

दिल्ली विश्वविद्यालय



University of Delhi

विद्या-वाचस्पति \* Doctor of Philosophy (Ph.D.)

प्रमाणित किया जाता है कि सितम्बर, 2016 में

ग्रोध एंड कैरेक्टराइजेशन ऑफ़ मेटल ऑक्साइड थिन फिल्मस फॉर ऑप्टिकल डिवाइस  
एप्लिकेशन्स

पर शोध प्रबंध स्वीकृत हो जाने के उपरांत आयुषी पालीवाल

को 2016 के दीक्षांत समारोह में दिल्ली विश्वविद्यालय की

विद्या-वाचस्पति की उपाधि प्रदान की गई।

विभाग: भौतिकी एवं खगोलभौतिकी

This is to certify that after approval of the thesis on  
Growth and Characterization of Metal Oxide Thin Films for Optical  
Device Applications

in September, 2016 Ayushi Paliwal

qualified for the degree of Doctor of Philosophy (Ph.D.) of this University.

The said degree was conferred upon him/her at the convocation held in 2016.

Department: Physics & Astrophysics

J. K. Das

कुलसचिव

दिल्ली विश्वविद्यालय

Registrar

University of Delhi

Self Attested  
Ayushi Paliwal



दिल्ली, दिनांक 19 नवम्बर, 2016

Delhi, Dated the 19th November, 2016

Y. K. Shyagi

कुलपति

दिल्ली विश्वविद्यालय

Vice Chancellor

University of Delhi

नामांकन संख्या

Enrol. No.

SV-522/05



000587

<sup>the</sup>  
Maharaja Sayajirao  
University of Baroda

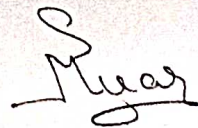
Whereas Shri Debajyoti Prabhirkumar  
Choudhary of the Faculty of Science  
has pursued a course of study prescribed  
by the University and passed the  
requisite Examination

Now therefore this is to certify that he  
has this day been duly admitted by the  
Senate to the Degree of

Doctor of Philosophy

( Physics )

Given under my hand this Fifth day of  
March one thousand nine hundred and  
ninety three



Chancellor

Debabrata Mishra



# भारतीय प्रौद्योगिकी संस्थान गुवाहाटी

विद्या परिषद की अनुशंसा पर

भौतिक विज्ञान में

विद्या वाचस्पति की उपाधि

देबब्रत मिश्र

को इस उपाधि के प्रदान हेतु विनियम विहित अपेक्षाएँ मई 2010 में सफलतापूर्वक पूर्ण करने पर प्रदान करता है।

भारतीय गणराज्य के अंतर्गत गुवाहाटी में आज 26 मई 2010 को संस्थान की यह मुद्रा अंकित उपाधि दी गई।

## INDIAN INSTITUTE OF TECHNOLOGY GUWAHATI

upon the recommendation of the Senate hereby confers the degree of

### Doctor of Philosophy

in

Physics

on

Debabrata Mishra

who has successfully completed in May 2010 the requirements prescribed under the regulations for the award of this degree.

Given this day, under the seal of the Institute at Guwahati in the Republic of India, the 26<sup>th</sup> day of May, 2010.

Thesis Title : Magnetic Properties of Co and Mn Substituted Fe-Zr-B Alloys Prepared by Melt Spinning and Mechanical Alloying Processes

निदेशक एवं  
अध्यक्ष, विद्या परिषद  
Director and  
Chairman, Senate

कुलसचिव  
Registrar

Attested

अध्यक्ष,  
शासी मंडल  
Chairman  
Board of Governors

Vinod Kumar  
25/5/10

Debabrata Mishra  
15-01-2016

Department of Physics & Astronomy  
University of Delhi  
Delhi-110007

विद्यापीठ, रक्षागना

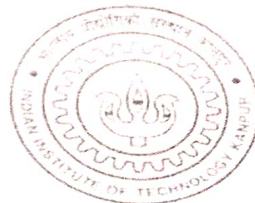
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क्रम सं./Serial No.: PG2-15061


अनुक्रमांक/Roll No.: Y9109067

विद्या परिषद की अनुशंसा पर  
भारतीय प्रौद्योगिकी संस्थान कानपुर  
के संचालक मण्डल द्वारा  
गोविन्द दयाल सिंह  
को  
डॉक्टर ऑफ फिलॉसफी  
की उपाधि

समस्त सम्मानों विशेषाधिकारों व दायित्वों के साथ  
सात जून दो हजार पंद्रह को कानपुर में  
प्रदान की गयी।



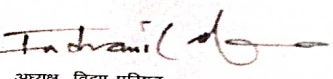
THE BOARD OF GOVERNORS  
OF THE  
INDIAN INSTITUTE OF TECHNOLOGY KANPUR  
UPON THE RECOMMENDATION OF THE SENATE  
HEREBY CONFERS ON  
GOVIND DAYAL SINGH  
THE DEGREE OF  
DOCTOR OF PHILOSOPHY  
WITH ALL HONOURS PRIVILEGES AND OBLIGATIONS  
THEREUNTO PERTAINING  
GIVEN AT KANPUR ON THIS SEVENTH DAY OF JUNE  
TWO THOUSAND FIFTEEN

