S.No.	Title of the book	Name of the author(s)	ISBN No.	Date of publication
1.	Solar energy	P.V.S.Sobhan Babu	978-93-5457-982-0	09-08-2021
2.	Electrical appliances	P.V.S.Sobhan Babu	978-93-5578-016-4	21-10-2021
3.	Public Relations	P.V.S.Sobhan Babu P.V.S.Teja	978-93-5566-208-8	21-10-2021

Raja Rammohun Roy National Agency for ISBN

Department of Higher Education, Ministry of Education

Government of India

Applicant Type: Author | Edit Profile | My Application | Change Password | Log Off | Total visitors since 01-July-2022: 288720

Date Time:15/10/2022|10:29:29 AM

Books Details Submitted for the allotment of ISBN by the applicant

You can edit certain fields of the books details upto date mentioned in action column in the table below - Total Records: 1

Sl No.	ISBN Number	Title	Author/Editor	Year Of Allotment of ISBN	Likely Publication Date	Country of Publication	Product Form	Title Veero Page	Language	Imprint	Publisher	Select	Action	Final Title Veero Page	Additional Book details	Application Status
1	978-93-5457-982-0	SOLAR ENERGY	P V S Sobhan Babu	2021	09/08/2021	INDIA	Single-component retail product/ Book		English		P V S Sobhan Babu|	Allotted	(Edit Expired) Delete Book Cancel ISBN Allotted		Update Additional Details	Allotted By RRRNA

Raja Rammohun Roy National Agency for ISBN

Department of Higher Education, Ministry of Education

Government of India

Applicant Type: Author | Edit Profile | My Application | Change Password | Log Off | Total visitors since 01-July-2022: 288720

Date Time:15/10/2022|10:35:49 AM

Books Details Submitted for the allotment of ISBN by the applicant

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Sl No.	ISBN Number	Title	Author/Editor	Year Of Allotment of ISBN	Likely Publication Date	Country of Publication	Product Form	Title Veero Page	Language	Imprint	Publisher	Select	Action	Final Title Veero Page	Additional Book details	Application Status
1	978-93-5566-208-8	PUBLIC RELATIONS	P V S Sobhan Babu, P V S Teja	2021	21/10/2021	INDIA	Single-component retail product/ Book		English		P V S Sobhan Babu|	Allotted	(Edit Expired) Delete Book Cancel ISBN Allotted		Update Additional Details	Allotted By RRRNA

Raja Rammohun Roy National Agency for ISBN

Department of Higher Education, Ministry of Education

Government of India

Applicant Type: Author | Edit Profile | My Application | Change Password | Log Off | Total visitors since 01-July-2022: 288720

Date Time:15/10/2022|10:39:24 AM

Books Details Submitted for the allotment of ISBN by the applicant

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Sl No.	ISBN Number	Title	Author/Editor	Year Of Allotment of ISBN	Likely Publication Date	Country of Publication	Product Form	Title Veero Page	Language	Imprint	Publisher	Select	Action	Final Title Veero Page	Additional Book details	Application Status
1	978-93-5578-016-4	ELECTRICAL APPLIANCES	P V S Sobhan Babu	2021	21/10/2021	INDIA	Single-component retail product/ Book		English		P V S Sobhan Babu|	Allotted	(Edit Expired) Delete Book Cancel ISBN Allotted		Update Additional Details	Allotted By RRRNA

Materials Today Chemistry 22 (2021) 100592

Contents lists available at ScienceDirect

Materials Today Chemistry

journal homepage: www.journals.elsevier.com/materials-today-chemistry/

Passivation layer–dependent catalysis of zinc oxide nanostructures

K.R. Nandanapalli [a, b, *], D. Mudusu [c], R.M.R. Lingandhinne [d], S.W. Lee [b, **]

[a] Institut für Chemie, Humboldt-Universität zu Berlin, Brook-Taylor-Str. 2, 12489, Berlin, Germany
[b] Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology (DGIST), 333 Techno Jungang-daero, Hyeonpung-myeon, Dalseong-gun, Daegu, 711-873, South Korea
[c] Department of Robotic Engineering, Daegu Gyeongbuk Institute of Science & Technology (DGIST), 333 Techno Jungang-daero, Hyeonpung-myeon, Dalseong-gun, Daegu, 711-873, South Korea
[d] Department of Physics, Loyola Degree College, Pulivendula, 516390, Andhra Pradesh, India

ARTICLE INFO

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Keywords:
ZnO nanostructures
Low-temperature synthesis
Surface passivation
Photoelectrochemical catalysis
Water-splitting
Eco-fuels

ABSTRACT

Electrochemical and photoelectrochemical catalysis of surface-passivated zinc oxide (ZnO) nanostructures with three different metal oxides were investigated. Initially, vertically aligned ZnO nanorods structures were developed over conductive substrates by a two-step approach and then passivated with an ultrathin zinc hydroxide, that is, $Zn(OH)_2$, cobalt oxide, that is, CoO, and $Zn(OH)_2$/CoO as bilayer, by electrochemical deposition. Compared with the pristine ZnO structures, the surface-passivated nanostructures possess slightly rough surfaces, whereas their crystal structure remains unchanged. From electrochemical catalysis studies under dark and illumination, it is noticed that vertically aligned ZnO nanostructures passivated with narrow band-gap CoO layers have a predominant water oxidation performance than that of the structures passivated with other oxide materials. It is mainly attributed to the eradication of surface states present on ZnO nanorods. Interestingly, the structures passivated with bilayers, that is, $Zn(OH)_2$/CoO, showed significant stability and durability (~103% retention in current density@60th min) with a continuous oxygen evolution reaction process for long durations.

1. Introduction

In recent years, the development of electrode materials, that is, as anodes as well as cathodes, for sustainable and efficient water-splitting process and thereby the production of eco-fuels has received great attention because of the threatening signals of global warming and climate changes [1]. After the invention of photocatalysis in titanium oxide by Fujishima and Honda [2], various oxides and non-oxides metallic compounds came into the limelight due to their suitable physical and chemical properties along with rich surface morphologies [3]. In particular, various metal oxide materials, including Cu_2O, TaON, $BiVO_4$, WO_3, Fe_2O_3, etc. [4], have been evolved as a special class of materials because of their easy processability and scalability along with excellent chemical stability and favorable band alignment toward the redox potential of water [5,6]. Among these metal oxide semiconductor materials, zinc oxide (ZnO) has received great attention as a suitable, efficient, and cost-effective anode material for not only the water-splitting process by oxygen evolution reaction (OER) for O_2/H_2 production [7–10] but also two-electron water oxidation reaction process to generate H_2O_2 [11]. This is mainly due to the low-temperature synthesis, non-toxicity, and abundancy of ZnO along with finely aligned conduction and valance band positions around the redox potential of water. However, photodegradation of OER electrodes greatly hinders their usage in real-time applications. In this view, enhancement of the performance along with chemical sustainability of electrocatalytic electrodes has appeared to be one of the challenging issues.

To overcome the above bottlenecks, the researchers have been implemented various approaches, including the development of nanostructures, loading of co-catalysts, growth of core/shell heterostructures, surface passivation, etc [12,13]. As a result, enriched chemical active surface area, amplification of chemical kinetics, increase of light absorption cum protection from chemical corrosion, and reduction of surface states and thereby a decrease of recombination losses have been observed [4]. For instance, different types of ZnO nanostructures, including nanorods, nanowires, nanoparticles, nanoflakes, etc., have been developed and explored their electrocatalytic as well as photoelectrochemical

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2468-5194/

Materials Today Chemistry 24 (2022) 100921

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Materials Today Chemistry

journal homepage: www.journals.elsevier.com/materials-today-chemistry/

Impact of shock waves on the physical and chemical properties of aligned zinc oxide structures grown over metal-sheets

R.M.R. Lingandhinne [a], D. Mudusu [b, *], K.R. Nandanapalli [c, d], K.P.J. Reddy [b], S. Lee [d, **]

[a] Department of Physics, Loyola Degree College, Pulivendula, 516390, Andhra Pradesh, India
[b] Department of Aerospace Engineering, Indian Institute of Science, Bangalore, 560012, India
[c] Center for Nanoscience and Engineering, Indian Institute of Science, Bangalore, 560012, India
[d] Department of Emerging Materials Science, Daegu Gyeongbuk Institute of Science & Technology (DGIST), 333 Techno Jungang-daero, Hyeonpung-myeon, Dalseong-gun, Daegu, 711-873, South Korea

ARTICLE INFO

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Available online xxx

Keywords:
Nanostructured zinc oxide (ZnO)
Flexible sheets
Space engineering applications
Chemical growth
Thermal stability

ABSTRACT

Zinc oxide (ZnO) nanorods were developed on stainless steel (SS) sheets as well as glass substrates in two steps by adopting well-established two different chemical methods namely, spray pyrolysis and chemical bath deposition techniques. Then, the structures were exposed to dynamically generated shock waves in a home-built shock tunnel. All the as-grown and shock waves exposed structures were characterized with advanced analytical techniques. Surface morphology and structural studies reveal that the as-grown nanostructured films over the both SS and glass substrates possess nanorods-like surface morphology; however, they exhibited (101) and (001) orientations as predominant orientations, respectively. From micro Raman analysis, it is noticed that the nanorod structures grown on both surfaces have good phase purity and crystalline quality. On the other hand, the cathodoluminescence studies show that these hydrothermally grown ZnO nanorods possess a large number of native defects. Finally, the ZnO nanorods exposed to shock waves generated with a temperature and pressure of ca. ~20,000 K and ~6 MPa for a short duration of 2–3 ms exhibited superb sustainability in terms of surface morphology as well as crystalline quality, which is mainly attributed to the slantly overlapped morphology as well as the high melting temperature of ZnO nanorods.

