



Miranda House

UNIVERSITY OF DELHI

Annual Report

Ph.D. Supervision

(To be maintained by those guiding Ph.D.)

Department: Physics

Academic Year: Till 2022

Name of the Teacher: Prof. Monika Tomar

Designation: Professor

Qualifications (Ph.D./D.Sc./D.Litt.): Ph.D.

Year of obtaining the above qualification: 2004

Year of recognition as research guide: 2009

Relevant page of the Recognition Letter as supporting document (if any):



Miranda House UNIVERSITY OF DELHI



FACULTY OF SCIENCE UNIVERSITY OF DELHI DELHI - 110007

SF-I/BRS/2010/1118

Dated: 23.4.2010

Ms. Monika Tomar
Department of Physics,
Miranda House,
University of Delhi,
Delhi - 110007.

Dear Madam,

The Board of Research Studies (Science) in its meeting held on 20.4.2010 has approved the application of ~~the~~ Ms. Monika Tomar, Department of Physics, Miranda House for your recognition as a Supervisor to guide Ph.D students of the University in your subject. This is only one time recognition for taking two Ph.D students. Any further recognition will be granted only after review by the duly constituted Inspection Committee of the BRS. The students may be provided guidance in your College as well as in the concerned Department of the University.

It may be mentioned here that the registration of the candidate for Ph.D programme will be done strictly in accordance with the guidelines prescribed under Ordinance VI-B duly notified by the Registrar vide letter no. SPA/R/2008/2655 dated 28/4/2008, (copy enclosed). Additional guidelines for the selection of candidates in the Projects for consideration for registration are also enclosed (Dean, Research letter no. R/194 dated 30/6/2008).

Students who are in receipt of any of the following types of fellowships/stipends will only be considered for registration by the BRS.

1. University Teaching Assistantships.
2. JRF through UGC/NET and CSIR/NET.
3. Fellowships of CSIR/ICAR/ICSSR/ICHR/ICMR/DBT/DST or from any other recognized Government institutions/organizations.
4. Rajiv Gandhi Fellowships for SC/ST from UGC.
5. SAP Fellowships from UGC.
6. Project JRF/Project Assistant.
7. Candidates with UGC (Non -NET) fellowships Rs. 5,000 fellowship under the new scheme.

For selection of candidates in Projects (A6), following is the composition of the Committee:

1. An eminent scholar to be nominated by the Vice-Chancellor.(DRC member as an outside experts)
2. Head of the Department.

Contd...P/2



Miranda House

UNIVERSITY OF DELHI

: 2 :

3. One professor and one Reader from the parent Department to be nominated by the Vice-Chancellor.
4. PI and Co-PI of the Project or any other member as per the requirement of the funding agency.

(This Selection Committee should clearly mention that the selected candidates be considered for registration by the DRC).

The candidates considered for registration have to do the course work available at the University Department.

Your recognition as a supervisor is also subject to fulfilling the following conditions:

1. Having a project from the funding agency for the duration of at least 2 years.
2. Undertaking from the Principal of the college that sufficient laboratory space will be provided to the students/supervisor to carry out the research work.
3. Any student appointed in the project will not be automatically considered for registration unless or otherwise recommended by the duly constituted committee (6).

The registration of the student and other research activities will be as per the guidelines prescribed under the revised ordinance VI-B.

Yours faithfully,

A handwritten signature in cursive script, appearing to read "R. P. Lal".

