



Anand Nagar, Krishnankoil - 626126, Srivilliputtur (via), Virudhunagar District, Tamilnadu.

APPLICATION FOR ADMISSION TO Ph.D. PROGRAMMES

Date of Application:30-06-2020

| | | | |
|------------------|---|-----------------|-----------|
| Department | ELECTRONICS AND COMMUNICATION ENGINEERING | Application No. | 20200182 |
| Area of Research | NANOSCIENCE AND TECHNOLOGY | Research Mode | FULL TIME |

Name :AMBIGAI BALAN A C
Date of Birth / Age :08-06-1994 / 26 Years
Gender :MALE
Category :MBC
e-Mail ID :ambigaibalan52@gmail.com
Mobile :9500885372



Ambigai Balan

| | | | |
|--------------------------------|--------------|--------------------------------------|----------------------------------|
| Father's/Husband's Name | CHANDRAN A | Father's/Husband's Occupation | RETIRED RAILWAY(NOW AGRICULTURE) |
| Family Income | 1200000 | Residential Type | RURAL |
| Birth Place | MADURAI | Mother Tongue | TAMIL |
| Religion | HINDU | Martial Status | SINGLE |
| Aadhaar No. | 973799640576 | PAN No. | CGUPA1315G |
| Physically Challenged | NO | Type of Disability | - |

| | |
|--|--|
| Address for Communication: 4/301 V V GIRI STREET NAGAMALAI PUDUKOTTAI MADURAI DISTRICT TAMIL NADU INDIA Pin-625019 | Permenant Address: 4/301 V V GIRI STREET NAGAMALAI PUDUKOTTAI MADURAI DISTRICT TAMIL NADU INDIA Pin-625019 |
|--|--|

| Qualification | | | | | | |
|---------------|----------------------------|------------------------------------|-------------|-----------------------------------|---------|---------|
| Degree | Discipline | College/university | Year Passed | AVG/CGPA | Class | Mode |
| B.E | AERONAUTICAL ENGINEERING | HINDUSTHAN INSTITUTE OF TECHNOLOGY | 2016 | 58 | 2 CLASS | REGULAR |
| M TECH | NANOSCIENCE AND TECHNOLOGY | PSG COLLEGE OF TECHNOLOGY | 2020 | ABOVE 75(MARKSHEET NOT RECIEVED) | 1 CLASS | REGULAR |

| Experience | | | | |
|--------------|-------------|-----------------|---------------|-------------|
| Organization | Designation | Experience From | Experience TO | Work Nature |
| | | | | |

| Payment Details | | | | |
|-----------------------|----------------|---------------------|--------|---------|
| Transaction ID | Reference | Date of transaction | Amount | Status |
| 20200182_200630165211 | SHMP8947868573 | 30-06-2020 | 600 | SUCCESS |

RESEARCH PROPOSAL

SILICA NANOSPHERES- SYNTHESIS, CHARACTERIZATION AND USING IT AS A TEMPLATE FOR REALIZING PERIODIC NANO STRUCTURES BY COLLOIDAL LITHOGRAPHY

ABSTRACT:

The process of producing highly ordered array of nanostructures always been a complex process, until the introduction of a simple technique called colloidal lithography which uses colloidal spheres as masks or template for deposition of desired materials over it. Mostly polymer nanospheres are used as masks but here we use silica spheres due to their simple production methods, these templates aids in the formation of ordered arrays of nanostructures. This technique is a simple and cost effective compared to other lithographic technique which are used in preparation of ordered array of nanostructures. In this present study we use this lithographic technique for fabrication and realizing of nanostructures with the aid of silica nanospheres as mask material.