1. Introduction

Materials science is one of the crucial branches in space engineering technology where the materials have been synthesized, processed, and tested for different applications [1,2]. The reduction of weight and cost of the materials along with the enhancement of specific device functionalities are a few key issues that have received great focus today [3–5]. State-of-the-art in space engineering reports suggests that most of these bottleneck problems can be handled by developing new class materials [6]. Noticeably, the primary selection of materials is determined by their mechanical and physical properties along with chemical characteristics [7–9]. In this direction, the combination of various kinds of materials has been adapted for different space engineering applications including electrical and electronics, sensors, controllers, detectors, protection, and energy conversion and storage devices since it is impossible to achieve all these applications by using a single material [10]. Though there are plenty of high-temperature materials with melting temperatures higher than 2000 °C including carbides, refractory metals, oxides, nitrides, and borides, the ceramic materials have received considerable attention due to their multifunctional characteristics along with considerable sustainability even under extreme temperatures or harsh operating conditions [11]. At the same time, these compound materials possess significant mechanical strength along with suitable optical and electrical properties. As a result, different kinds of devices have been developed and tested for various space applications including leak detection, temperature monitoring, emissions monitoring, and fluctuations in the surrounding environment.

In recent years, the development of materials with nanoscale dimensions by adopting advanced processing methodologies allows scientists to realize efficient and eco-friendly devices not only for day-to-day applications but also for space engineering and medical applications [12]. As a result, various semiconductor

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A Review on Different Renewable Energy Resources

L.Raja Mohan Reddy[1*],B.Purusotham[2],G.V.Ramana[3],N.B.Sivarami Reddy[1]

[1]*Dept.of Physics, Government Degree College, Rajampeta, Annamayya(Dt), A.P., India-516115*
2Dept.of Zoology, Government Degree College, Rajampeta, Annamayya(Dt), A.P., India-516115
3Dept.of Physics, SCNR Government Degree College, Proddatur, YSR(Dt), A.P., India-516360

ABSTRACT: The world is fast becoming a global village due to the increasing daily requirement of energy by all population across the world while the earth in its form cannot change. The need for energy and its related services to satisfy human social and economic development, welfare and health is increasing. Returning to renewables to help mitigate climate change is an excellent approach which needs to be sustainable in order to meet energy demand of future generations. Renewable technologies are technically viable and economically attractive; traditional energytechnology receives many investment dollars. The use of renewable energy resources is growing gradually and it's requirement is also increasing as compared with the conventional energy sources from corner to corner of the world. The use of these energies can accomplish the added energy requirement and the research on this is in development. The renewable energy types considered include solar, wind, geothermal, bio-energy and waste derived energy, ocean thermal energy, tidal, wave and hydraulic.This paper provides a brief knowledge about different renewable energy resources. It thus, becomes a need to explore these sources more efficiently, so that we can maximize it's use for different applications worldwide.

Keywords— Renewable Energy Resources, Solar Energy, Wind Energy, Hydrothermal Liquefaction

1. INTRODUCTION

As world's population is increasing day by day, therefore the utilization of energy is increasing in a hurry. The employ of renewable energy resources seems to be a huge movement by which the extra energy can be generated as generation of energy becomes an important concern for the world [1]. Renewable energy resources can be a alternative option for conventional energy resources as it substitute conventional fuels [2]. Basically, the most important aspect for increasing renewable energies is to pilot a number of positive results like controlling the greenhouse effect and climate change [3, 4].The status for electricity generation of various renewable energy types, such as solar, wind, hydraulic, biomass, ocean andgeothermal, is frequently reported and the development potentials of renewable energies are often investigated [5, 6]. The development of

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Nelson Mandela Marg, Vasant Kunj, New Delhi-110070

CERTIFICATE OF APPRECIATION

This certificate is presented to

Dr.L.Raja Mohan Reddy

Government Degree College, Rajampeta

for contributing as a reviewer of the translation of the book

"Physics (Introduction to Electromagnetic Theory with Lab Manual)"

of 1st year Undergraduate program in Telugu under AICTE Technical Book Writing Scheme as per the requirement of

National Education Policy-2020

(Prof. M. Jagadesh Kumar)
Chairman, AICTE

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

Nelson Mandela Marg, Vasant Kunj, New Delhi-110070

CERTIFICATE OF APPRECIATION

This certificate is presented to

N.B. Sivarami Reddy

Government Degree College, Rajampeta

for contributing as a reviewer of the translation of the book

"Applied Physics-I (with Lab Manual)"

of 1st year Diploma program in Telugu under AICTE Technical Book Writing Scheme as per the requirement of

National Education Policy-2020

(Prof. M. Jagadesh Kumar)
Chairman, AICTE

Certificate of Appreciation

To

Mr/Mrs/Ms. N.B.Sivarami Reddy, Lecturer in Physics, GDC Porumamilla,YSR Kadapa in recognition of his/her active participation as Master Trainer in Red Ribbon Club Activities during 2019-20.

Certificate No:
RRC057

Spl.Commissioner of Collegiate Education

NATIONAL SERVICE SCHEME

YOGI VEMANA UNIVERSITY

Kadapa – 516 005, Andhra Pradesh

UNIVERSITY LEVEL NSS AWARD - 2022-2023

04-10-2023

Certificate

This is to certify that **Dr. L. Rajamohan Reddy,** *Programme Officer, Unit 1, Govt. Degree College, Rajampeta has been awarded with* ***University Level Best Programme Officer*** *award for the year 2022-2023 in recognition of outstanding contributions rendered under National Service Scheme.*

Programme Coordinator **Registrar** **Vice Chancellor**

YOGI VEMANA UNIVERSITY:KADAPA

Prof. A.G. Damu
Dean, Academic Affairs
Ph.No.9177888961
mail:cdcyvu@gmail.com

No. YVU/CDC/Academic Affairs/BOS/UG/2022-2023 Date: 18.10.2022

To
The Chairman & Members,
Board of Studies in **Physics/ Electronics.**

Sir/Madam,

Sub: - YVU-CDC/ Academic Affairs–Constitution of Board of Studies – UG Course-Acceptance- Requested– Reg.
Ref: - Vice- Chancellor's Orders dated 15.10.2022

*****

I am by direction, to inform you that you have been nominated as chairman/member of the Boards of Studies in **Physics/ Electronics** for a period of 3 years from the date of this order. The nominated members are requested to share their experience and expertise in the academic endeavors for the benefit of the students and the development of the university. Further, you are requested to make it convenient to attend the meetings and accomplish the delegated works as and when scheduled.

Physics/ Electronics			
S.No	**Name**	**Designation**	**Address**
1	Dr.G Venkata Ramana	Chairman	SCNR, Proddatur
2	Dr. G Parkadin	Member	SCNR, Proddatur
3	Dr.L Rajamohan Reddy	Member	GDC, Rajampet
4	Dr.K. Venkata Subba Reddy	Member	SBVR, Badvel
5	Head Dept. Of Physics	University Nominee	Yogi Vemana University, Kadapa

You are requested to kindly acknowledge the receipt of the letter in the form of acceptance. Whenever you attend the meeting, TA/ DA/ Sitting allowance will be paid as per University rules.

DEAN
Academic Affairs

Copy to
1) Copy to the Principal, Yogi Vemana University College, Kadapa.
2) The Controller of Examinations, Yogi Vemana University, Kadapa for information.
3) P.A. to Vice-Chancellor, Yogi Vemana University for information.
4) The file.

YOGI VEMANA UNIVERSITY:KADAPA
COLLEGE DEVELOPMENT COUNCIL

Dr.Y. Subbarayudu
Dean,
Ph.No.9703216196
mail:cdcyvu@gmail.com

No. YVU/CDC/BOS Meeting/UG/2022-2023 Date: 08.11.2022

To
The Chairman & Members,
Board of Studies in **All subjects.**

Sir/Madam,

Sub: - YVU-CDC– UG BOS Meeting scheduled on 11.11.2022–Information-Reg.

*****

The Chairmen/Members of UG BoS of concerned subjects are requested to attend the BOS meeting scheduled as detailed below without fail to finalize the syllabus, Model papers and optional papers for Vth Semester.

Date : 11.11.2022

Time : 10.30 AM

Venue : APJ Abdul Kalam Central Library, Yogi Vemana University, Kadapa

Further, Chairmen/ Members will be paid TA/ DA/ Sitting allowance as per University rules.

Note: Principals of YVU affiliated college/University College are requested to relieve the concerned Chairman/Members of UG BOS for the BOS meeting to be held on 11.11.2022.

DEAN
DEAN
College Development Council
YOGI VEMANA UNIVERSITY
KADAPA-516005.

Copy to
1. All Chairman/Members.
2. The Principal, YVUC, Kadapa.
3. The Principal, SV University College, Tirupathi.
4. All the Principals of YVU affiliated colleges.
5. File.