  
विभागाध्यक्ष/Head  
भौतिकी एवं खगोल भौतिकी विभाग  
Department of Physics & Astrophysics  
दिल्ली विश्वविद्यालय, दिल्ली-110007  
University of Delhi, Delhi-110007  
SH 5/123  
Be bita  
05/07/23

*Self attested  
Govind Dayal*

  
अध्यक्ष, संचालक मण्डल  
CHAIRMAN  
BOARD OF GOVERNORS

  
कुलसचिव  
REGISTRAR

  
अध्यक्ष, विद्या परिषद  
CHAIRMAN  
SENATE

No. 2837

Enrolment No..... NSC/03/01

जवाहरलाल नेहरू विश्वविद्यालय  
नई दिल्ली

**JAWAHARLAL NEHRU UNIVERSITY**

NEW DELHI - 110067.

(INTER-UNIVERSITY ACCELERATOR CENTRE, NEW DELHI )

**PROVISIONAL DEGREE CERTIFICATE**

**DOCTOR OF PHILOSOPHY**

**THIS IS TO CERTIFY THAT** JYOTI

having successfully completed all the requirements in terms of the Ordinance relating to Ph.D. degree has been declared eligible for the award of the Degree of **DOCTOR OF PHILOSOPHY** of the University in the year 2007.

The title of the Ph.D. Thesis : "DISSOCIATION DYNAMICS OF DIATOMIC MOLECULES"

New Delhi;

Dated : 04. 01. 2008

*Sharda Narain*

Asst./Deputy Registrar (Evl.)

(Sharda Narain)

Section Officer (Evl-I),  
Jawaharlal Nehru University  
New Delhi-110067

*Attached*

This provisional degree is valid till the original degree is issued. The original degree is usually issued after a period of one year.



DOCTOR OF PHILOSOPHY

This is to certify that *Kirti Ranjan*  
after approval of his/her thesis on "*Large PT  
Particle Production in proton Collisions at  
LHC Energies*"  
in *February*, 2003, has been admitted to  
the degree of Doctor of Philosophy in this University  
at the Convocation held in 2003.



Delhi, dated the 22nd February, 2003

Vice-Chancellor,  
University of Delhi

verified  
du  
8/5/07



टाटा मूलभूत अनुसंधान संस्थान  
TATA INSTITUTE OF FUNDAMENTAL RESEARCH  
भारत सरकार का नाभिकीय विज्ञान एवं गणित का राष्ट्रीय केन्द्र एवं समर्पित विश्वविद्यालय  
National Centre of the Government of India for Nuclear  
Science and Mathematics and a Deemed University

विद्या परिषद् की अनुशंसा पर

ओम प्रकाश

को एतद्वारा

किए गए शोधकार्य तथा ग्रेजुएट स्कूल का निर्धारित पाठ्यक्रम पूरा करने पर

विद्या वाचस्पति

की उपाधि प्रदान की जाती है।

On the recommendation of the Academic Council, the degree of

Doctor of Philosophy (Ph.D.)

is hereby conferred on

Om Prakash

in recognition of the research work leading to the thesis

"Superconductivity in Bismuth and ground state properties of quasi-skutterudites

$R_3TX_13$  ( $R = Y, Ce$  and  $Lu$ ,  $T = Ru$  and  $Os$ ,  $X = Ge$ )"

and for fulfilling the requirements of the Graduate School.

L.P. Trivedi

निदेशक एवं अध्यक्ष, विद्या परिषद्  
Director and Chairman,  
Academic Council

03-03-2017

मुंबई, भारत/Mumbai, India

Kate

अध्यक्ष, प्रबंधन परिषद्  
Chairman, Council of  
Management

Self Attestd

Om Prakash

विभागाध्यक्ष/Head  
भौतिकी एवं खगोल भौतिकी विभाग  
Department of Physics & Astrophysics  
दिल्ली विश्वविद्यालय, दिल्ली-110007  
University of Delhi, Delhi-110007

SW  
19/9/23

Babita  
19/9/23

96PH1108

संक्रमांक / Enrol.No.



हैदराबाद विश्वविद्यालय  
University of Hyderabad

University of Hyderabad

प्रमाणित किया जाता है कि  
पी सन्थिल कुमार

को एवं भौतिकविज्ञान संकाय में  
शोध-प्रबंध प्रस्तुत करने एवं सभी अपेक्षाओं को  
सफलतापूर्वक पूर्ण करने पर सन् 2003 में

डॉक्टर ऑफ़ फ़िलॉसफ़ी

की उपाधि प्रदान की गयी है

This is to certify that  
**P Senthil Kumar**  
having submitted a thesis in the School of  
Physics  
and having successfully completed all the requirements  
has been admitted to the degree of