Dean, Faculty of Science



Miranda House

UNIVERSITY OF DELHI

Part A

Currently Enrolled Research Scholars

Name of the student:	Manisha Bharti
Year of registration:	26-11-2018
Supervisor:	Prof. Monika Tomar
Co-supervisor, if any:	
Title of the thesis:	Development of Acoustic wave based sensing platform
Whether receiving scholarship, Name of the scholarship:	JRF-CSIR

Relevant supporting document (issued by the BRS):



Miranda House UNIVERSITY OF DELHI

D.U.P.-295-12-16-10 Page X 100

BOARD OF RESEARCH STUDIES (SCIENCE) FACULTY OF SCIENCE UNIVERSITY OF DELHI

Ref. No. Ref : FOS-I/114/Ph.D./7824

Dated : 13-11-2018
Physics & Astrophysics

With reference to his/her application for admission to Ph.D./ Programme in
Ms. Manisha Bharati
Mr./Mrs./Miss is hereby informed that the Board of Research Studies for Science in
its meeting held on 22.10.2018 has provisionally selected him/her for registration to Ph.D. Programme and has
assigned him/her to Physics & Astrophysics Department under the supervision of
Prof./Dr. Prof. Vinay Gupta on the following proposed area of
research
"Development of Sensing Platform Based on Acoustic Waves"

1. His/her admission to Ph.D. Programme shall be provisional and the same shall be confirmed only when he/she has qualified in the course work and has completed any other requirements, such as passing in the oral test etc., to be laid down by the Departmental Research Committee in each case.
2. In case the candidate is employed, provisional admission to Ph.D. would be allowed only if leave requirement is fulfilled.
3. At the end of six months, the Advisory Committee shall assess the progress of the candidate through a comprehensive written and oral examination/presentation.
4. If the Advisory Committee is satisfied, it would recommend confirmation of the provisional admission previously granted and the Board, if satisfied, would confirm the provisional admission.
5. If the overall performance in respect of the above is not found to be satisfactory, the candidate shall be required to repeat the same within the next six months when his/her performance would be re-examined. If the performance is again found not to be satisfactory the Advisory Committee may recommend either a further chance to improve his/her performance or cancellation of the provisional admission granted to him/her.

He/she is further informed that the date of his/her joining will be treated from the date of submission of fees in this University. A blank form for joining Report is enclosed herewith which should be returned to this office duly filled in and signed by his/her supervisor and Head of the Department to enable him/her to deposit the prescribed supervision and other fees with the Cashier, Delhi University, within 15 days from the date of issue of this letter i.e. 22.11.2018 failing which his/her selection to the course shall be deemed as cancelled.

His/her registration is governed by the provisions of Ordinance VI-B relating to Doctorate of Philosophy (Ph.D.) of this University.

In case the candidate has passed the M.Sc. Examination from a University other than Delhi University, he/she is required to be enrolled as student of this University. An enrolment form is enclosed which must be sent to Academic Branch duly filled and signed by the Head of the Department immediately after joining the Ph.D. Course. The original certificate may also be produced.

Encl: As above.

Assistant Registrar (Science)

Ms. Manisha Bharati
33/32, Old Rajinder Nagar,
New Delhi-110060



Miranda House UNIVERSITY OF DELHI



विज्ञान संकाय
दिल्ली विश्वविद्यालय
FACULTY OF SCIENCE
UNIVERSITY OF DELHI

Porta Cabin, Near Department of Zoology, University of Delhi, Delhi - 110007, Ph. : 011-27666601/27662825

पोर्टा केबिन नजदीक प्राणी विज्ञान विभाग, दिल्ली विश्वविद्यालय, दिल्ली-110007 दूरभाष: 011-27666601/27662825

Email- office_fsc@admin.du.ac.in

Ref.: FOS-I/114/2021/774

Dated: 20/09/2021

AR-769
22/9/21

The Head
Department of Physics & Astrophysics,
University of Delhi,
Delhi-110007.

Sir,

This is with reference to the minutes of DRC dated 27/07/2021 regarding change of Supervisor of the following Ph.D. scholars due to sudden demise of Prof. Vinay Gupta.