YOGI VEMANA UNIVERSITY:KADAPA

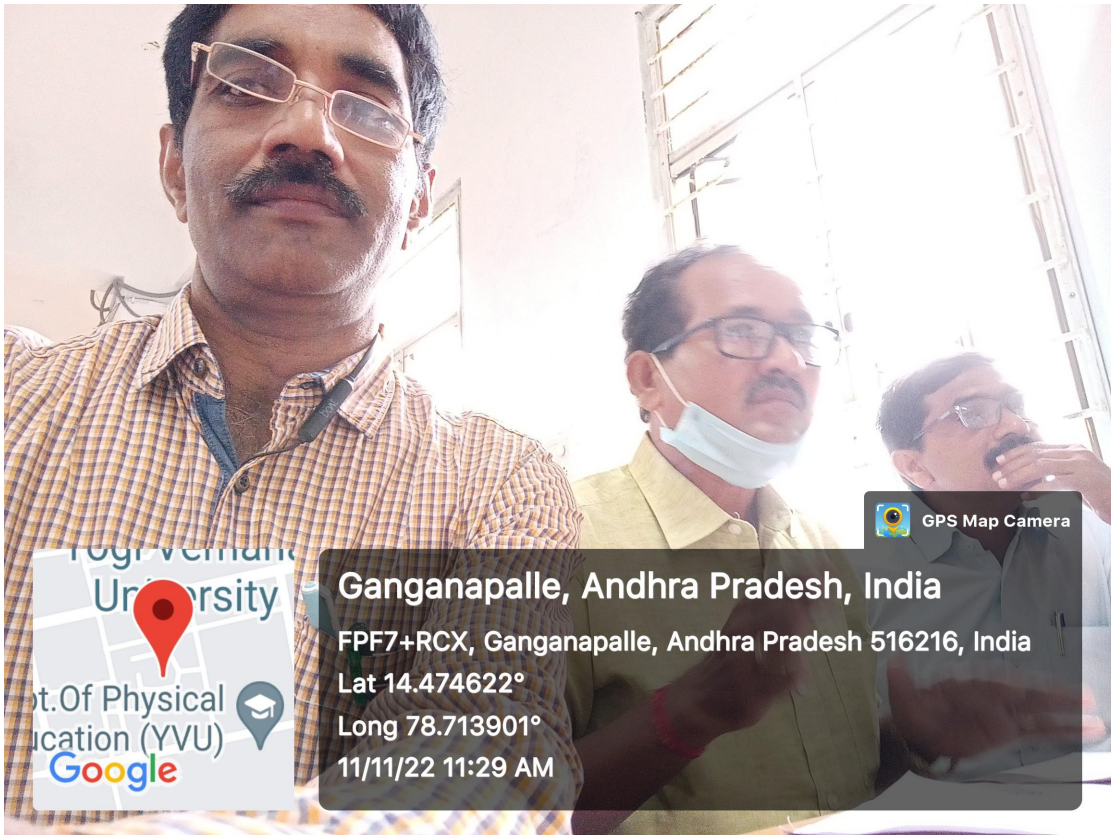
Prof. A.G. Damu
Dean, Academic Affairs
Ph.No.9177888961
mail:cdcyvu@gmail.com

No. YVU/CDC/Academic Affairs/BOS/UG/2022-2023 Date: 11.11.2022

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Dr L.RAJA MOHAN REDDY, Lect. in Physics GDC, Rajampeta attended for UG combined *BOS Meeting held on 11.11.2022 in APJ Abdul Kalam Central Library, YVU, Kadapa.*

DEAN
Academic Affairs




GPS Map Camera
Ganganapalle, Andhra Pradesh, India
FPF6+FX4, Ganganapalle, Andhra Pradesh 516216, India
Lat 14.473432°
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GPS Map Camera
Ganganapalle, Andhra Pradesh, India
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Lat 14.473433°
Long 78.712658°
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YOGI VEMANA UNIVERSITY

Vemanapuram, Kadapa–516005

www.yvu.edu.in

DEAN
Academic Affairs

Email: academicsectionyvu@gmail.com
agdamu01@gmail.com

No. YVU/AS/UG-BOS/Physics/2023 Date: 05.09.2023

PROCEEDINGS OF THE VICE-CHANCELLOR
(PRESENT: PROF. CHINTA SUDHAKAR)

Sub.:-Yogi Vemana University– Academic Section – Appointment of Chairman & Members of BOS in Physics for UG (Hon) – Orders–Issued.

Ref.:- 1. Rc. Lr. No. APSCHE/AC/CBCS-2023-24/review dated 22/06/2023.
2. Lr. No. YVU/KDP/AGD/AS/4thYr UG-Hon/BOS const./2023 dated 25/08/2023 from Dean, Academic Affairs, YVU
3. The Hon'ble Vice-Chancellor's Orders bearing No. YVU/AS/4 Yrs UG-Hon/BOS const./2023 dated 04/09/2023.

-oOo-

ORDER:

Having considered the contents of the note file dated 04-09-2023, the Hon'ble Vice-Chancellor has appointed the following faculty members from affiliated colleges under YVU jurisdiction, Yogi Vemana University, Kadapa and other institutions as chairman and member for Board Of Studies (BOS) in **Physics** of 4 years UG (Hon) program for a period of two years from 05-09-2023.

Board of Studies in Physics				
S. No.	**Name**	**Designation**	**Address**	**Phone No.**
1	Dr. G. Venkata Ramana	Chairman	Lec. in Physics, SCNR Govt. Degree College, Proddatur	9966948849 gramana1968 @gmail.com
2	Dr. G. Pakrudin	Member	Lec. in Physics, SCNR Govt. Degree College, Proddatur	9441001409 pakarags@gmail.com
3	Dr. L. Rajamohan Reddy	Member	Lec. in Physics, Govt. Degree College, Rajampeta	8247753051 lrmrmphil@gmail.com
4	Dr. K. Venkata Subba Reddy	Member	Lec. in Physics, SBVR Degree College, Badvel	9441013050 drsubbareddykv@gmail. Com
5	Head, Dept. of Physics (Prof. K. Krishna Reddy)	University Nominee	YV University College, Kadapa	9966220933 krishna.kkreddy@gmail.com

They are requested to accept the assignment and assist the University by sharing their knowledge and expertise in designing & strengthening the curriculum in tune with current needs and Academic Regulations of UG (Hon) program for the benefit of student community.

[BY ORDER]

DEAN
ACADEMIC AFFAIRS
YOGI VEMANA UNIVERSITY
KADAPA- 516005

To

1. The individuals for information and taking necessary action.
2. The Dean, CDC, YV University, Kadapa for information.
3. The Controller of Examinations, YV University, Kadapa for information.
4. The Honorable Vice-Chancellor's Table for favor of information.

Board of Studies Meeting

GOVERNMENT COLLEGE FOR MEN (Autonomous)
KADAPA

From
The Principal
Government College for Men (Autonomous)
Kadapa

Date: 13/01/2022

To
Sri N.Sivarami Reddy
Lecturer in Physics
Govt Degree College
Rajampeta
Kadapa.Dt

Respected Sir,

Sub: Department of Physics - Request for attending Board of Studies-Meeting on 18/01/2022- Reg.

The Department of Physics, Government College for Men(A), Kadapa is conducting Board of Studies meeting in Physics at 10.00 AM on 18/01/2022 in the Department of Physics. Hence, I request your good selves to attend the meeting to decide the Syllabus and model question papers for Physics of III & IV Semesters of II B.Sc of this college from the academic year 2021-2022.

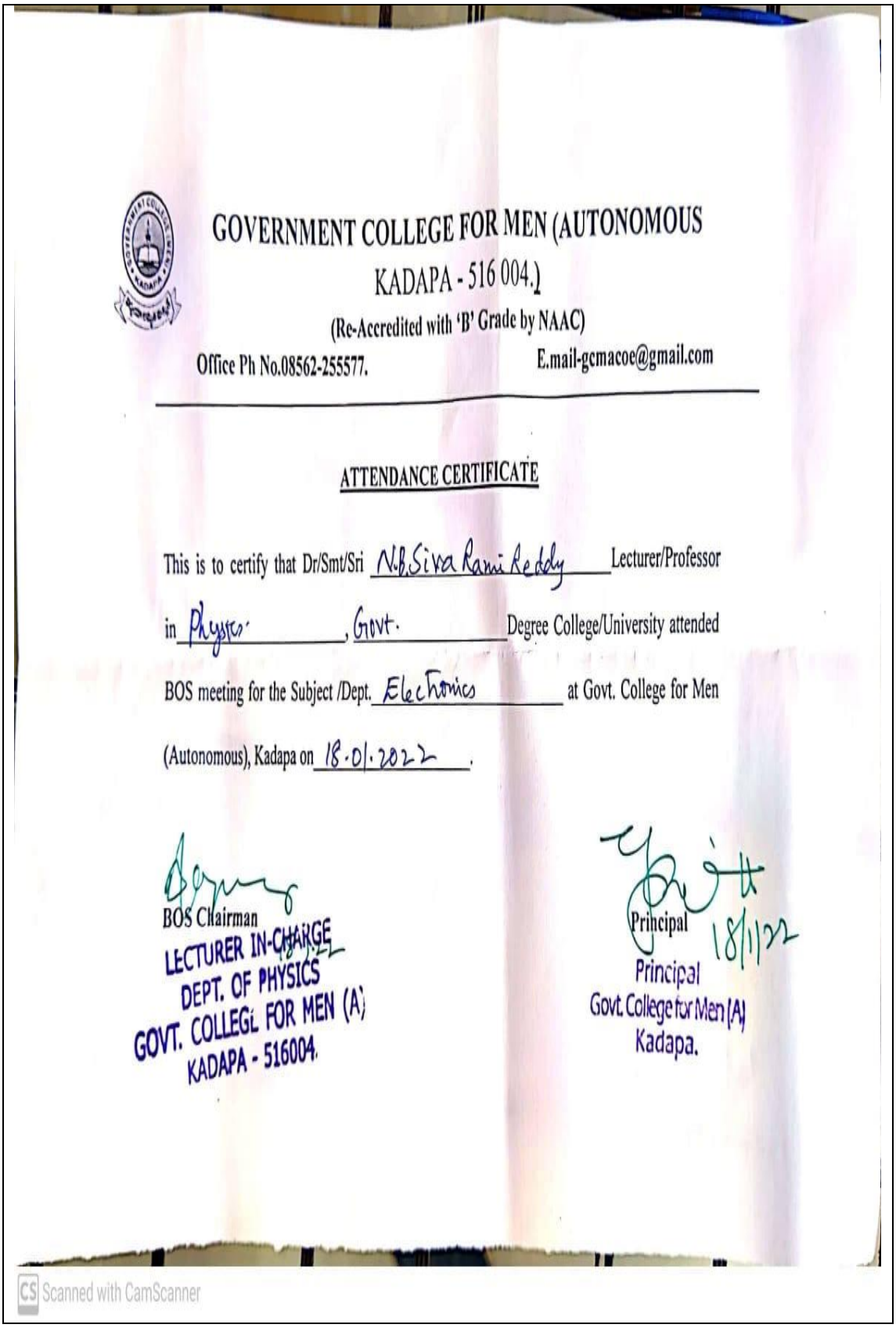
You are also requested to approve the list of examiners for question paper Setting and paper valuation in the subject of Physics for conducting examinations in this autonomous college.