**Doctor of Philosophy**

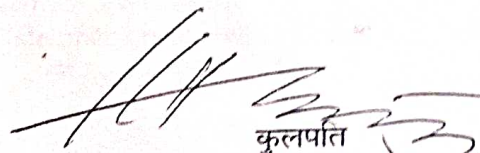
in the year 2003

विश्वविद्यालय की मूहर के अधीन प्रदत्त  
Given under the Seal of the University



कुल सचिव  
Registrar

*verified*  
*du*  
*21/11/08*



कुलपति  
Vice-Chancellor

हैदराबाद/Hyderabad. दिनांक/Dated नवंबर / November 03, 2004

काशी हिन्दू  
विश्वविद्यालय



BANARAS HINDU  
UNIVERSITY

AN INSTITUTION OF NATIONAL IMPORTANCE ESTABLISHED BY AN ACT OF PARLIAMENT

श्री राकेश कुमार मिश्र इति—नामा

२०१५ तमे ईसवीयवर्षे फिजिक्स

इति विषये फिजिक्सविभागे विश्वविद्यालयस्यास्य

डाक्टर ऑफ फिलासाफी इत्युपाधिं प्राप्नोदिति प्रमाणयति ।

प्रमाणित किया जाता है कि श्री राकेश कुमार मिश्र

को सन् २०१५ की फिजिक्स

विषय में फिजिक्स विभाग से

इस विश्वविद्यालय की डाक्टर ऑफ फिलासाफी उपाधि प्रदान की गई ।

*This is to certify that Shri Rakesh Kumar Mishra*

*has been admitted to the degree of Doctor of Philosophy in the subject*

*Physics from the Department*

*of Physics of this University of the 2015.*

*Title of the Thesis - Static and Dynamic Behavior of Biopolymers*

स्थान : वाराणसी  
Place : Varanasi

दिनांक Dated FEB 19, 2016

कुलपति:  
Vice-Chancellor

विभागाध्यक्ष  
HEAD  
भौतिकी और खगोल भौतिकी विभाग  
Department of Physics & Astrophysics  
दिल्ली विश्वविद्यालय दिल्ली-110007

22.05.2023



भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान कोलकाता  
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH KOLKATA

अधिसभा की अनुमति पर शारी मंडल द्वारा

**सचिन पाण्डेय**

को निर्धारित अहंताएँ पूर्ण कर लेने पर

वर्ष 2020 में

**डॉक्टर ऑफ़ फ़िलोसॉफी**

की उपाधि प्रदान की जाती है।

*The Board of Governors,*

*upon recommendation of the Senate, hereby confers on*

**SACHIN PANDEY**

*the Degree of*

**Doctor of Philosophy**

*in the year 2020*

*on having fulfilled the prescribed requirements.*

**Thesis Title: Aspects of Quantum Cosmology**



*Mohana*

Chairperson/सभापति  
Board of Governors/शारी मंडल

*[Signature]*

Registrar/कुलसचिव

Regn: 13IP016



*[Signature]*

Chairman/सभापति  
Senate/अधिसभा

Date: August 17, 2021

Place: IISER Kolkata

**We**, the Chancellor, Vice-Chancellor,  
and Members of the Executive Council  
of the **University of Bombay**, certify

that the withinsigned

Sanjay Jain  
Tata Institute of Fundamental of  
Research

having presented in the month of September  
in the year 1987, a Thesis for the Degree of  
Doctor of Philosophy (Science) which has  
been accepted by the Examiners, the Degree of

**Doctor of Philosophy**

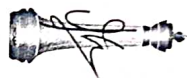
(Science)

has been conferred on him at **Bombay**, on the  
eighteenth day of the month of January  
in the year one thousand nine hundred and  
eighty-eight.

**In Testimony** whereof are set the Seal of the  
said University and the Signature of the said  
Chancellor.

Chittatosh Mookerjee  
P/

JAWAHARLAL NEHRU CENTRE FOR ADVANCED  
SCIENTIFIC RESEARCH, BANGALORE



(A Deemed University)

*The Council of Management on the recommendation of the  
Academic Advisory Committee of the Centre hereby confers on*

**Subhajit Paul**

*the degree of*

**Doctor of Philosophy**

*in recognition of the research work on*

**Dynamics of Clustering in Systems of Granular and Active Particles**

Subhajit Paul  
Self attested  
Signature/Head  
शाहाजीत पावल  
Department of Physics & Astrophysics  
जवाहरलाल नेहरू केंद्र  
University of Delhi, Delhi-110007  
Babla  
01/01/24

President

September 15, 2018

Chairman of the  
Council of Management

E. m e l e

F. n. 22B

20120191



# Jadavpur University

Encl. 7

*Certified that*

**Sri Sumaloy Roy**

was admitted to the Degree of Doctor of Philosophy in Science of this University on 07/03/2012 and that the degree was conferred on him/her at the Convocation held in December 2012 with all the Rights and Privileges thereto appertaining.

In Witness whereof the Signature of the Vice-Chancellor of Jadavpur University is hereunto affixed.



*Sumaloy Roy*

JADAVPUR UNIVERSITY  
The 24th December, 2012

*[Signature]*  
Vice-Chancellor



होमी भाभा राष्ट्रीय संस्थान  
Homi Bhabha National Institute



होमी भाभा राष्ट्रीय संस्थान  
एतद्वारा

डॉक्टर ऑफ फिलोसॉफी  
की उपाधि

तमोघ्न दास

(हरीश-चंद्र अनुसंधान संस्थान)  
की

भौतिक शास्त्र

में विधिवत् रूप से इसके योग्य पाने पर प्रवृत्त करता है।

यह उपाधि उनके शोध-कार्य, जो निम्न शोध-प्रबंध

में परिणित हुआ, को मान्य पाने हेतु है।

*Thesis title: ROLE OF QUANTUM CORRELATIONS IN QUANTUM  
COMMUNICATION NETWORKS*

परिष्ठापक के अनुमोदन की तारीख Date of approval of result : February 26, 2018

अध्यक्ष, विद्या परिषद् Chairman, Academic Council

Enrolment No. PHYSS02201105007

HBN I is a University established under Section 3 of the UGC Act, 1956 vide Notification No. F.9.52004-1.5, dated 3rd June, 2005 of Government of India. Regd. Office: Training School Compound, Anandkhimber, Mumbai-400 074. Retail: Nallidra: Jambur, 2018

