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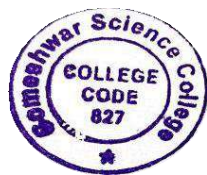
Someshwarnagar, Tel. Baramati, Dist: Pune (Pin : 412 306) Maharashtra, India
(Affiliated to Savitribai Phule Pune University, Pune) Estd : 2007

Govt. Rag. No. N.G.C. 2007(189/07) Mashi-3, Dt. 2 July 2007 College Code 827 University Appvl. No. IDNo. PU/PN/S/284/2007

3.3.1 Number of research papers published per teacher in the Journals notified on UGC website during the last five years

Title of paper	Name of author/authors	Name of journal	ISSN No.	Year of publication
Synthesis & Characterization of nickelbismuth aluminum ferrite nanoparticles by Sol-Gel method.	Asst. Prof. K.C. , Attar, Asst. Prof. P.D.Holkar	International journal of Innovative Science, Engineering & technology	ISSN: 2348 -7968	Feb. 2021
Effect of light intensity and distance of the light source on the output voltage of solar cell.	Asst.Prof. D.V. Bansode, Asst.Prof. Chavan M.B., Asst. Prof. K.C. Attar, Asst. Prof. P.D. Holkar	PENSEE International Journal	ISSN: 0031- 4773	Mar-21
Role of microorganisms in vedic astrology : Mini review	Bhandwalkar Madhuri Santosh	International Journal of Jyotish Research	ISSN: 2456- 4427	July 2021

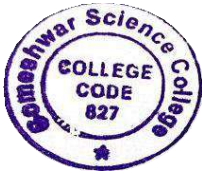
Academic year	2021-22	2020-21	2019-20	2018-19	2017-18
No. of research papers published in UGC care listed journals	03	00	00	00	00




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Synthesis and Characterization of Nickel-Bismuth Aluminium Ferrite Nano particles by Sol-Gel Technique

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Abstract

Bismuth doped Nickel Aluminium ferrite $\text{Ni}_{1-x}\text{Bi}_x\text{Al}_y\text{Fe}_2\text{O}_4$ (where $x = 0, 0.025, 0.050, 0.075, 0.1, 0.15$) and ($y = 0.1, 0.2, 0.3, 0.4, 0.5$) Nanoparticles were synthesized at low temperatures using a easy, cost-effective acting refer sol-gel auto oxidation. The standard softness of nickel aluminium ferrite is a big amount of use. Nickel Bismuth Aluminium ferrite is get soft ferrite. The existing job is to survey the knowledge and magnetic place of Bi doped Nickel Aluminium nano-ferrite the synthesized samples. To obtain the parameters of hysteresis, the VSM was used. With changes in the Bi percentage, the magnetic property of the ready samples shows important effect. Spinel ferrite is confirmed from FTIR.

Keywords: Sol-gel; Ni-Bi-Al nanoferrite; XRD; VSM; FTIR etc.

1. Introduction

In the shape of collisions, powders, clusters, rods, wires, and thin films, a wide range of techniques are required to synthesize various forms of nanomaterial[1]. Nanomaterial preparation divided into two wide top-down and bottom-up spectrums, each of which has two physical and wet chemical paths. The nearly big parameters for the activity of nanoparticles are the correct size, well-scattered particles with a small size distribution, equiaxial particle structure, full status, and uniform mixture. Many wet-chemical approaches have the typical characteristic of atomic or molecular scale mixing of materials. Any of the non-conventional methods are a acting of sol-gel, the procedure of co-precipitation, acting of precursor, acting of combustion, hydrothermal, drying by spray. From Etc[2].

1.1 Sol-gel auto combustion Process

All the samples were processed using the auto combustion methodology of Sol-gel in the current work. For the combustion phase, oxidizing metal salts and combustion fuel are important in the Sol-gel auto combustion method. As oxidizing salts and combustion fuel for all of the sample preparations, metal nitrates and citric acid were in use. Both chemicals had an analytical reagent of high purity and were used without further purification. For the analysis of ultrafine hexaferrite powders, the Sol-gel auto oxidation process has been shown to be an super simple, time-saving and energy-efficient path[3].