Thanking you Sir,

Yours faithfully,

PRINCIPAL 13.1.2022
GOVT. COLLEGE FOR MEN (A)
KADAPA.

Board of Studies Meeting



GOVERNMENT COLLEGE FOR MEN (AUTONOMOUS

KADAPA - 516 004.)

(Re-Accredited with 'B' Grade by NAAC)

Office Ph No.08562-255577. E.mail-gcmacoe@gmail.com

ATTENDANCE CERTIFICATE

This is to certify that Dr/Smt/Sri N.B.Siva Rami Reddy Lecturer/Professor in Physics, Govt. Degree College/University attended BOS meeting for the Subject /Dept. Electronics at Govt. College for Men (Autonomous), Kadapa on 18.01.2022.

BOS Chairman

LECTURER IN-CHARGE
DEPT. OF PHYSICS
GOVT. COLLEGE FOR MEN (A)
KADAPA - 516004.

Principal 18/1/22

Principal
Govt. College for Men (A)
Kadapa.

Board of Studies Meeting

Government Degree College

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Andhra Pradesh

email: rajampeta.jkc@gmail.com,
www.gdcrajampeta.edu.in

Cell: +91-9966452703

Dr.B.PURUSHOTHAM, M.Sc., B.Ed., Ph.D.,
Principal

17-01-2022.

RELIEVING ORDER

Ref:- Proceedings of the Govt. College for Men(A) Kadapa .
Dt: 17-01-2022.

Sri N.Sivarami Reddy, Lecturer in PHYSICS, Govt. Degree College, Rajampeta, Kadapa is hereby relieved of his duties on 17-01-2022 A.N to attend Board of Studies Meeting in the subject of ~~PHYSICS~~ Electronics at Govt. College for Men(A), Kadapa on 18-01-2022 at 10:00 A.M. He is also requested to submit attendance Certificate at the time of reporting to duty in the college.

17.1.2022

PRINCIPAL
Govt. Degree College,
RAJAMPET-516115, Y.S.R. (Dist.)

Principal

Board of Studies Meeting

GOVERNMENT COLLEGE FOR MEN (A), KADAPA.

Attendance Certificate

DATE: 17/04/2021.

This is to certify that Sri N.B.Siva Rami Reddy, Department of Physics,Govt. Degree College, Porumamilla,Kadapa(Dt.) attended the Board of Studies meeting in the Department of Electronics, Government College for Men(A), Kadapa on 17/04/2021.

Principal

PRINCIPAL
GOVT. COLLEGE FOR MEN (A)
KADAPA.

GOVERNMENT COLLEGE FOR MEN (Autonomous)
KADAPA

From
The Principal
Government College for Men (Autonomous)
Kadapa

Date: 12/04/2021.

To
Sri N.B.Siva Rami Reddy
Lecturer in Physics
Govt Degree College,
Porumamilla,
Kadapa (Dt)

Respected Sir,

Sub: Department of Electronics - Request for attending Board of Studies-Meeting on 17/04/2021- Reg.

The Department of Electronics, Government College for Men, Kadapa is conducting Board of Studies meeting in Electronics at 10.00 AM on 17/04/2021 in the Department of Electronics. Hence, I request your good selves to attend the meeting to decide the Syllabus and model question papers for Electronics of I & II Semesters of I B.Sc of this college from the academic year 2020-2021.

You are also requested to approve the list of examiners for question paper Setting and paper valuation in the subject of Electronics for conducting examinations in this autonomous college.

Thanking you Sir,

Yours faithfully,

15.4.2021

PRINCIPAL
GOVT. COLLEGE FOR MEN (A)
KADAPA.


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REVIEW ON WASTE-TO-ENERGY CONVERSION THROUGH THERMO-CHEMICAL PROCESSES

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Abstract: Waste disposal is an important issue that needs to be addressed, not only for health and environmental reasons but also for its social and economic impacts. Three important waste streams that contribute to the growing amount of wastes generated come from medical, industrial, and electronic residual wastes. These residual wastes are usually just being dumped or disposed of in sanitary landfills. Apart from finding solutions to these environmental waste problems, these wastes can be a possible source of energy that can support our energy sustainability. Waste to Energy (WTE) is a very broad term that covers any process that converts waste into energy, or an energy-carrying product, such as a gas or oil. Despite the existence of many different technologies, the aims of all WTE processes are essentially the same, Reduce the volume of waste and hence reduce the volume requiring disposal in landfill; Reduce the biodegradable fraction of waste to zero, and Produce a useful commodity (typically electricity and/or heat) from non-recyclable waste. This review summaries the technological approaches that have been developed, presents some of the basic principles, provides details of some specific processes.

Keywords: Thermo-chemical, Pyrolysis, Gasification, electronic waste, industrial waste, medical waste, waste disposal, waste-to-energy

1. INTRODUCTION

The World Bank estimates that 1.3 billion tonnes of waste is generated annually worldwide and, by 2025, this amount will increase to 2.2 billion tonnes per year [1]. The tremendous rise in municipal solid waste (MSW) in the fast-growing cities of developing and emerging countries have led to increasing public concerns with regards to the resultant health and environmental impacts. Apart from municipal solid wastes, other major wastes that have potential as WTE feed sources are those coming from medical facilities, hazardous wastes from industries, and different residual electronic wastes. Most of the residual wastes from these waste streams, after segregation and treatment, usually just end up in storage facilities – or worst – in landfills. For medical wastes, for example, the global wastes generated surge and increase manifolds during the COVID-19 pandemic, which adds up to our waste problems. Hazardous industrial wastes, on the other hand, such as paints and used oils and grease after treatment just end up also in storage facilities or in landfills. Moreover, for electronic wastes – after segregating and recovering the recyclable materials – the residual electronic wastes also are just being disposed of in landfills. These three different wastes streams instead of adding to environmental waste problems may have potential benefits as a WTE feed, which can help not only in managing these wastes but

also to provide alternative source and energy supply support. In this era of sustainable growth, trends are moving away from conventional (non-renewable) resources towards renewable resources to satisfy the energy requirement of the general population without creating negative environmental impacts. A worldwide effort is being made to recognize the potential of every nation in the solid waste management sector and its subsequent utilization in the energy recovery sector. Solid Waste Management (SWM) is a current paradigm between developing and developed countries. In industrialized countries, technologies to utilize MSW for the production of energy, heat, solid biofuel and compost were well established [2-4]. MSW is a valuable renewable resource with capacity of biogas generation for combined heat and power (CHP) production by using the appropriate waste-to-energy technologies [5]. These technologies must be selected based on the waste composition assessment and economics [6]. Selection of the appropriate WTE-T is not an easy task due to generation of solid waste is influenced by seasonality and socioeconomic level of producers [7]. Policy instruments for sustainable waste management also have a significant impact in the selection of WTE-T [8]. Waste-to-energy technologies can be classified into biochemical and thermochemical processes while MSW can be classified as biodegradable and non-biodegradable, which are suitable for biochemical and thermochemical processes respectively [9, 10]. Biochemical processes are related to anaerobic digestion technologies to produce biogas [11] and thermochemical processes are related to pyrolysis [12], gasification [13] and incineration technologies [14]. Other authors also consider landfill gas utilization technologies [15] along with biorefineries as WTE-T [16, 17]. These technologies are potential to reduce greenhouse gas emissions in decentralized energy from waste systems [18]. this paper aims to review the suitability of waste type, based on their characteristics, and to match the exhibited characteristics against the operational parameters of the appropriate WTE technologies.

2. METHODOLOGY

This review is based on a literature search using Science Direct and NPTEL.

3. WASTE-TO-ENERGY (WTE) TECHNOLOGY

There are several waste to energy technologies available based on the type, quantity and characteristics of raw material, the required method of the energy, economic conditions, environmental standards and specific factors [19]. The most commonly used waste to energy technologies are thermo-chemical, bio-chemical, chemical and physical conversion technologies [20]. The thermal treatment includes cineration, pyrolysis, gasification and refused derived fuel (RDF) The biological treatment includes anaerobic digestion (AD), fermentation and enzyme. The chemical conversion includes hydrolysis, solvent extraction and transesterification. The physical conversion includes mechanical extraction, briquetting of Biomass and distillation.

Thermo-chemical technologies are generally used to convert waste into heat, electricity, and other value-added products (VAP) by subjecting waste to high temperatures [21]. Thermal conversion is considered a part of integrated waste management technology [22].