MOTIVATION:

The need for fabrication of nanostructures is paramount due to their applications in wide range of fields like polymer electronics, micro electromechanical system (MEMS) and nanoelectromechanical system(NEMS) but the conventional lithographic techniques like electron beam lithography,x –ray lithography needs complex equipments and high cost which is hard for researchers to attain them fr the reason of that I use colloidal lithography which makes use of self organization mechanism of colloidal particles to form nanofabrication templates

WORK PLAN:

- Literature survey
- synthesis of silica nanospheres
- characterization of silica nanospheres by SEM ,TEM,DLS
- deposition of nanosphere over substrate by deposition methods like spin coating
- characterization of substrate ,examine the substrate for monolayer formation by AFM
- deposition of desired material over sphere template
- removal of spheres
- deposition of metal inside the pores by thermal vapour deposition,pores which is formed after removal of nanospheres
- removal of template by solvent immersion
- characterization of nanostructures

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PSG COLLEGE OF TECHNOLOGY

(AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY)

COIMBATORE - 641 004 INDIA

MTech DEGREE EXAMINATIONS MAY 2019

STATEMENT OF GRADES

S.No.: A 208532

NAME : AMBIGAI BALAN A C
 ROLL NO : 18PN01
 BRANCH : NANO SCIENCE & TECHNOLOGY

DATE OF BIRTH : 08/06/1994

| Course Code | Course Title | Credits | Grade Point Secured | Letter Grade |
|------------------------|--|-----------|---------------------|--------------|
| FIRST SEMESTER | | | | |
| 18LN01 | COMPUTATIONAL MATHEMATICS | 3.0 | 6 | B |
| 18LN04 | MATERIALS SCIENCE | 4.0 | 6 | B |
| 18LN81 | ENGLISH FOR RESEARCH PAPER WRITING | Completed | | |
| SECOND SEMESTER | | | | |
| 18LN06 | CHARACTERIZATION OF NANOMATERIALS | 4.0 | 6 | B |
| 18LN07 | NANOFABRICATION | 3.0 | 6 | B |
| 18LN08 | NANOELECTRONICS | 4.0 | 6 | B |
| 18LN09 | NANOBIOTECHNOLOGY | 3.0 | 7 | B+ |
| 18LN32 | NANOTECHNOLOGY FOR ENERGY SYSTEMS | 3.0 | 6 | B |
| 18LN52 | NANOFABRICATION LABORATORY | 2.0 | 9 | A+ |
| 18LN61 | INDUSTRIAL VISIT AND TECHNICAL SEMINAR | 2.0 | 7 | B+ |
| 18LN82 | RESEARCH METHODOLOGY AND IPR | Completed | | |

As per scheme - Credits to be enrolled upto Second Semester : 43.00
 - Credits enrolled upto Second Semester : 43.00
 - Total credits earned upto Second Semester : 40.00
 - CGPA upto Second Semester : ***

*** CGPA is computed only if candidate passes all the courses registered.
 - End of Statement -

Note :
 Relative Grading adopted for theory courses and Absolute Grading for all other courses.
 Only those courses passed by the candidate are printed in this statement.

DATE : 12/06/2019



Seal :
 This document is issued without any correction
 Medium of Instruction : English
 CGPA : Cumulative Grade Point Average

VCN
 CONTROLLER OF EXAMINATIONS

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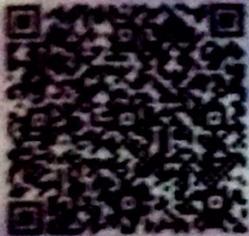
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INCOME TAX DEPARTMENT