In this connection, this is to inform you that the Board of Research Studies (Science) in its meeting held on 09/08/2021 considered & approved the following Supervisor/s to guide the following Ph.D. scholars under supernumerary Quota:

S.No.	Name of the Scholar	New Supervisor(s)
1.	Ms Manisha Bharati	Dr. Monika Tomar (Miranda House)
2.	Ms. Gunjan Yadav	Dr. Monika Tomar (Miranda House)
3.	Mr. Shiva Laichhane	Dr. Arijit Chowdhuri (A.N.D. College)
4.	Mr. Puneet Sagar	Prof. Binay Kumar
5.	Ms. Akanksha Motla	Prof. S. Annapoorni
6.	Mr. Rohit	Dr. Arijit Chowdhuri (A.N.D College)

The concerned scholars may please be informed accordingly.

Yours faithfully,

Section Officer

Copy to:

1. Dr. Monika Tomar, Supervisor, Miranda House, University of Delhi, Delhi-110007.
2. Dr. Arijit Chowdhuri, Supervisor, Acharya Narendra Dev College, Govindpuri, Kalkaji, New Delhi- 110019.
3. Prof. Binay Kumar, Supervisor, Deptt. of Physics & Astrophysics, University of Delhi, Delhi-110007.
4. Prof. S. Annapoorni, Supervisor, Deptt. of Physics & Astrophysics, University of Delhi, Delhi-110007.

Section Officer

Stashi
20/9/21



Miranda House

UNIVERSITY OF DELHI

Name of the student:	Gunjan Yadav
Year of registration:	07-01-2019
Supervisor:	Prof. Monika Tomar
Co-supervisor, if any:	
Title of the thesis:	Wide band-gap semiconducting thin films for photonic devices
Whether receiving scholarship, Name of the scholarship:	JRF-UGC

Relevant supporting document (issued by the BRS):



Miranda House UNIVERSITY OF DELHI

Subject to Submission Selection Committee Minutes of 07.01.2019
NET/Physics

U.U. 9-295-12-16-10 Page X 100

BOARD OF RESEARCH STUDIES (SCIENCE)
FACULTY OF SCIENCE
UNIVERSITY OF DELHI

Ref. No. Ref.: FOS-I/114/Ph.D./8074

Dated: 07-01-2019

Physics and Astrophysics

With reference to his/her application for admission to Ph.D./ Programme in
Ms. Gunjan Yadav
Mr./Mrs./Miss is hereby informed that the Board of Research Studies for Science in
its meeting held on 06.11.2018 has provisionally selected him/her for registration to Ph.D. Programme and has
assigned him/her to Physics and Astrophysics Department under the supervision of
Prof./Dr. Prof. Vinay Gupta on the following proposed area of
research: "Wide band gap semiconducting thin films for photonic devices"

1. His/her admission to Ph.D. Programme shall be provisional and the same shall be confirmed only when he/she has qualified in the course work and has completed any other requirements, such as passing in the oral test etc., to be laid down by the Departmental Research Committee in each case.
2. In case the candidate is employed, provisional admission to Ph.D. would be allowed only if leave requirement is fulfilled.
3. At the end of six months, the Advisory Committee shall assess the progress of the candidate through a comprehensive written and oral examination/presentation.
4. If the Advisory Committee is satisfied, it would recommend confirmation of the provisional admission previously granted and the Board, if satisfied, would confirm the provisional admission.
5. If the overall performance in respect of the above is not found to be satisfactory, the candidate shall be required to repeat the same within the next six months when his/her performance would be re-examined. If the performance is again found not to be satisfactory the Advisory Committee may recommend either a further chance to improve his/her performance or cancellation of the provisional admission granted to him/her.

He/she is further informed that the date of his/her joining will be treated from the date of submission of fees in this University. A blank form for joining Report is enclosed herewith which should be returned to this office duly filled in and signed by his/her supervisor and Head of the Department to enable him/her to deposit the prescribed supervision and other fees with the Cashier, Delhi University, within 15 days from the date of issue of this letter i.e. 22-01-2019 failing which his/her selection to the course shall be deemed as cancelled.

His/her registration is governed by the provisions of Ordinance VI-B relating to Doctorate of Philosophy (Ph.D.) of this University.

