 has been prepared by a variety of different techniques, for example Xu *et al.* [22] prepared nanosized BaTiO_3 powders by hydrothermal method; but among them, the solid state reaction method is the traditional method for preparing BaTiO_3 powders by mixing the starting materials, usually titanium dioxide and barium carbonate and calcinations them at an elevated temperature around 1200°C . However, the solid-state reaction method tends to result in a significant amount of agglomeration, poor chemical homogeneity and undesirable secondary phase such as BaTi_2O_5 .

It is known that the mechanochemical synthesis relates to non-conventional methods of green chemistry since it allows decreasing the pollution in the environment [23-26]. The main purpose of present work

India's Challenges in Waste Management

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Abstract

The key to efficient waste management is to ensure segregation source and resource recovery. Most recyclable waste ends up in a dump yard due to the lack of efficient waste management. Waste management rules in India are based on the principles of "sustainable development", "precaution" and "polluter pays". These principles mandate municipalities and commercial establishments to act in an environmentally accountable and responsible manner—restoring balance, if their actions disrupt it. The increase in waste generation as a by-product of economic development has led to various subordinate legislations for regulating the manner of disposal and dealing with generated waste are made under the umbrella law of Environment Protection Act. 1986 (EPA). Specific forms of waste are the subject matter of separate rules and require separate compliances, mostly in the nature of authorizations, maintenance of records and adequate disposal mechanisms.

Introduction- Waste management (or waste disposal) is the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process. Waste can be solid, liquid, or gaseous and each type has different methods of disposal and management. Waste management deals with all types of waste, including industrial, biological and household. In some cases waste can pose a threat to human health. Waste is produced by human activity, for example the extraction and processing of raw materials. Waste management is intended to reduce adverse effects of waste on human health, the environment or aesthetics. Waste management practices are not uniform among countries developed and developing nations; regions urban and rural areas and residential and industrial sectors can all take different approaches. A large portion of waste management practices deal with municipal solid waste (MSW) which is the bulk of the waste that is created by household, industrial, and commercial activity.

The key to efficient waste management is to ensure proper segregation of waste at source and to ensure that the waste goes through different streams of recycling and resource recovery. Then reduced final residue is then deposited scientifically in sanitary landfills. Sanitary landfills are the ultimate means of disposal for unutilized municipal solid waste from waste processing facilities and other types of inorganic waste that cannot be reused or recycled. Major limitation of this method is the costly transportation of MSW to far away landfill sites.

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Gender Equality and Women Empowerment

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ISBN : 978-93-87129-95-5

Book No. : 604

Publisher & Printer: Mr. Yuvraj Mali

Dhule : 17, Devidas Colony, Varkhedli Road,
Dhule-424001.
Contact: 9405206230

Jalgaon : Basement, Om Hospital,
Near Anglo Urdu Highschool, Dhake Colony,
Jalgaon - 425001.
Contact: 0257-2239666, 9764694797

Email : atharvapublications@gmail.com
Website : www.atharvapublications.com

First Edition : 20 Oct. 2018

Type Setting : Atharva Publications

Price : ₹595/-

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- **Women and Human Rights to Education 268**
in Yemen : An Overview
- Mohammed Adulkareem A. Alkamel
- **Rabindranath Tagore's Play 'Chitra' 273**
: A Study of Women Empowerment
- Deepak D. Deore
- **Portrayal of Women in Literature through Ages 277**
- Mr. S. S. Duthade
- Mr. M. S. Nikumbhe
- **Women and Literature 283**
- Prof. (Capt) Sarbjit K. Cheema
- **Woman Empowerment and NGOs 288**
: A study of Mahila Arthik Vikas
Mahamandal, Dhule (M.A.V.I.M.)
- Dr. Suvarna Sahebrao Barde
- **Gender Equality and Psychological Issues 295**
- Dr. Sateesh Surye
- **Women's Education and Human Right 298**
- Priti Govind Bijave
- **Imagining a Feminist World 302**
: What Humanities Can Do?
- Mr. Nitin Patil
- **The Status of Dalit Women in 306**
: The Prisons We Broke
- Prof. Wagh M.B.
- **Women Education - Fundamental Human Right 310**
- V. S. Patil
- **Women in India and Media 315**
- Anju Ashok Pakhale
- **Mahashewta Devi's 'Draupadi' 320**
: A New Perspective of Women Empowerment
- Swati Ravindra Vihire
- **The Role of Women in Indian Politics 323**
- Mr. Pankaj L. Sonawane

Women Education - Fundamental Human Right

- V. S. Patil

Uttamrao Patil Art's and Science College, Dahiwel

Abstract

Women education refers to every form of education that aims at improving the knowledge, and skill of women and girls. Women and girls continue to face discrimination at all levels of education. The article reports barriers of education, recommendations on it, importance of women education. It also focuses on education in India.

Keywords - Women Education, Human right, Empowerment, India, Government Policies.

Introduction

Gender equality in education is a basic human right. It is also essential to achieving sustainable development. Globally, 65 million girls are not in school. 123 million young people between the ages of 15 and 24 who cannot read or write, out of them 61% are women. (Global Monitoring Report- Unesco). - Education plays a critical role in the development of a nation whether it is social or economic growth. Women education is important to empower woman as a human being.

Education is a fundamental right

Every woman, man, youth and child has the fundamental human right to education, training and information. Women education refers to every form of education that aims at improving the knowledge, and skill of women and girls. It includes general education at schools and colleges, vocational and technical education, professional education, health education, etc.

Gender equality in education is a basic human right - it is also essential to achieving sustainable development of society. Education is not only a right in itself, but is also the surest way to empower individuals to enjoy all of their human rights.

Barriers to woman education

Women and girls continue to face discrimination at all levels of education, a fact which poses tremendous obstacles to their advancement. Girls face barriers to education caused by -