Homi Bhabha National Institute  
hereby confers the degree of

Doctor of Philosophy

on

Tamoghna Das

(Harish-Chandra Research Institute)

in

Physics

the student having been found duly qualified for the same. This is in recognition of the research work leading to following thesis.

अध्यक्ष, प्रबंधन परिषद् Chairman, Council of Management

attested

Tamoghna Das

KARNATAK UNIVERSITY, DHARWAD

ಕುಲಾಧಿಪತಿ, ಕುಲಪತಿ ಮತ್ತು ಸಿನೇಟ ಸದಸ್ಯರಾದ ನಮ್ಮಿಂದ  
the Chancellor, Vice-Chancellor and members of the Senate

ವೇದೇಶ್ವರ ಅಣ್ಣಿಕುಮಾರ  
ದಲಪತಿ

Center on Shri Vedeshwar Agnikumar  
Ganapati. ಅಪರಿಗೆ

ಡಾಕ್ಟರ್ ಆಫ್ ಫಿಲಾಸಫಿ

( ಭಾಷಶಾಸ್ತ್ರ )  
**DOCTOR OF PHILOSOPHY**  
( Physics )

ಪದವಿಗೆ \_\_\_\_\_ ಅಣ್ಣಿಕುಮಾರ ರಲ್ಲಿ

ಇವರು ಅಗತ್ಯವಾದ ಅರ್ಹತೆಗಳನ್ನು ಪೂರೈಸಿ ಪರಿಗಣಿತವಾಗಿರುವುದರಿಂದ  
ಈ ಪದವಿಯನ್ನು ದಯಪಾಲಿಸಲಾಗಿದೆ.

recognition of the fulfilment of requirements for the said  
degree in the year August 1988

ವಿಶ್ವವಿದ್ಯಾಲಯದ ಅಧಿಕಾರ ಮುದ್ರೆಯೊಡನೆ ನೀಡಲಾಗಿದೆ.  
Given under the seal of the University.

ಧಾರವಾಡ Dharwad

ತಾರೀಖು Date : 10 FEB 1989

ಕುಲಾಧಿಪತಿ Chancellor

ಶಿವರಾಜ





REGN. NO. 51415

पूर्वोत्तर क्षेत्रीय विज्ञान तन्त्र प्रौद्योगिकी संस्थान

North Eastern Regional Institute of Science & Technology

(Deemed to be University u/s 3 of the UGC Act, 1956)

Upon the recommendation of the Academic Council hereby confers the Degree of

Doctor of Philosophy

on

UJANA BAGGI

Thesis titled "ENGINEERED NANOMATERIALS FOR THE APPLICATION IN REMEDIATION OF HEAVY METAL IONS (Pb<sup>2+</sup> & Cr<sup>6+</sup>) FROM WATER"

in the Department of Physics,

Given this day, the 18th February, 2022 under the seal of the Institute at Itanagar in the Republic of India.

Director & Chairman

Academic Council/Head

23.02.2022

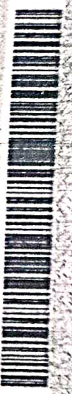
Department of Physics & Astrophysics

University of Delhi, Delhi-110007

Self Attestd

Chairman

Board of Management



*WE, the Chancellor, Vice Chancellor and Members  
of the Court of the Gujarat University certify  
that the Degree of*

**Doctor of Philosophy**  
( Science )

*has been conferred on the sixth day of the  
month of January in the year one thousand nine  
hundred and ninety three at Ahmedabad, on  
Dutta Anjan who has been found duly qualified for  
the same.*

*In Testimony whereof are set the Seal of the  
said University and the Signature of the said  
Chancellor.*

*Sant Singh*  

---

*Chancellor.*

University of Bombay



No. 741

I CERTIFY THAT

Das Gupta Patrick

presented in the month of September 1988, a Thesis in

Physics for the Degree of

Doctor of Philosophy (Science)

and that his/~~her~~ Thesis has been accepted, on the recommendation of the referees, as qualifying him/~~her~~ for the said Degree.

Bombay,

11 APR 1989

*[Handwritten initials]*

*[Signature]*  
for Registrar.



सामांजन संख्या  
Enrol. No.

547/76

सम्मानित किया जाता है कि सितम्बर 1988 में "आसिलेशंस ऑफ डिजिनेरेट" के उपरांत हरिंदर पाल सिंह पर शोध-प्रबंध स्वीकृत हो जाने के उपरांत इस विश्वविद्यालय की विद्या-वाचस्पति की उपाधि को 1989 के दीक्षांत-समारोह में प्रदान की गई।

## University of Delhi

DOCTOR OF PHILOSOPHY

This is to certify that Harinder Pal Singh after approval of his/her thesis on "Degenerate Stellar Masses" of

in September 1988, has been admitted to the degree of Doctor of Philosophy in this University at the Convocation held in 1989.