In case the candidate has passed the M.Sc. Examination from a University other than Delhi University, he/she is required to be enrolled as student of this University. An enrolment form is enclosed which must be sent to Academic Branch duly filled and signed by the Head of the Department immediately after joining the Ph.D. Course. The original certificate may also be produced.

Encl.: As above.

Ms. Gunjan Yadav
G-Block, Prem Nagar
Najafgarh
Delhi-110043

Assistant Registrar (Science)



Miranda House UNIVERSITY OF DELHI



विज्ञान संकाय
दिल्ली विश्वविद्यालय
FACULTY OF SCIENCE
UNIVERSITY OF DELHI

Porta Cabin, Near Department of Zoology, University of Delhi, Delhi - 110007, Ph. : 011-27666601/27662825
पोर्टा केबिन नजदीक प्राणी विज्ञान विभाग, दिल्ली विश्वविद्यालय, दिल्ली-110007 दूरभाष: 011-27666601/27662825
Email- office_fsc@admin.du.ac.in

Ref.: FOS-1/114/2021/११७५

Dated: 20/09/2021

The Head
Department of Physics & Astrophysics,
University of Delhi,
Delhi-110007.

Sir,

This is with reference to the minutes of DRC dated 27/07/2021 regarding change of Supervisor of the following Ph.D. scholars due to sudden demise of Prof. Vinay Gupta.

In this connection, this is to inform you that the Board of Research Studies (Science) in its meeting held on 09/08/2021 considered & approved the following Supervisor/s to guide the following Ph.D. scholars under supernumerary Quota:

S.No.	Name of the Scholar	New Supervisor(s)
1.	Ms Manisha Bharati	Dr. Monika Tomar (Miranda House)
2.	Ms. Gunjan Yadav	Dr. Monika Tomar (Miranda House)
3.	Mr. Shiva Laichhane	Dr. Arijit Chowdhuri (A.N.D. College)
4.	Mr. Puneet Sagar	Prof. Binay Kumar
5.	Ms. Akanksha Motla	Prof. S. Annapoorni
6.	Mr. Rohit	Dr. Arijit Chowdhuri (A.N.D College)

The concerned scholars may please be informed accordingly.

Yours faithfully,

Section Officer

Copy to:

- ✓ Dr. Monika Tomar, Supervisor, Miranda House, University of Delhi, Delhi-110007.
- Dr. Arijit Chowdhuri, Supervisor, Acharya Narendra Dev College, Govindpuri, Kalkaji, New Delhi- 110019.
- Prof. Binay Kumar, Supervisor, Deptt. of Physics & Astrophysics, University of Delhi, Delhi-110007.
- Prof. S. Annapoorni, Supervisor, Deptt. of Physics & Astrophysics, University of Delhi, Delhi-110007.

Section Officer

20/9/21



Miranda House

UNIVERSITY OF DELHI

Name of the student:	Babita Sharma
Year of registration:	13-04-2021
Supervisor:	Prof. Monika Tomar
Co-supervisor, if any:	
Title of the thesis:	Development of Functional materials for energy applications
Whether receiving scholarship, Name of the scholarship:	JRF-CSIR

Relevant supporting document (issued by the BRS):



Miranda House UNIVERSITY OF DELHI

BOARD OF RESEARCH STUDIES (SCIENCE)

FACULTY OF SCIENCE

UNIVERSITY OF DELHI

BR-352(3)
9/4/21
Ref. No. Ref.: FOS-1/114/Ph.D./9337

Dated: 08.04.2021

With reference to his/her application for admission to Ph.D. Programme in **Physics & Astrophysics** **Ms. Babita Sharma** is hereby informed that the Board of Research Studies for Science in its meeting held on **19.03.2021** has provisionally selected him/her for registration to Ph.D. Programme and has assigned him/her to **Physics & Astrophysics** Department under the supervision of **Dr. Monika Tomar** on the following proposed area of research **Development of Functional materials for energy applications.**