1.2 Principle

The gelling and eventual burning of an liquid solution containing salts and organic fuel is the

EFFECT OF LIGHT INTENSITY & DISTANCE OF THE LIGHT SOURCE ON THE OUTPUT VOLTAGE OF SOLAR CELL

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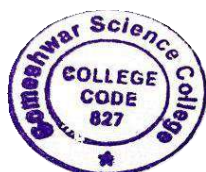
Abstract: Now days there are different types of advance photovoltaic materials are available for different applications. But the output of the solar cell is depends on strength of the light source and materials used for Solar Panel. We compared the effect of distance and intensity of the different light sources on the output of solar cell. In this paper we are use natural source i.e. sun as well as artificial sources like LED bulb of 9 Watt and Tungsten Filament lamp of 200Watt. It is observed that the output of the solar panel is increased with the strength of light source keeping same material of Solar Panel. At specific intensity the output of the solar panel is continual.

Keywords : Solar Cell, Tungsten Filament, LED

1. INTRODUCTION

"A solar cell (also known as a photovoltaic cell or PV cell) is defined as an electrical device that converts light energy into electrical energy through the photovoltaic effect. A solar cell is basically a p-n junction diode. Solar cells are a form of photoelectric cell, defined as a device whose electrical characteristics – such as current, voltage, or resistance – vary when exposed to light. Individual solar cells can be combined to form modules commonly known as solar panels. The common single junction silicon solar cell can produce a maximum open-circuit voltage of approximately 0.5 to 0.6 volts. By itself this isn't much – but remembers these solar cells are tiny. When combined into a large solar panel, considerable amounts of renewable energy can be generated" [1].

A solar cell is really a junction diode, but its creation differs slightly from that of standard p-n junction diodes. A very tinny layer of p-type semiconductor is adult on top of a heavier n-type semiconductor. A few finer electrodes are placed on top of the p-type semiconductor plate [2]. These electrodes should not block the thin p-type sheet. A p-n junction exists just underneath the p-type layer. The bottom of the n-type layer also has a current-collecting electrode. We encase the full rally in thin glass to protect the solar cell from motorized blow [3].



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ISSN: 2456-4427
Impact Factor: RJIF: 5.11
Jyotish 2021; 6(2): 11-13
© 2021 Jyotish
www.jyotishjournal.com
Received: 11-06-2021
Accepted: 17-07-2021

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International Journal of Jyotish Research (वेदचक्षु)

Role of microorganisms in Vedic astrology: Mini review

Bhandwalkar Madhuri Santosh, Patil Neha Nitin and Waghmode Meghmala Sheshrao

DOI: <https://doi.org/10.22271/24564427.2021.v6.i2a.118>

Abstract

Vedic astrology which is one of the most important study in India. Since ancient times, in India rituals were suggested as per the planets and other cosmic influences. Planets have the influence at cell level, eukaryotic, prokaryotic as well as viruses. Beside the concept of nakshatra tree, in this paper emphasis is given on the role of microorganisms in astrology. As a part of ritual, we are using the microbial products or processes. Microorganisms are also mentioned in Vedas. Biomineralization derived crystals has been suggested for healing practices. Meteorite-microbial interaction has also been reported which suggests extra-terrestrial existence of microorganisms.

Keywords: Microorganisms, astrology, biomineralization, crystals, meteorites

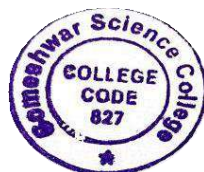
Introduction

Microorganisms are tiny living things that proved their terrestrial as well as extra-terrestrial life. Meteorites which has origin in outer space, has also been reported to have presence of Actinobacteria *Rubrobacter radiotolerans*, Proteobacteria and Bacteroidetes, iron/sulfur cycling organisms *Geobacter* spp. and *Desulfovibrio* spp (Tait *et al.*, 2017) ⁽¹⁾. Microbial fingerprint on extraterrestrial material, meteorites suggests the possibility of interaction of microorganisms with meteorites (from asteroids, Moon, or Mars) and subsequent mineralization (Milojevic *et al.*, 2019) ⁽²⁾.