कुल-सचिव,  
दिल्ली विश्वविद्यालय  
Registrar,  
University of Delhi.

दिल्ली, दिनांक 2 अप्रैल, 1989.  
Delhi, dated the 2nd April, 1989.

Munir Daza  
कुलपति,  
दिल्ली विश्वविद्यालय  
Vice-Chancellor,  
University of Delhi

Isachand  
Assistant Controller of Examinations  
University of Delhi

ADMITTED TO THE DEGREE  
in presence on 6th April 1989

Ashtad  
2/6/89  
Admission Officer  
Deptt. of Physics & Astrophysics  
University of Delhi  
Delhi-110007

BE IT KNOWN THAT THE TRUSTEES OF

# PURDUE UNIVERSITY

UPON NOMINATION OF THE FACULTY

HAVE GRANTED TO

**NIVEDITA DEO**

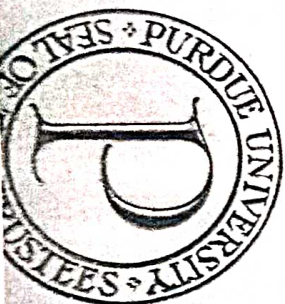
THE DEGREE OF

**DOCTOR OF PHILOSOPHY**

IN RECOGNITION OF THE FULFILLMENT OF THE  
REQUIREMENTS OF THAT DEGREE

AWARDED AT WEST LAFAYETTE IN THE STATE OF INDIANA  
AUGUST 7, 1988.

*Donald S. Luccett*  
PRESIDENT OF THE TRUSTEES



*Raman C. Narain*  
PRESIDENT OF THE UNIVERSITY

*Nivedita Deo*

# Nagpur University



विज्ञान आचार्य  
[Doctor of Philosophy]  
(Faculty of Science)  
—\*\*—

*This is to certify that*  
*Shri Parushottam Gananath Sahare*  
*having been found to be duly qualified on*  
*examination of the thesis on:*  
*"Thermoluminescence in mixed Sulphate Phosphors"*  
*was admitted to the degree of विज्ञान आचार्य*  
*(Doctor of Philosophy) in the Faculty of*  
*Science in this University in the*  
*year 1990.*

Nagpur :  
19th January, 1991

*T. M. Sahare*  
Vice-Chancellor



## विद्या-वाचस्पति

प्रमाणित किया जाता है कि मई, 1992 में "ऑटॉमिक ऑटो-  
कोरिलेशन फंक्शन्स इन हाईली एनीसोट्रोपिक क्रिस्टल्स एंड  
सिम्पल प्रोटीन्स"

पर शोध-प्रबंध स्वीकृत हो जाने के उपरांत पूनम सिलोटिग्रा पितृकुलनाम पूनम गनी इवाम  
को 1992 के दीक्षांत-समारोह में इस विश्वविद्यालय की विद्या-वाचस्पति की उपाधि  
प्रदान की गई।

## University of Delhi

### DOCTOR OF PHILOSOPHY

This is to certify that *Poonam Glatia nee Poonam Gani*  
after approval of his/her thesis on "*Atomic Auto -  
Correlation Functions in Highly Anisotropic  
Crystals and Simple Proteins.*"  
in May, 1992, has been admitted to the degree of  
Doctor of Philosophy in this University at the Convocation  
held in 1992.



*R. S. Jaiswal*  
Head

Deptt. of Physics  
& Astrophysics  
University of Delhi,  
Delhi-110 007

कुल-सचिव,  
दिल्ली विश्वविद्यालय  
Registrar,  
University of Delhi.

दिल्ली, दिनांक 31 मई, 1992  
Delhi, dated the 31st May, 1992

*ETC*  
*M. V. Singh*  
16 8 93

Dr. M. V. SINGH  
Scientist-B  
Defence Institute of Physiology  
& Allied Sciences (Min. of Def.)  
DELHI CANTT-10

*Barua*  
कुलपति,  
दिल्ली विश्वविद्यालय  
Vice-Chancellor,  
University of Delhi.

Indian Institute of Science, Bangalore  
 Faculty of Engineering

The Council on the recommendation of the Senate of the Institute  
 hereby confers on

S. MURUGAVEL

the degree of

Doctor of Philosophy

in recognition of the research work on

Local Structure and Transport Properties of Chalogenide Glasses

E. m. s. S.  
 Chancellor

24 March 1999

K. Raju Ravanna  
 Chairman of the Council

New York  
 Dept

# University of California

28

ON THE NOMINATION OF THE  
GRADUATE COUNCIL OF THE BERKELEY DIVISION  
HAVE CONFERRED UPON  
SHOBHIT MAHAJAN

HAVING DEMONSTRATED ABILITY BY ORIGINAL RESEARCH  
IN PHYSICS  
THE DEGREE OF DOCTOR OF PHILOSOPHY  
WITH ALL THE RIGHTS AND PRIVILEGES THERETO PERTAINING

GIVEN AT BERKELEY  
THIS TWENTIETH DAY OF MAY IN THE YEAR  
NINETEEN HUNDRED AND EIGHTY-SIX

Head of the Dept.  
Dept. of Physics & Astro-Physics  
University of Delhi Delhi.