1. His/her admission to Ph.D. Programme shall be provisional and the same shall be confirmed only when he/she has qualified in the course work and has completed any other requirements, such as passing in the oral test etc., to be laid down by the Departmental Research Committee in each case.
2. In case the candidate is employed, provisional admission to Ph.D. would be allowed only if leave requirement is fulfilled.
3. At the end of the six months, the Advisory Committee shall assess the progress of the candidate through a comprehensive written and oral examination/presentation.
4. If the Advisory Committee is satisfied, it would recommend confirmation of the provisional admission previously granted and the Board, if satisfied, would confirm the provisional admission.
5. If the overall performance in respect of the above is not found to be satisfactory, the candidate shall be required to repeat the same within the next six months when his/her performance would be re-examined. If the performance is again found not to be satisfactory the Advisory Committee may recommend either a further chance to improve his/her performance or cancellation of the provisional admission granted to him/her.

He/she is further informed that the date of his/her joining will be treated from the date of submission of fees in this University. A blank form for joining Report is enclosed herewith which should be returned to this office duly filled in and signed by his/her supervisor and Head of the Department to enable him/her to deposit the prescribed supervision and other fees on online portal in the concerned deptt, university of delhi within 15 days from the date of issue of this letter i.e. 24/4/21 failing which his/her selection to the course shall be deemed as cancelled.

His/her registration is governed by the provisions of Ordinance VI-B relating to Doctorate of Philosophy (Ph.D.) of this University.

In case the candidate has passed the M.Sc. Examination from a University other than Delhi University, he/she is required to be enrolled as a student of this University. An enrolment form is enclosed which must be sent to Academic Branch duly filled and signed by the Head of the Department immediately after joining the Ph.D. Course. The original certificates may also be produced.

Encl.: As above.

Ms. Babita Sharma
A-220 Sangam Vihar,
New Delhi, Opp. To Batra Hospital,
Delhi-110080

Section Officer (Science)

Copy forwarded for information to:-

1. The Head, Department of **Physics & Astrophysics** University of Delhi, Delhi-110007.
2. Supervisor, **Dr. Monika Tomar**, Department of **Physics & Astrophysics**, University of Delhi, Delhi-110007.

Section Officer (Science)



Miranda House

UNIVERSITY OF DELHI

Name of the student:	Amit Kumar
Year of registration:	08-03-2022
Supervisor:	Dr. Mahipal Singh, Kumaon University
Co-supervisor, if any:	Prof. Monika Tomar
Title of the thesis:	Polymer composites as advanced EMI shielding material for electromagnetic pollution
Whether receiving scholarship, Name of the scholarship:	

Relevant supporting document (issued by the BRS):



Miranda House UNIVERSITY OF DELHI



कुमाऊँ विश्वविद्यालय, नैनीताल-263001(उत्तराखण्ड)

KUMAUN UNIVERSITY, NAINITAL-263001 (UTTARAKHAND), INDIA

Office: 05942-236856 (Extn-328), Mobile CAO-Research: 9719919043, Fax: 05942-235213

Email: caoresearchku@gmail.com & sriccku@gmail.com, Website: www.kunainital.ac.in

Research Section

Revised letter

दिनांक : 04.10.2021

पत्रांक-शोध/43/भौतिक विज्ञान/2021

Amit Kumar
Village - jajal P.O - Jhandupur
Distt - Sonipat
Haryana Pin - 131023

विश्वविद्यालय शोध उपाधि समिति (R.D.C.) भौतिक विज्ञान(Physics) की बैठक दिनांक 29.12. 2021 को सम्पन्न हुई, बैठक में आपके शोध आवेदन पत्र से सम्बन्धित निम्नांकित निर्णय लिया गया है। (सम्बन्धित क्रमों पर सही का चिन्ह लगा है) यह निर्णय आपकी सुविधा को ध्यान में रखते हुए विद्वत परिषद् एवं कार्यपरिषद् की स्वीकृति की प्रत्याशा में प्रसारित किया जा रहा है। इसे अन्तिम तब ही माना जाये जबकि इसे विद्वत तथा कार्यपरिषद् की स्वीकृति प्राप्त हो जाये।