भारत सरकार

GOVT. OF INDIA



स्थायी लेखा संख्या कार्ड
Permanent Account Number Card

CGUPA1315G

नाम / Name

A C AMBIGAI BALAN

पिता का नाम / Father's Name

AMMAVASAI CHANDRAN

जन्म की तारीख / Date of Birth

08/06/1994

हस्ताक्षर / Signature





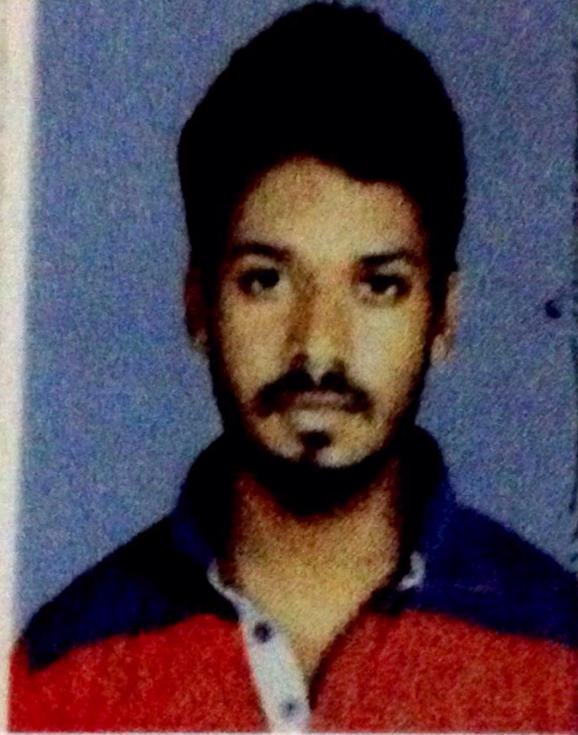
இந்திய தேர்தல் ஆணையம்
Election Commission of India



வாக்காளர் புகைப்பட அடையாள அட்டை. ELECTOR PHOTO IDENTITY CARD



WBV2079549



வாக்காளரின்: அம்பிகை பாலன்
பெயர்

Elector's : AMBIGAI BALAN
Name

உறவினரின் : சந்திரன்
பெயர்

Relation's : CHANDRAN
Name

117441 1857/23

PNO1

GCP(ET3)-26-6-1,67,200Cps.-10-5-99

R Dis /9 dt.

DNC

சான்றிதழ் எண்
Certificate No.



மாவட்டக் குறியீடு எண்
District Code
வட்டக் குறியீடு எண்
Taluk Code
கிராமக் குறியீடு எண்
Village Code

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|---|---|---|
| 1 | 6 | |
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521904

சாதிச் சான்றிதழ்
COMMUNITY CERTIFICATE

மதுரை மதுரை மதுரை மதுரை மதுரை
கொழும்பட்டி மதுரை மதுரை மதுரை மதுரை
செல்வன் A. E. அம்பிகாபாயன்
பெயர் A. சந்திரன் கிந்தி. பிரமலாபதிக்கர்

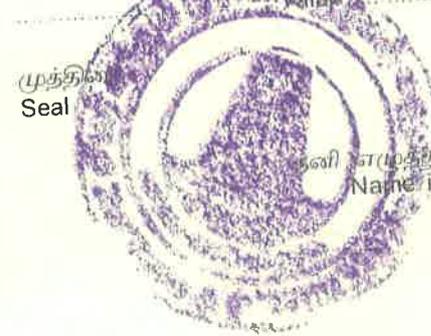
வகுப்பைச் சார்ந்தவர், அரசு ஆணை நிலை எண் எண். 28 பிற்பட்ட மற்றும்
மிகவும் பிற்பட்ட பிரிவின் நலத்துறை நாள் 19-7-1994 வரிசை எண் 229 படி,
சீர் மரபினர் பிரிவினைச் சார்ந்தவர் எனச் சான்றளிக்கப்படுகிறது.

This is to certify that..... Son / Daughter
of Thiru..... of.....
Village / Town,..... Taluk,.....

District of the State of Tamil Nadu belongs to
Community, which is recognised as
a Denotified Community as per Government Order (Manuscript Series) No. 28.
Backward Classes and Most Backward Classes Welfare, dated 19th July 1994.
vide Serial No.....

2. திரு / திருமதி / செல்வன் / செல்வி.....
என்பவரும் அவருடைய குடும்பத்தினரும் தமிழ்நாட்டில்
மாவட்டத்தில் மதுரை மதுரை மதுரை மதுரை
கிராமத்தில் / நகரத்தில் வசித்து வருகிறார்கள் எனச் சான்றளிக்கப்படுகிறது.

2. It is certified that Thiru/Tmt./Selvan/Selvi..... and
his/her family ordinarily reside(s) at..... Village/Town
..... District of Tamil Nadu.



கையொப்பம்
Signature
நாள்
Date
21/11/23

பெயர்
Name in Capital Letters
பதவிப் பெயர்
Designation
மதுரை மதுரை மதுரை மதுரை

21-11-03