11/7/53

Sra Michael Feynman  
CHANCELLOR AT BERKELEY

Joseph Leroy  
DEAN OF THE GRADUATE DIVISION  
AT BERKELEY

George Dinkelman  
PRESIDENT OF THE REGENTS

Ed P. Taylor  
PRESIDENT OF THE UNIVERSITY



Wester

SECTION OFFICER (ADMN.)

ST. STEPHEN'S COLLEGE  
DELHI. 11/21/53

11/21/53

# Indian Institute of Technology Delhi

Upon the recommendation of the Senate  
hereby confers the degree of

Doctor of Philosophy

on *Shyama Rath*

Thesis title :

*"Resonant Raman and Infrared  
Spectroscopy of Mercury Cadmium  
Telluride."*

Given this day under the seal of the Institute at Delhi  
in the Republic of India.

The 13<sup>th</sup> August, 1994.

*[Signature]*  
Director &  
Chairman, Senate

*[Signature]*  
Chairman  
Board of Governors

*[Signature]*  
Registrar



20050241



# Jadauppur University

*Certified that*

**Sri Sourav Sur**

was admitted to the Degree of Doctor of Philosophy in Science of this University on 29/07/2005 and that the degree was conferred on him / her at the Convocation held in December 2005 with all the Rights and Privileges thereto appertaining.

In Witness whereof the Signatures of the Chancellor and the Vice-Chancellor

of Jadauppur University are herewith affixed.

*Sourav Sur*



Vice-Chancellor

The 24th December, 2005

*Verified*

*[Signature]*

Section Officer (Gen)  
Dept. of Science & Astrophysics

*[Signature]*  
Chancellor

Professor

# दिल्ली विश्वविद्यालय



## विद्या-वाचस्पति

प्रमाणित किया जाता है कि गई, 1987 में गोप गंड  
 कैटेगोरिजेशन ऑफ RE स्पल्टर्ड फेर्रोइलेक्ट्रिक ( बेरियम टिटांटे ) गंड  
 ट्रांसपेरेंट कंडक्टिंग ( इंडियम टिन ऑक्साइड ) थिन फिल्म " गंड  
 पर शोध-प्रबंध स्वीकृत हो जाने के उपरांत कोट्टेफुडि श्रीनिवास  
 को 1988 के वीक्षांत-समारोह में इस विश्वविद्यालय की विद्या-वाचस्पति की उपाधि  
 प्रदान की गई ।

## University of Delhi

### DOCTOR OF PHILOSOPHY

This is to certify that Nendepudy Sreenivas  
 after approval of his/her thesis on Growth and Characterisation  
of RE Splattered Ferroelectric (Barium Titanate) and Transparent  
Conducting (Indium Tin Oxide) thin films  
 in May 1987, has been admitted to the degree of  
 Doctor of Philosophy in this University at the Convocation  
 held in 1988.



कुल-सचिव,  
 दिल्ली विश्वविद्यालय  
 Registrar,  
 University of Delhi.

Director of Examination  
 University of Delhi  
 Delhi-7.

Attested True Copy  
 D.P. Goyal

Head  
 Deptt. of Physics,  
 & Astrophysics,  
 University of Delhi,  
 Delhi-110007

दिल्ली, दिनांक 17 अप्रैल, 1988.  
 Delhi, dated the 17th April, 1988.

Moonis Raza  
 कुलपति,  
 दिल्ली विश्वविद्यालय  
 Vice-Chancellor,  
 University of Delhi

ADMITTED TO THE DEGREE  
 on 18-4-1988



# Indian Institute of Technology, Madras

hereby confers the degree of  
**Doctor of Philosophy**  
of the Institute  
on

**SUBRAMANIAN ANNAPPOORNI**

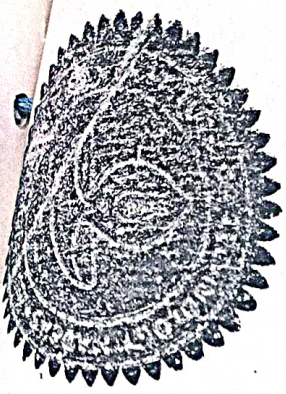
for successfully completing the prescribed programme of study and  
presenting the thesis entitled

**MAGNETIC AND ELECTRICAL BEHAVIOUR OF  
CERTAIN HYDROGENATED ALLOYS OF  
RARE EARTH-TRANSITION METALS**

Given this day the Eleventh of August 1990  
under the seal of the Institute.