- 1- शोध कार्य का शीर्षक/रूपरेखा एवं निर्देशक स्वीकार किये गये
- 2- शोध कार्य की रूपरेखा निम्न संशोधन के साथ स्वीकार की गई -

Name of Candidate	Topic	Name of Supervisor
Amit Kumar	Co-supervision is not approved. Scientific gaps and lacuna in existing knowledge associated with the Propose study are missing. The objectives of the proposed study are unclear and need to be more elaborated. No relation to the previous studies is mentioned and needs to be addressed. Materials to be used remain underfined. Needs thorough revision.	Dr.Mahipal Singh

अतः उपरोक्त संशोधन शीर्षक के अनुरूप संशोधित रूपरेखा की दो प्रतियां अपने शोध निर्देशक से अग्रसारित कर संयोजक/विभागाध्यक्ष द्वारा अनुमोदन करने के उपरान्त पत्र निर्गत की तिथि से तीन माह के अन्दर विश्वविद्यालय कार्यालय में जमा करें। बिना संयोजक के अनुमोदन के संशोधित रूपरेखा स्वीकार नहीं की जायेगी।

- 3- शोध कार्य की रूपरेखा निम्न कारणों से अस्वीकार की गई-
उपरोक्त सूचना के आधार पर आप शोध कार्य की संशोधित रूपरेखा पॉच प्रतियों में अपने शोध निर्देशक एवं विषय संयोजक द्वारा अनुमोदित करवाने के उपरान्त CAO-SRICC (शोध अनुभाग) कार्यालय कक्ष संख्या-114 में शीघ्रातिशीघ्र जमा करवाने का कष्ट करें, ताकि आपकी संशोधित रूपरेखा को सम्बन्धित विषय की शोध उपाधि समिति की अगली बैठक में निर्णय हेतु प्रस्तुत किया जा सके।

- 4- आपके आवेदन पत्र पर निम्नांकित कारणों से विचार अगली बैठक के लिये स्थगित किया गया है।

- 5- आपकी शोध पंजीयन तिथि दिनांक 30-08-2017 है।

6- UGC ordinance -2016 के अनुसार शोध ग्रंथ जमा करने की न्यूनतम समयावधि 3 वर्ष है, इस समयावधि में प्री पी0एच0डी0 कोर्स वर्क की समयावधि भी सम्मिलित है। शोध कार्य की अधिकतम अवधि 6 (छः) वर्ष है एवं महिला शोधार्थियों के लिए शोध कार्य की अधिकतम अवधि 8 वर्ष है। यह तिथि शोध कार्य की रूपरेखा के पंजीकरण की तिथि (उपरोक्त) से मान्य होगी। उक्त तिथि के उपरान्त एक वर्ष का समय विस्तारण एवं एक वर्ष का पुनः पंजीकरण विशेष परिस्थितियों में कुलपति जी द्वारा स्वीकृत किया जा सकता है। इसके लिये आपको प्रार्थना पत्र अपने शोध निर्देशक से अग्रसारित करवाकर 6 वर्ष (महिला शोधार्थियों के लिए 8 वर्ष) की अधिकतम अवधि पूर्ण होने के तीन माह के भीतर विश्वविद्यालय को भेजना होगा। यदि उपरोक्त अवधि तक समय विस्तारण के सम्बन्ध में आपसे कोई प्रार्थना पत्र प्राप्त नहीं होता है तो आपका शोध पंजीकरण शोध अधिनियम की धारा 6 (4) के अन्तर्गत निरस्त कर दिया जायेगा। इसकी कोई पूर्वसूचना विश्वविद्यालय द्वारा नहीं भेजी जायेगी।

7- विश्वविद्यालय के शोध नियमों के अनुसार पी0एच0डी0 Pre-Submission Viva के उपरान्त शोध ग्रंथ को विश्वविद्यालय में 60 दिनों की समयावधि में जमा करना अनिवार्य है।