Since ancient times, India has some traditional astrological remedies which uses fermented foods and microbial products or processes (biomineralization). This review is based on the interconnection of microbiology and astrology. There are main 7 planets viz., Sun, Moon, Mars, Mercury, Jupiter, Venus, Saturn and 2 shadow planets viz., Rahu and Ketu. Reference of microorganisms in Vedas is as "adrishta krimi" (Jakhmola, 2010) ⁽³⁾ where positive and negative aspects of them are available. As per the available report, not only human being but also small creatures like bacteria, virus are under the influence of planets and shows behavior accordingly. Planets also influences the growth of the cell. Considering the microorganisms, bacterial growth curve always has variations due to Kuja dosha (Planet: Mars) (Vegaraju *et al.*, 2020) ⁽⁴⁾. Eclipses particularly solar eclipses has massive effect on the growth of bacteria and viruses (Vegaraju *et al.*, 2019) ⁽⁵⁾.

In this paper, more emphasis is given on Indian Vedic rituals for planets and associated microorganisms, by which we can put some light on microorganism's involvement for human wellbeing. Microorganisms are ubiquitous in nature. Microorganisms play both the beneficial as well as malefic role as that of planets. Some microorganisms play the role as probiotic i.e. microorganisms for life. These probiotics are especially present in fermented foods like pickle, curd, idli etc. As per the planets nature, tree and food has been suggested.

In India, there is concept to worship Nakshatra Tree (Āradhya Vruksha) for each group of people born under specific constellation. There are main Nakshatras which show astronomical signatures and have profound effect on human's nature (Table 1). Worshipping Nakshatra concept is like connecting the human inner environment with the nature by which Chakras (energy centers of body) can be activated (Gupta *et al.*, 2016) ⁽⁶⁾. Microbiologists are doing the research on activities or contents in Āradhya Vruksha aided by microorganisms' involvement (Gupta *et al.*, 2016; Kakade and Chaphalkar, 2017) ^(6, 7). Consumption of fermented foods like pickles, vinegars, and dry wines has been suggested to reduce the malefic effect of Saturn (<https://kripalu.org>).




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**International Journal of Innovative Science,
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has published the paper titled

**SYNTHESIS AND CHARACTERIZATION OF NICKEL-BISMUTH
ALUMINIUM FERRITE NANO PARTICLES BY
SOL-GEL TECHNIQUE**

International Journal of Innovative Science, Engineering and Technology


Volume 8 Issue 2, February 2021.



www.ijset.com



Editor in Chief, IJSET



CERTIFICATE OF PUBLICATION ISSN: 0031-477

This is to certify that the paper entitled

**"EFFECT OF LIGHT INTENSITY & DISTANCE OF THE LIGHT SOURCE ON
THE OUTPUT VOLTAGE OF SOLAR CELL"**

Authored By


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Department of Physics, Someshwar Science College, Someshwarnagar, Tal: Baramati
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Has been published in

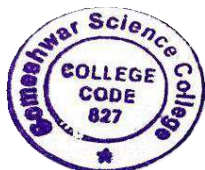



PENSEE JOURNAL, VOLUME 51 ISSUE 03 - 2021



Editor-In-Chief

<https://penseereseach.com>

PAPER ID: PNS-0321-169



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CERTIFICATE OF PUBLICATION

ISSN: 0031-4773

This is to certify that the paper entitled

"EFFECT OF LIGHT INTENSITY & DISTANCE OF THE LIGHT SOURCE ON THE OUTPUT VOLTAGE OF SOLAR CELL"

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Department of Electronics, Someshwar Science College,
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Has been published in

PENSEE JOURNAL,VOLUME 51 ISSUE 03 - 2021

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PENSEE JOURNAL,VOLUME 51 ISSUE 03 - 2021

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International Journal of Jyotish Research (वेदचक्षु)

International Journal of Jyotish Research

Peer Reviewed Journal, Refereed Journal, Indexed Journal

ISSN: 2456-4427, Impact Factor: RJIF 5.11

Publication Certificate

This certificate confirms that "Bhandwalkar Madhuri Santosh" has published manuscript titled "Role of microorganisms in Vedic astrology: Mini review".

Details of Published Article as follow:

Volume : 6
Issue : 2
Year : 2021
Page Number : 11-13

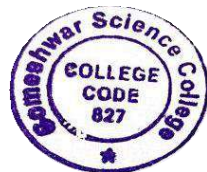
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Date: 01-07-2021

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