3.1. Incineration

One of the most common waste treatment technology is incineration, in which waste mass is reduced by 70% and waste volume is reduced up to 90%. Incineration is suitable for high calorific value wastes. In this process, produced energy is converted in electricity generation[19, 23, 24]. The whole process carried out in three phases i.e. incineration, energy recovery and control of air pollution. The whole process is illustrated in Figure 1. In the first phase (incineration process), waste is directly burned at 700-1000^{o} C in the combustion chamber by using flue gas and preheated air. Ultra-hot steam is produced after combustion of waste and this steam is used to create heat energy. Turbine is connected to generator which produces energy, heat and bottom ash. Bottom ash primarily contains of silicon, iron, calcium, aluminum, sodium and potassium.Heat and energy are recovered in second phase of incineration process. The biggest disadvantage of incineration process is the production of greenhouse gases. Thus, it is of prime concern to install emission control equipment to the incinerator, which is the third phase of incineration process [19,25,26]. Incineration technology of Indian MSW is not convenient as it contains high organic composition, moisture content or inert content (range 30- 60% each) and low calorific value (range 800-1100 kcal/kg) [27].Usually, in India small incinerators are used for burning of hospital waste. Still, a medium sized incinerator plant was installed to dispose of 300 tonnes of day-to-day waste at Delhi, India in 1987. However, the plant remained out of order currently, because non-availability of

waste having required calorific value for incineration [28]. At present, there is no large-scale incinerator working in India

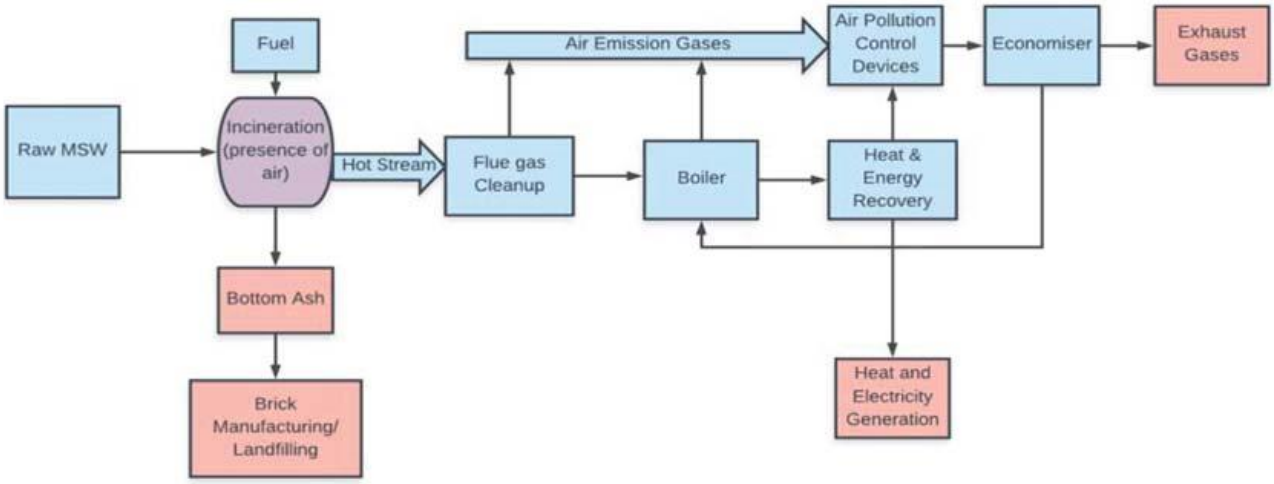

Figure 1. Incineration process to produce electricity and heat

3.2. Gasification

Gasification is a partial oxidation of organic substances at elevated temperature (500°C - 1800°C) to produce a synthesis gas (often called syngas) that can be used as a feedstock (through some reforming processes), or as a fuel [29]. The synthesis gas contains CO, CO_2, H_2, H_2O, CH_4, trace amounts of higher hydrocarbons such as ethane and ethane, inert gases originating from the gasification agent and various contaminants such as small particles [30]. The partial oxidation can be carried out using air, oxygen, steam, carbon dioxide or a mixture of these. Air gasification produces a low heating value (LHV) gas (4-7 MJ/Nm3 higher heating value), while oxygen gasification produces a medium heating value (MHV) gas (10-18 MJ/Nm3 higher heating value). [31]. This synthesis gas can be used for efficient production of electricity and/or heat, or second generation liquid biofuels. Several different gasification processes are available or being developed which are in principle suited for the treatment of MSW, certain hazardous wastes and dried sewage sludge. Good operation of the gasification reactor and minimisation of tar formation requires that the nature (size, consistency) of the waste input remains within certain predefined limits. This often requires special pretreatment of MSW, thereby increasing the cost. Figure 2. illustrates the gasification process.

Special features of gasification processes are:

• smaller gas volume compared to incineration (up to a factor of 10 by using pure O_2),

• smaller waste water flows from synthesis gas cleaning,

• predominant formation of CO rather than CO_2,

• capturing of inorganic residues, *e.g.* within slag in high temperature slagging gasifiers,

• high operating pressures (in some processes), leading to small and compact aggregates,

• material and energetic utilisation of the synthesis gas.

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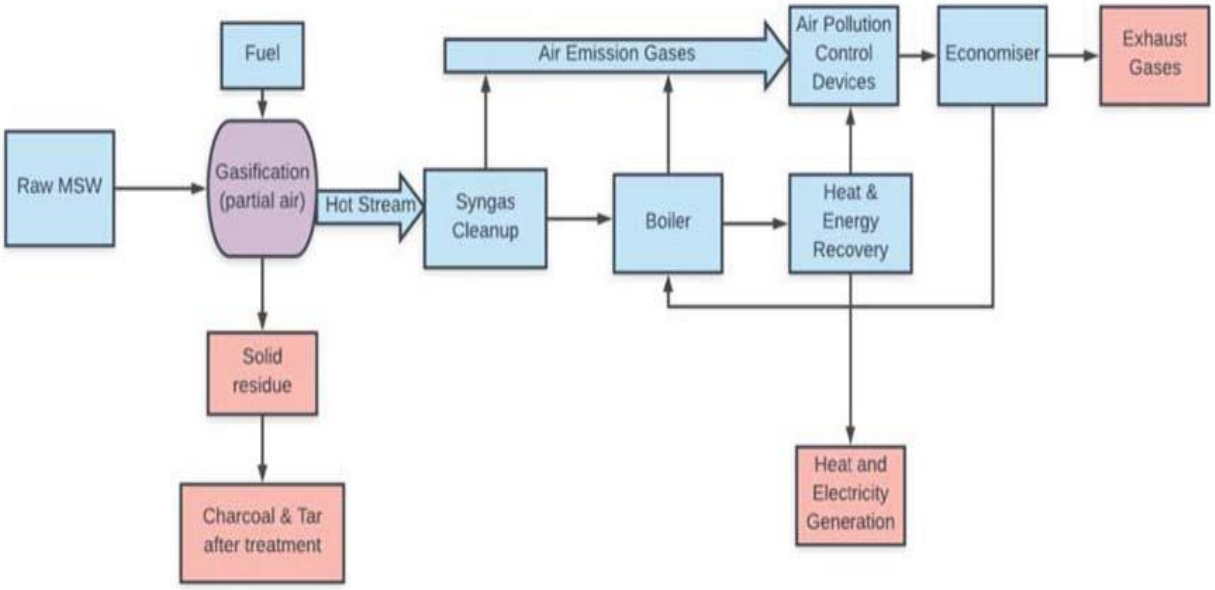

Figure 2. Gasification process to produce energy and heat

3.3. Pyrolysis

The recent consciousness of the need for abatement of air pollution leads to worldwide interest in and investigation of pyrolysis as a major process for waste treatment. Pyrolysis is thermal degradation either in the complete absence of an oxidising agent, or with such a limited supply that gasification does not occur to an appreciable extent; the latter may be described as partial gasification and is used to provide the thermal energy required for pyrolysis at the expense of product yields. Relatively low temperatures (400-900°C, but usually lower than 700°C) are employed compared to gasification. Three products are obtained: pyrolysis gas, pyrolysis liquid and solid coke, the relative proportions of which depend very much on the pyrolysis method and reactor process parameters. The heating value of pyrolysis gas typically lies between 5 and 15 MJ/m³ based on MSW and between 15 and 30 MJ/m³ based on RDF.

Pyrolysis plants for waste treatment usually include the following basic process stages:

1. Preparation and grinding: the grinder improves and standardises the quality of the waste presented for processing, and as such promotes heat transfer.

2. Drying (depends on process): a separate drying step improves the LHV of the raw process gases and increases efficiency of gas-solid reactions within the reactor.

3. Pyrolysis of wastes: besides the pyrolysis gas, a solid carbon-containing residue is generated which contains mineral and metallic compounds.

4. Secondary treatment of pyrolysis gas and pyrolysis coke: condensation of the gases for the extraction of energetically usable oil mixtures and/or incineration of gas and coke for the destruction of the organic compounds and simultaneous utilisation of energy.