प्रतिलिपि- निम्नलिखित को सूचनार्थ एवं आवश्यक कार्यवाही हेतु प्रेषित :-

1. Dr.Mahipal Singh, Deptt.of Physics,R.H.P.G.College,Kashipur.
- 2- संयोजक एवं विभागाध्यक्ष, भौतिक विभाग, डी0एस0बी0 परिसर, नैनीताल।

निदेशक

एस0आर0आई0सी0सी0

निदेशक

एस0आर0आई0सी0सी0



Miranda House UNIVERSITY OF DELHI

Certificate of Supervisor

I Dr. Mahipal Singh (name of the supervisor) certify that Mr/ /Ms/ Amit Kumar
 ----- has been carrying on his/ her research work under me
 for registration of his/ her name for the Ph.D. programme in Physics (name of the
 subject). I have no objection to guide Mr/ /Ms/ Amit Kumar

 The number of enrolled Ph.D. candidates working under my supervision till date is 03....

***I recommend Prof./ Dr. Monika Tomar, Asst. Prof. of Dept. of Physics
Miranda House, Delhi Univ., Delhi (name of the Institute) to act as Co- Supervisor.

***(Strike out if not applicable).

Date: 06/07/2019

Full signature of Supervisor with Official Seal
 of designation **Dr. Mahipal Singh**
 Associate Professor-Physics
 R.H.Govt.P.G.College, Keshiপুর (U.K.)

Monika Tomar
6.7.19
Assistant Professor

Full signature of Co-Supervisor with Official
 Seal of designation **Dr. Monika Tomar**
 Physics Department
 Miranda House
 University of Delhi
 Delhi-110007



Miranda House

UNIVERSITY OF DELHI

Name of the student:	Nidhi Dhull
Year of registration:	22-12-2016
Supervisor:	Prof. Monika Tomar
Co-supervisor, if any:	
Title of the thesis:	Growth of functional oxide thin films for device applications
Whether receiving scholarship, Name of the scholarship:	

Relevant supporting document (issued by the BRS):



Miranda House UNIVERSITY OF DELHI

D.U.P.-295-12-16-10 Pads X 100

BOARD OF RESEARCH STUDIES (SCIENCE) FACULTY OF SCIENCE UNIVERSITY OF DELHI

Ref. No. Ref. : FOS-I/114/Ph.D./ 6473

Dated :20.12.2016.....

Physics & Astrophysics

With reference to his/her application for admission to Ph.D./ Programme in
Mr./Mrs./Miss. Ms. Nidhi Dhull.....is hereby informed that the Board of Research Studies for Science in

its meeting held on25.11.2016.....has provisionally selected him/her for registration to Ph.D. Programme and has assigned him/her toPhysics & Astrophysics.....Department under the supervision of

Prof./Dr. DR. MOHITA TOMAR.....on the following proposed area of research.....

"Growth of Oxide thin Films for Device applications"

FUNCTIONAL

1. His/her admission to Ph.D. Programme shall be provisional and the same shall be confirmed only when he/she has qualified in the course work and has completed any other requirements, such as passing in the oral test etc., to be laid down by the Departmental Research Committee in each case.
2. In case the candidate is employed, provisional admission to Ph.D. would be allowed only if leave requirement is fulfilled.
3. At the end of six months, the Advisory Committee shall assess the progress of the candidate through a comprehensive written and oral examination/presentation.
4. If the Advisory Committee is satisfied, it would recommend confirmation of the provisional admission previously granted and the Board, if satisfied, would confirm the provisional admission.
5. If the overall performance in respect of the above is not found to be satisfactory, the candidate shall be required to repeat the same within the next six months when his/her performance would be re-examined. If the performance again found not to be satisfactory the Advisory Committee may recommend either a further chance to improve his/her performance or cancellation of the provisional admission granted to him/her.