*V. Govindarajan*  
V. Govindarajan  
Director

*K. K. Kundan*  
K. K. Kundan  
Chairman Board of Governors



Head of the Dept.  
Dept. of Physics & Astro-Phys.  
University of Delhi, Delhi

Master Tax 6M

Contd... 2/0

(3)





होमी भाभा राष्ट्रीय संस्थान  
Homi Bhabha National Institute

होमी भाभा राष्ट्रीय संस्थान  
प्रद्वारा

डॉक्टर ऑफ फिलोसॉफी  
की उपाधि

कृष्णाकान्त मण्डल

(राजा रामान्ना प्रगत प्रौद्योगिकी केन्द्र)  
को

भौतिक शास्त्र

में विधिवत् रूप से इसके योग्य पाने पर प्रस्ताव करता है।

यह उपाधि उनके शोध-कार्य, जो निम्न शोध-क्षेत्र

में परिचित हुआ, को मान्य पाने हेतु है।

*Thesis Title: STRUCTURAL AND CHEMICAL PROPERTIES OF PURE AND DOPED GOLD NANOCUSTERS*

परिषद् की बैठक दिनांक Date of meeting of Council of Management: June 2, 2016

*BK Dutta*

परिषद् Chairman, Academic Council

No. P/11/2011/04/06/06

Homi Bhabha National Institute  
hereby confers the degree of  
**Doctor of Philosophy**  
on

Krishnakanta Mondal  
(Raja Ramanna Centre for Advanced Technology)

in  
Physics  
he having been found duly qualified for the  
same. This is in recognition of his research  
work leading to following thesis.

*BK Dutta*  
19.4.2023

निर्वाहक/Head

भौतिकी एवं अणु शक्ति विभाग

Department of Physics & Astro-physics  
भौतिकी विभाग, दिल्ली-110 007

Chairman, Council of Management  
भारतीय प्रौद्योगिकी संस्थान दिल्ली-110007

Research Method No: January, 2016

Regional Office: Training School Complex, Arundhaty Nagar, Mumbai-400 094



होमी भाभा राष्ट्रीय संस्थान  
Homi Bhabha National Institute



होमी भाभा राष्ट्रीय संस्थान  
प्रवर्धारा

डॉक्टर ऑफ फिलोसॉफी  
की उपाधि

मंगीलाल चौधरी

(प्लाज्मा अनुसंधान संस्थान)

को

भौतिक शास्त्र

में विधिवत् रूप से इसके शीर्षक माने गए प्रदान की जाती है।  
यह उपाधि उनके शोध-कार्य, जो निम्न शीर्षक-अनुषंग  
में परिणित हुआ, को मान्य माने हेतु है।

*Thesis title : EXPERIMENTAL STUDIES ON COLLECTIVE PHENOMENA IN  
DUSTY PLASMAS*

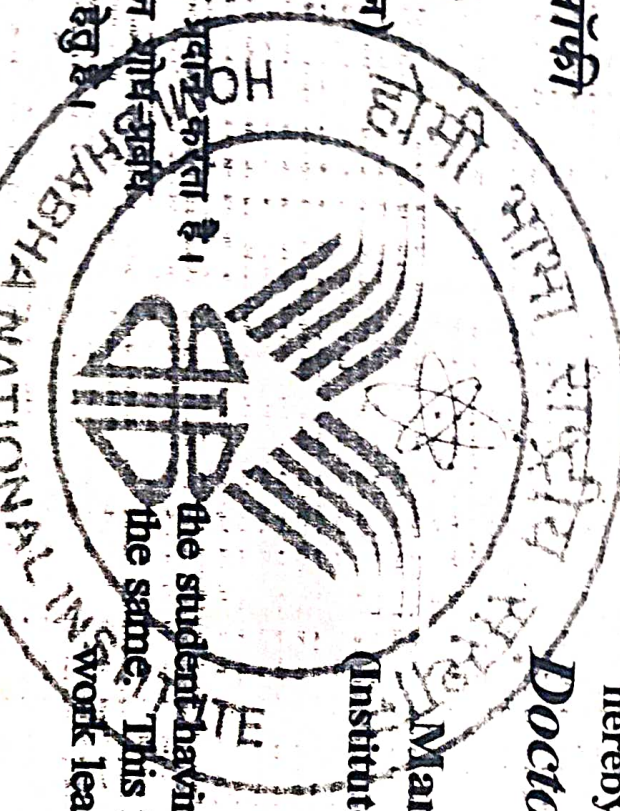
परिणाम के अनुमोदन की तारीख Date of approval of result : October 18, 2017

*Donor's Name*

अध्यक्ष, विद्या परिषद् Chairman, Academic Council

Enrollment No. PHYS062011104003

HEBI is a University established under Section 3 of the UGC Act, 1956 vide Notification No. R3-5/2004-U3, dated 3rd June, 2005 of Government of India  
Regd. Office: Training School Complex, Annaiahilagar, Mumbai-400 094



Homi Bhabha National Institute  
hereby confers the degree of

**Doctor of Philosophy**

on

Mangilal Choudhary

(Institute for Plasma Research)

in

Physics

the student having been found duly qualified for  
the same. This is in recognition of the research  
work leading to following thesis.

*15/10/17*

विभागाध्यक्ष/Head  
भौतिकी एवं ज्योतिष भौतिकी विभाग  
Department of Physics & Astro  
डिपार्टमेंट ऑफ फिजिक्स, दिल्ली-110 052  
University of Delhi, Delhi-11000

*15/10/17*

अध्यक्ष, प्रबंधन परिषद् Chairman, Council of Management

Result Notified in: August, 2017



होमी भाभा राष्ट्रीय संस्थान  
Homi Bhabha National Institute



होमी भाभा राष्ट्रीय संस्थान

एवं द्वारा

डॉक्टर ऑफ फिलोसॉफी

की उपाधि

उत्कर्ष मिश्रा

(हरीश-चन्द्र अनुसंधान संस्थान)