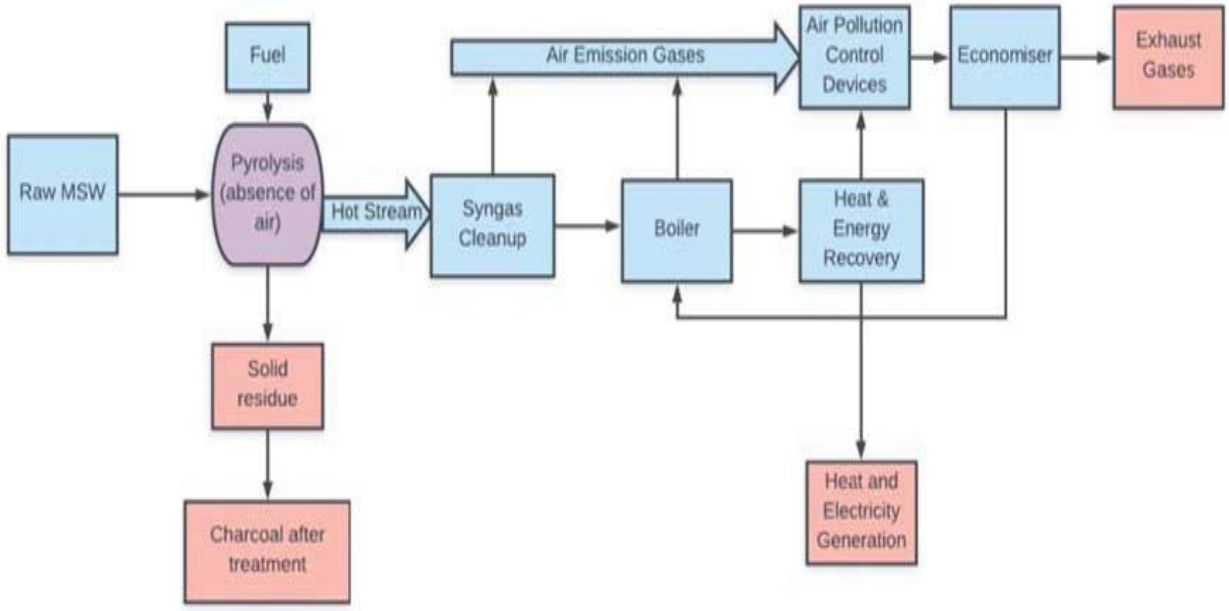

Figure 3. Pyrolysis process to produce energy and heat

3.4. **Refuse-derived Fuel (RDF)**

RDF technology stipulates safe and eco-friendly disposal of MSW. It is an alternating fuel which can be used in boilers in place of fossil fuels. The process of RDF generation is described in Figure 4. A few RDF plants were setup in India [27,32], RDF pellets is frequently used for pulp, paper industry, wood industry waste and saw-mill industry [25].

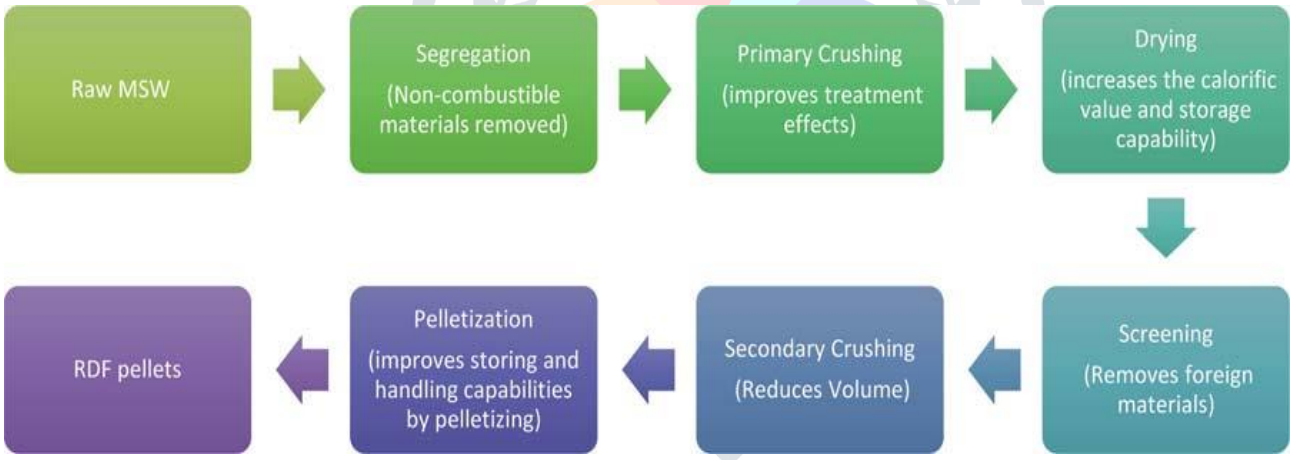

Figure 4. Refuse derived fuel process

4. CONCLUSION

With the ever-increasing demand for energy in a rapidly growing economy like India, cheap and sustainable energy is the need of the hour. Waste to Energy conversion remains a major untapped energy resource in the Indian context. Several efforts have been made by the government of India to improve our waste energy potential (biomass, MSW). A significant improvement in biomass energy generation capacity (10 GW) has been attained in the past decade, however, the MSW-based energy potential is yet to be realized. It is to be mentioned that less than 5% of the overall energy generation potential from MSW is currently utilized in India. The types of waste (MSW) plays an important role on the efficiency of WTE technologies and the yields of production. The thermal treatment required waste that have low moisture content and high calorific value for good performances.

"Waste is nothing but wealth at wrong place"

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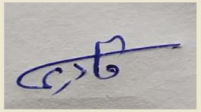
Dr. Aradhana Sethi

Convener



Dr. Mohammad Akbarul Qadri

Coordinator

This certificate is computer generated and can be verified by scanning the QR code given below. This will display the certificate from the NPTEL repository, https://nptel.ac.in/noc/

Roll No: NPTEL21PH33S43730208

To
DR L RAJA MOHAN REDDY
4-2-222, ANKALAMMAPETA
PULIVENDLA
ANDHRA PRADESH - 516390
PH. NO :8247753051

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:3
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

DR L RAJA MOHAN REDDY

for successfully completing the course

Physics of Renewable Energy Systems

with a consolidated score of **67** %

Online Assignments	21.6/25	Proctored Exam	45.25/75

Total number of candidates certified in this course: **279**

Prof. G P Raja Sekhar
Dean, Continuing Education
IIT Kharagpur

Jul-Oct 2021
(12 week course)

Prof. Debjani Chakraborty
Coordinator, NPTEL
IIT Kharagpur

Indian Institute of Technology Kharagpur

FREE ONLINE EDUCATION swayam शिक्षित भारत, उन्नत भारत

Roll No:NPTEL22CH05S33680102

To DR L RAJA MOHAN REDDY
4-2-222, ANKALAMMAPETA
PULIVENDLA
ANDHRA PRADESH - 516390
PH. NO :8247753051

No. of weeks of NPTEL Courses	Equivalence of NPTEL course with regular FDP
4	$\frac{1}{2}$ FDP of one week
8	Full FDP of one week
12	$1\frac{1}{2}$ FDP

Duration of NPTEL course: 8 Weeks

NPTEL-AICTE
Faculty Development Programme

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

DR L RAJA MOHAN REDDY

for successfully completing the course

Waste to Energy Conversion

with a consolidated score of **83** %

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

(Jan-Mar 2022)

Prof. Dileep N. Malkhede
Advisor-I (Research, Institute & Faculty Development)
All India Council for Technical Education

Roll No: NPTEL22CH05S33680102

To validate and check scores: http://nptel.ac.in/noc

The candidate has studied the above course through MOOCs mode, has submitted online assignments and passed proctored exams.
This certificate is therefore acceptable for promotions under CAS as per AICTE notifications dated 24th July 2018, similar to other refresher / orientation courses.
F.No. AICTE / RIFD / FDP through MOOCs / 2017-18

GOVERNMENT OF ANDHRA PRADESH

COMMISSIONERATE OF COLLEGIATE EDUCATION

MANGALAGIRI, ANDHRA PRADESH

"Five-Day Residential Training Programme for Teachers"

Electrical Appliances

(Skill Development Course)

from 07th to 11th December 2022

Certificate

of Participation

This is to certify that Dr.L.Raja Mohan Reddy , GDC,Rajampet has participated in the "Five – Day Residential Training Programme for Teachers" on Content Delivery and Assessment methods pertaining to Skill Courses for I-Semester TOT on "Electrical Appliances" at ANU Guntur organized by Commissionerate of Collegiate Education, A.P., Mangalagiri.

Date: 11.12.2022

Dr. Pola Bhaskar I.A.S
Commissioner of Collegiate Education, A.P
Secretary to Government (GAD), A.P

6 DAY TRAINING OF THE TRAINERS PROGRAM (ToT)

FACULTY DEVELOPMENT PROGRAMME

ENGLISH MEDIUM OF INSTRUCTION

PROFICIENCY IN ENGLISH | MAXIMIZING GLOBAL OPPORTUNITIES

CERTIFICATE OF PARTICIPATION

This is to certify that

Dr.L.RAJA MOHAN REDDY

Government Degree College, Rajampeta

participated in the 6 Day Training of the Trainers Programme on

English medium of Instruction, Proficiency in English from

12.06.2023 to 17.06.2023

at **Nodal Resource Centre (NRC), S.G. Govt. Degree College, Piler**

organized by **Commissionerate of Collegiate Education, A.P., Mangalagiri.**

Dr. M.Sudhakara Reddy
PRINCIPAL, NRC-S.G. Govt. Degree College, Piler

Dr. POLA BHASKAR, I.A.S
COMMISSIONER OF COLLEGIATE EDUCATION

YOGI VEMANA UNIVERSITY

Vemanapuram, Kadapa-516003, Andhra Pradesh, INDIA
http://www.yogivemanauniversity.ac.in

Prof. A.G. Damu
Dean
Academic Affairs

Phone: + 91-8562-225410 (Off.)
+ 91-9177888961 (Mobile)
FAX : + 91-8562-225419
E-mail: agdamu01@gmail.com

YVU/Dean-AA/4th Year-UG/Syllabus framing/2023 09-03-2023

To
The Principal

Sir/Madam,

Sub: YVU-Conduct of conduct a two-day workshop on 15th and 16th March 2023 for subject committee members for preparation of syllabus for 4th year of 4 Yr UG Courses-OD for two days-reg.

Ref: Rc. No. APSCHE/AC/CBCS/Gen UG/4th yr/2023 dated 03-03-2023.

With reference cited above, APSCHE directed the Universities to conduct a two-day workshop for subject committee members for the preparation and finalization of syllabus of 4th year (semesters-VII and VIII) of 4-year UG honours of General Degree Programs. In this regard Yogi Vemana University has scheduled the said workshop on 15th and 16th March 2023 to Subject Committee Members and University Nominees of allocated subjects as detailed in enclosed table. Accordingly, I informed all the Subject Committee Members and University Nominees to attend a two-day workshop on 15th and 16th March 2023 in APJ Abdul Kalam Central library, Y V University, Kadapa from 11:00 am to 05:00 pm to share their experience and expertise in framing syllabus. Hence, I am herewith requesting the concerned principals to accord permission to attend the said workshop, relieve the concerned faculty and treat their absence on 15th and 16th March 2023 as ON DUTY so as to attend the workshop without fail.

Thanking you

A.G. DAMU
Dean, Academic Affairs
YV University, Kadapa

DEAN
ACADEMIC AFFAIRS
YOGI VEMANA UNIVERSITY
KADAPA- 516005

List of revised Subject Experts in the allocated subjects to Yogi Vemana University, Kadapa

Sl. No.	Name of the Subject	Name of the Member	University/College	Phone Numbers & Email IDs
1.	Computer Maintenance	1. Dr. B. Reddaiah	Dept. of MCA Y.V. University, Kadapa	9000601602 b.reddiah@yogivemanauniversity.ac.in
		2. Dr. A. Sri Lakshmi	Govt. Degree College, Kodur	9866866854 boscomputers.yvu@gmail.com
		3. Dr. G. Chandrasekhar Reddy	SKSC Degree College, Proddatur	9182343526 8985544805
		4. D. Manoj Prabhakar	SCNR Degree College, Proddatur	9492441242 manoj07573@gmail.com
2	Anthropology	1. Dr. N.V. Rami Reddy	Dept. of Zoology, Y.V. University, Kadapa	9866094531 nvramireddy@yvu.edu.in
		2. Dr. B. Purushotham	Govt. Degree College, Rajampeta	9966452703 aristatilzoo@gmail.com
		3. Dr. D.V. Nagendra Kumar	Govt. Arts College for Men (A), Kadapa	9492657661 veeranagendrakumar@gmail.com
		4. Dr. P. Tirupal	Dept. of Anthropology S.V. University, Tirupati	9494745745 thirupal3@gmail.com
3	Public Administration	1. Dr. D.R. Satish Babu	Dept. of PS & PA, Y.V. University, Kadapa	9440028159 ravindra.babu753@gmail.com
		2. C. Ramamohan Reddy	Govt. Degree College, Yerraguntla	9440084212 ramamohan.pdtr@gmail.com
		3. N.V.L. Durga Pradeep	SCNR Govt. Degree College, Proddatur	8074018521 nakkinapradeep@gmail.com
		4. Dr. P. Hari Prasad	Govt. Arts College for Men (A), Kadapa	8519907895 harikalpi@gmail.com
4	Statistics	1. Dr. M. Sreedhar Babu	Dept. of Applied Mathematics, Y.V. University, Kadapa	9959656072 msreedharyvu@gmail.com
		2. S. Hari Prasad	Govt. Degree College, Rly. Kodur	9494404963 prasadsreekaram@gmail.com
		3. R. Ramachandra Reddy	Lepakshi Degree College, Proddatur	9440353796 principal_lepakshidc@yahoo.com
		4. Dr. K. Satish	Govt. Degree College, Vempalli	9885181110 statishlaks@gmail.com

Contd. 2 Page

DEAN
ACADEMIC AFFAIRS
YOGI VEMANA UNIVERSITY
KADAPA- 516005

Sl. No.	Name of the Subject	Name of the Member	University/College	Phone Numbers & Email IDs
5	Geology	1. Prof. K. Raghu Babu	Department of Geology, Y.V. University, Kadapa	9440673734 dr.kraghu@gmail.com
		2. Dr. P. Rama Krishna	Govt. Degree College for Men, Kadapa	9985370100 pramakrishnageology@gmail.com
		3. Dr. M. Ravi Kumar	Govt. Degree College, Yerraguntla	8341184784 ravi.geology@gmail.com
6	Electronics	1. Dr. M. Raghavender	Dept. of Physics, Y.V. University, Kadapa	9885069418 toraghavender@rediffmail.com
		2. K. Subhan Saheb	Govt. Degree College, Mydukur	9885185266 subhansridevi@gmail.com
		3. Dr. M. Obula Reddy	YSRV Govt. Degree College, Vempalli	9440696747 mormphil@gmail.com
		4. Dr. L. Raja Mohan Reddy	Govt. Degree College, Rajampeta	9440924107
		5. M.V. Ramanaiah	SKR & SKR GDC for Women (A), Kadapa	9440382340
7	Geography	1. Prof. T. Siva Prathap	Dept. of Earth Sciences, Y.V. University, Kadapa	9440567799 prathap.shia@gmail.com
		2. Prof. A. Krishna Kumari	Department of Geography S.K. University, Anantapur	9949774986 krishna_a31@yahoo.co.in
		3. Dr. Reddy Bhaskar Reddy	Department of Geography S.V. University Tirupati	9640057456 bhaskarreddy.svu@gmail.com
		4. Dr. N. Chandrayudu	Department of Geography S.V. University Tirupati	7013082576 ncrgeo64@gmail.com
8	Urdu Literature/ Special Urdu	1. Dr. Syed Vasiulla Bhakthiyari	Govt. Degee College for Men (A), Kadapa	9441905026 vasibakhtiary@gcmkadapa.ac.in
		2. Dr. S. Farooq Basha	Govt. Degee College, Rayachoti	9493330013 shaikfarooqbasha@gmail.com
		3. Dr. Shazeya Beghum	SKR & SKR GDC for Women (A), Kadapa	9866999808 shazeeyahod.urdu@gmail.com
		4. Dr. Ameenulla	S.V. University, Tirupati	9247175259 ameen.svu@gmail.com

DEAN
ACADEMIC AFFAIRS
YOGI VEMANA UNIVERSITY
KADAPA- 516005

Government Degree College

NAAC Accredited with **'B'** Grade

Rajampeta – 516 115, Kadapa District

Andhra Pradesh

email: rajampeta.jkc@gmail.com,
www.gdcrajampeta.edu.in

Cell: +91-9966452703

Dr.B.PURUSHOTHAM, M.Sc., B.Ed., Ph.D.,
Principal

14-03-2023

RELIEVING ORDER

Ref:- YVU/Dean-aa/4th Year-UG/Syllabus framing/2023 Dated:09-03-2023.

Dr.L.RAJAMOHAN REDDY, Lecturer in PHYSICS, Govt. Degree College, Rajampeta,Kadapa is hereby relieved of his duties on the AN of 14-03-2023 to attend a Two -Day workshop on 15 & 16 March 2023 for preparation of syllabus of 4th year of 04 year UG Courses at YVU,Kadapa.He is also requested to submit attendance Certificate at the time of reporting to duty in the college.

Principal

PRINCIPAL 14/3/23
Govt. Degree College,
RAJAMPET-516115, Y.S.R. (Dist.)

YOGI VEMANA UNIVERSITY: KADAPA

Prof. A.G. Damu
Dean, Academic Affairs

Ph.No.9177888961
mail:agdamu01@gmail.com

No. YVU/AA/UG-4th Y/Syllabus/2023

Date: 16.03.2023

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Dr. L. Raja Mohan Reddy, Govt. Degree College, Rajampeta has attended for Two-Day Workshop as one of the subject committee members in Electronics for the preparation and finalization of syllabus of 4th year of 4 year UG Hons held on 15.03.2023 and 16.03.2023 in APJ Abdul kalam Central library, YVU, Kadapa.

DEAN
ACADEMIC AFFAIRS
YOGI VEMANA UNIVERSITY
KADAPA- 516005

GOVERNMENT OF ANDHRA PRADESH

COMMISSIONERATE OF COLLEGIATE EDUCATION

Prasadampaadu, Vijayawada, Krishna District, A.P. - 521108

CERTIFICATE

OF PARTICIPATION

This is to certify that

N.B.SIVARAMIREDDY

Lecturer in Physics

GDC PORUMAMILLA

participated in **"A Five-day APCCE - US Faculty Development Programme on** New Knowledge in Physics and Energy materials: Advanced Research Techniques *from* 6th July, 2020 to 10th July, 2020 organised by **Commissionerate of Collegiate Education, A.P., Vijayawada** in association with University of Louisville-USA, Southern University-USA and Elizabeth City State University-USA