को

भौतिक शास्त्र

में विधिवत् रूप से इसके योग्य पाने पर प्रदान करता है।

यह उपाधि उनके शोध-कार्य, जो निम्न शोध-प्रबंध

में परिणित हुआ, को मान्य पाने हेतु है।

Thesis title : DYNAMICS OF QUANTUM CORRELATIONS IN CLEAN AND DISORDERED MANY-PARTICLE SYSTEMS

परिणाम के अनुमोदन की तारीख Date of approval of result : April 25, 2017

अध्यक्ष, विद्या परिषद् Chairman, Academic Council

*P. M. Mishra*

Enrollment No. PHS/S0820100-4005

Homi Bhabha National Institute, Sector 31, Gandhinagar, New Delhi-110007

Post Office: Training School Complex, Gandhinagar, New Delhi-110007

Result Notified in: December, 2017

26/7/2017

Homi Bhabha National Institute  
hereby confers the degree of

Doctor of Philosophy

on

Utkarsh Mishra

(Harish-Chandra Research Institute)

in

Physics

the student having been found duly qualified for the same. This is in recognition of the research work leading to following thesis.

*Utkarsh Mishra*  
26.7.2017

विभागाध्यक्ष/Head  
भौतिकी एवं खगोल भौतिकी विभाग  
Department of Physics & Astrophysics  
भारतीय विश्वविद्यालय दिल्ली-110007

अध्यक्ष, प्रबंधन परिषद् Chairman, Council of Management  
*Utkarsh Mishra*  
26/7/2017



होमी भाभा राष्ट्रीय संस्थान  
Homi Bhabha National Institute



होमी भाभा राष्ट्रीय संस्थान  
एतद्वारा

एतद्वारा

डॉक्टर ऑफ फिलोसॉफी  
की उपाधि

अमोल सिंह

(राजा रामन्ना प्रगत प्रौद्योगिकी केन्द्र)

को

भौतिक शास्त्र

में विधिवत रूप से इसके योग्य माने मर प्रदान करता है।  
यह उपाधि उनके शोध-कार्य, जो निम्न शोध-ग्रन्थ  
में परिणित हुआ, को मान्य पाने हेतु है।

Thesis Title : STUDY OF COMPROMISED MECHANISMS FOR X-RAY OPTICAL

APPLICATIONS

प्रबंधन परिषद् की बैठक दिनांक Date of Meeting of Council

*Dr. M. S. ...*

अध्यक्ष, विद्या परिषद् Chairman, Academic Council

Enrolment No. PHS03201004010



Homi Bhabha National Institute  
hereby confers the degree of

Doctor of Philosophy

on

Amol Singh

(Raja Rammanna Centre for Advanced Technology)

in

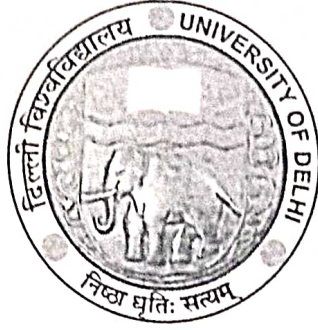
Physics

he having been found duly qualified for the  
same. This is in recognition of his research  
work leading to following thesis.

astrophysics  
10007  
10007  
Babita  
27/12/20



# दिल्ली विश्वविद्यालय



## UNIVERSITY OF DELHI

प्रमाणित किया जाता है कि फरवरी, 2015 में शोध प्रबंध स्वीकृत हो जाने के उपरान्त

**'अरुण कुमार'**

को 2015 के दीक्षांत-समारोह में दिल्ली विश्वविद्यालय की विद्या-वाचस्पति की उपाधि प्रदान की गई।

विभाग: भौतिकी एवं खगोलभौतिकी

*This is to certify that on approval of the thesis in February, 2015*

*'Arun Kumar'*

*qualified for the degree of Doctor of Philosophy (Ph.D.) of this University. The said Degree was conferred upon him/her at the Convocation held in 2015.*

Department: Physics & Astrophysics



विभागाध्यक्ष/Head  
भौतिकी एवं खगोल भौतिकी विभाग  
Department of Physics & Astrophysics  
दिल्ली विश्वविद्यालय, दिल्ली-110007  
University of Delhi, Delhi-110007

6/1/23

Bebita  
6/1/23

J. V. Das

कुलसचिव  
दिल्ली विश्वविद्यालय  
Registrar  
University of Delhi

दिल्ली, दिनांक 30 मई, 2015  
Delhi, Dated the 30th May, 2015

कुलपति  
दिल्ली विश्वविद्यालय  
Vice Chancellor  
University of Delhi

self. Attached  
Arun

नामांकन संख्या  
Enrol. No. HR - 357/04

ADMITTED TO THE DEGREE  
of Philosophy on 12-6-15





# University of Delhi



## DOCTOR OF PHILOSOPHY

This is to certify that Arshu Tosh. Pharakawaj after approval of his/her thesis on "Some Aspects of Hadron-Hadron Collisions at the Large Hadron Collider - LHC" in February 2003, has been admitted to the degree of Doctor of Philosophy in this University at the Convocation held in 2003.



*[Signature]*  
Registrar  
University of Delhi.

Delhi, dated the 22nd February, 2003

*[Signature]*  
Vice-Chancellor,  
University of Delhi.

*[Signature]*