Special Commissioner,
Commissionerate of Collegiate Education, A.P

6 DAY TRAINING OF THE TRAINERS PROGRAM (ToT)

FACULTY DEVELOPMENT PROGRAMME

ENGLISH MEDIUM OF INSTRUCTION

PROFICIENCY IN ENGLISH | MAXIMIZING GLOBAL OPPORTUNITIES

CERTIFICATE OF PARTICIPATION

This is to certify that

SIVARAMIREDDY N B

GOVT. DEGREE COLLEGE, RAJAMPETA

participated in the 6 Day Training of the Trainers Programme on

English medium of Instruction, Proficiency in English from

05.06.2023 to 10.06.2023

at **Nodal Resource Centre (NRC), S.G. Govt. Degree College, Piler**

organized by **Commissionerate of Collegiate Education, A.P., Mangalagiri.**

Dr. M.Sudhakara Reddy
PRINCIPAL, NRC-S.G. Govt. Degree College, Piler

Dr. POLA BHASKAR, I.A.S
COMMISSIONER OF COLLEGIATE EDUCATION

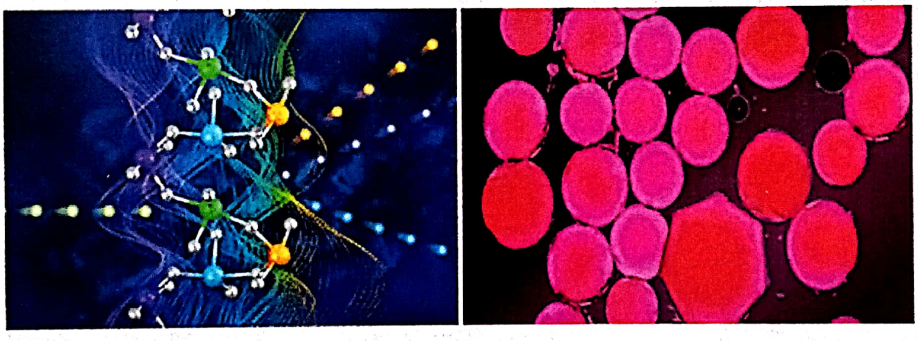
RTMS - 2022

24th September, 2022

National Conference on

Recent Trends in Materials Science

Book of Abstracts



Organized by

Department of Physics & Electronics

Government College for Men (A)

KADAPA – 516004, A.P., INDIA

INDEX

RECENT TRENDS IN RENEWABLE ENERGY SOURCES: INDIA

L.Raja Mohan Reddy[1*],M.Obula Reddy[2],M.Thaidun[3], G.V.Ramana[4], B.Purusotham[5] and N.B.Sivarami Reddy[1]

[1]Lecturer in Physics, GDC, Rajampeta,YSR(Dt),A.P.,India-516115
[2]Lecturer in Physics, GDC, Vempalli,YSR(Dt),A.P.,India-516329
[3]Lecturer in Physics, GDC, Pendlimarri,YSR(Dt),A.P.,India-516216
[4]Lecturer in Physics, SCNRGDC,Proddatur,YSR(Dt),A.P.,India-516360
[5]Lecturer in Zoology, GDC, Rajampeta,YSR(Dt),A.P.,India-516115

E-mail:lrmrmphil@gmail.com

Abstract:

The global demand for renewable energy in recent decades has continued to increase, despite adverse economic conditions such as world economic recessions, trade disputes, and falls in gas and oil prices. As India is in a league of the most rapid development taking place in the country, hence it has to produce more and more energy to meet the consumption of the people with increase in the population. India is now one of the countries with large production of energy from renewable sources. The renewable energy system represents a unique opportunity for creating new employment with climate goals and increasing economic growth, and enhancing human welfare. Hence the role of renewable energy is very important and has been assuming increasing significance in recent times with the growing concern for energy security. Today, renewable account for about 33% of India's primary energy consumptions. India is increasingly adopting responsible renewable energy techniques and taking positive steps towards carbon emissions, cleaning the air and ensuring a more sustainable future. In India, from the last two and half decades there has been a vigorous pursuit of activities relating to research, development, demonstration, production and application of a variety of renewable energy technologies for use in different sectors. India's renewable energy capacity (excluding large hydro) stood at 114.07 GW till June-end this year, while 60.66 GW of projects are under various stages of development. India has set a target of having 175 GW of renewable energy capacity, including 100 GW of solar and 60 GW of wind energy, by 2022.

Keywords— Renewable energy, economic growth

Dept. of Physics & Electronics, Govt. College for Men(A), Kadapa-516004,A.P.

Review on Biomass Energy Potential in India

L.Raja Mohan Reddy[1*],B.Purushotham[2], S.Mahboob Basha[1]
N.B.Sivarami Reddy[1]and P.V.S.Sobhan Babu[1]

1. Dept.of Physics, Government Degree College, Rajampeta, Annamayya(Dt), A.P., India-516115
2. Dept.of Zoology, Government Degree College, Rajampeta, Annamayya(Dt), A.P., India-516115

Abstract:-

Energy consumption is increasing on a daily basis as the global economy expands. As a result, power generating planners, policymakers, and governments, among others, must concentrate on the issue of rising energy consumption. Fossil fuels are thought to be limited, while renewable energy sources are plentiful in nature. As a result, renewable energy sources should be encouraged in order to protect the environment and human health. The study takes into account a variety of problems concerning biomass potential and biomass power generation. Because bio-energy is one of the most important sources of renewable energy, a variety of factors were considered when assessing the literature on biomass-based power generation. Biomass energy is less expensive and does not pollute the environment. In some aspects, it also regulates environmental contamination. Biomass energy production provides a lot of room for innovation and application in remote and rural regions. We will require efficient resources for this, as well as sustainable, renewable, non-conventional, and equally important energy resources to fully realize India's future potential. Biomass produces ethanol, which is regarded as one of the world's most valuable sources of renewable energy.

Key Words: Biomass Energy, Non-conventional Energy, Renewable Resources, Bio-fuel.

GOVERNMENT COLLEGE FOR MEN (A)

KADAPA- 516004, A.P., INDIA.

National Conference On

RECENT TRENDS IN MATERIALS SCIENCE (RTMS-2022)

24th September, 2022

Organized by

DEPARTMENT OF PHYSICS & ELECTRONICS

Certificate

This is to certify that Mr./Ms./Dr./Prof. L. Raja Mohan Reddy

of G.D.C. Rajampeta *has attended*

One Day National Conference on "Recent Trends in Materials Science (RTMS-2022)" held at Government College for Men (A), Kadapa, YSR Dist. A.P. on 24th September, 2022. He/She has Participated / Presented a paper entitled – Review on Biomass Energy potential in India – *in the conference.*

Dr. B. Sudhakar Reddy	Dr. C. Nageswara Raju	Sri P. Bayapu Reddy	Dr. G. Ravindranath
Convener	Organizing Secretary	Head	Principal

GOVERNMENT COLLEGE FOR MEN (A): KADAPA

Attendance Certificate

Dt. 24-09-2022

This is to certify that Dr./Sri/Smt/Mr/Ms. L. RAJA MOHAN REDDY, Lecturer in Physics working at GDC, Rajampeta attended One day **NATIONAL CONFERENCE ON "RECENT TRENDS IN MATERIALS SCIENCE" (RTMS-2022)** Organized by the Department of Physics & Electronics, Govt. College for Men(A), Kadapa – 516004 on **24th September, 2022.**

Signature of the Principal

24/9/22

PRINCIPAL
GOVT. COLLEGE FOR MEN (A)
KADAPA.

GOVERNMENT OF ANDHRA PRADESH

COMISSIONER OF COLLEGIATE EDUCATION

In Collaboration with

Nodal Resource Center: GOVT. COLLEGE FOR MEN (A) KADAPA

Certificate of Participation

This certificate is presented to Dr/Mr/Mrs/Miss **Shaik Mahaboob Basha**, Lecturer in **Physics** GDC Rajampet has participated in "Three *days Training Programme* on *Internship* and *LMS*" held at **Nodal Resource Center, Govt. College for Men (A), Kadapa** from **06.02.2023 to 08.02.2023.**

NRC Coordinator

Principal

COMMISSIONERATE OF COLLEGIATE EDUCATION
GOVERNMENT OF ANDHRA PRADESH

5 Day Training Programme for Teacher's Teaching (TOT)
Solar Energy
(Skill Development Course)

Certificate
of Participation

This certificate is awarded to **P.V.S.Sobhana Baby, GDC, Rajampet** for participating in **"5 Day Training Programme for Teachers on Solar Energy - Content Delivery and Assessment Methods (TOT on Solar Energy)"** from 10.08.2022 to 14.08.2022 organized by Commissionerate of Collegiate Education, A.P.,Vijayawada in collaboration with **KSN Govt Degree College for Women, Ananthapuramu.**

Certificate generated on: August, 14 of 2022

Dr. Pola Bhaskar, IAS
Commissioner of Collegiate Education
Government of Andhra Pradesh
Vijayawada

COMMISSIONERATE OF COLLEGIATE EDUCATION
GOVERNMENT OF ANDHRA PRADESH

5 Day Training Programme for Teacher's Teaching (TOT)
Solar Energy
(Skill Development Course)

Certificate
of Participation

This certificate is awarded to **S.Mahaboob Basha, GDC, Rajampet** for participating in **"5 Day Training Programme for Teachers on Solar Energy - Content Delivery and Assessment Methods (TOT on Solar Energy)"** from 10.08.2022 to 14.08.2022 organized by Commissionerate of Collegiate Education, A.P.,Vijayawada in collaboration with **KSN Govt Degree College for Women, Ananthapuramu.**

Certificate generated on: August, 14 of 2022

Dr. Pola Bhaskar, IAS
Commissioner of Collegiate Education
Government of Andhra Pradesh
Vijayawada

VIT-AP UNIVERSITY

CERTIFICATE OF PARTICIPATION

This certificate is presented to Mr/Ms/Dr/Prof.

N.B.SIVARAMIREDDY, Govt.Degree College, PORUMAMILLA, YSR KADAPA DISTRICT,

For attending the **National Level workshop on Recent Trends and Opportunities in Physics (Online)** on 10th and 17th April 2021, Organised by the Department of Physics, School of Advanced Sciences, VIT-AP University, Andhra Pradesh, India.

Santanu Mandal

(Prof. Madhusudhana Rao N)

Head, Physics Department

(Dr Santanu Mandal)

Dean, School of Advanced Sciences