He/she is further informed that the date of his/her joining will be treated from the date of submission of fees in the University. A blank form for joining Report is enclosed herewith which should be returned to this office duly filled in and signed by his/her supervisor and Head of the Department to enable him/her to deposit the prescribed supervision and other fees with the Cashier, Delhi University, within 15 days from the date of issue of this letter i.e.21.12.2016..... failing which his/her selection to the course shall be deemed as cancelled.

His/her registration is governed by the provisions of Ordinance VI-B relating to Doctorate of Philosophy (Ph.D.) of this University.

In case the candidate has passed the M.Sc. Examination from a University other than Delhi University, he/she is required to be enrolled as student of this University. An enrolment form is enclosed which must be sent to Academic Branch duly filled and signed by the Head of the Department immediately after joining the Ph.D. Course. The original certificate may also be produced.

Encl.: As above.

.....Ms. Nidhi Dhull.....
.....H.No. 771/21, Barahi Road,
.....Teacher Colony, Bahadurgarh,
.....Haryana.....

Assistant Registrar (Science)



Miranda House

UNIVERSITY OF DELHI

Part B

Research Scholars who have completed Ph.D.

Name of the student:	Akshta Rajan
Year of registration:	15-10-2010
Year of obtaining Ph.D.:	
Supervisor:	Prof. Monika Tomar
Co-supervisor, if any:	
Title of the thesis:	Development of ZnO thin films for UV photo detectors

Relevant supporting document (issued by the BRS):



Miranda House UNIVERSITY OF DELHI

COURSE WORK IS COMPULSORY FOR EVERY CANDIDATE UNLESS NOT ELIGIBLE FOR LECTURESHIP
D.U.P. 407-7-07-50P*200

①

BOARD OF RESEARCH STUDIES (SCIENCE) FACULTY OF SCIENCE UNIVERSITY OF DELHI

Ref No SF-I/PH.D/ 2253

Dated 15.10.2010

With reference to his/her application for admission to Ph.D Programme in Physics & Astrophysics
Mr./Mrs./Miss Akshita Rajan is hereby informed that the Board of Research Studies
for Science in its meeting held on 01.10.2010 has provisionally selected him/her for registration to Ph.D
Programme and has assigned him/her to Physics & Astrophysics Department under supervision
of Prof. Dr. Monika Tomar on the following title of thesis -

"Structural & Optical Studies of Metal & Metal Oxide Nanostructures for
Photonic Devices"

- 1 His/her admission to Ph.D. Programme shall be provisional and the same shall be confirmed only when he/she has qualified in the course work and has completed other requirement such as passing in the oral test etc. to be laid down by the Departmental Research Committee in each case.
- 2 At the end of the six months, the Advisory Committee shall assess the progress after comprehensive written and/or oral examination.
- 3 If the Advisory Committee is satisfied, it would recommend confirmation of the provisional admission previously granted and the Board if satisfied would confirm the provisional admission.
- 4 If the overall performance in respect of the above is found not to be satisfactory, he/she shall be required to repeat the same within the next six months when his/her performance would be re-examined. If the performance is again found not to be satisfactory the Advisory Committee may recommend either a further chance to improve his/her performance or cancellation of the provisional admission granted to him/her.

He/She is further informed that the date of his/her joining and starting research in the Department will be his/her date of registration. He/She is therefore requested to intimate this office the date from which he/she started his/her research in the Department. A blank form for joining Report is enclosed herewith which should be returned to this office duly filled in and signed by his/her supervisor and Head of the Department to enable his/her to deposit the prescribed supervision and other fees with the Cashier, Delhi University, within 15 days from the date of issue of this letter i.e. till 30.10.2010 failing which his/her selection to the course shall be deemed as cancelled.

His/her registration is governed by the provisions of Ordinance VI-B relating to Doctorate of Philosophy (Ph.D.) of this University.

In case he/she passed the M.Sc. Examination from a University other than Delhi University he/she is required to be enrolled as a student of this University. An enrolment form is enclosed which must be sent to Academic Branch duly filled and signed by the Head of the Department immediately after joining the Ph.D. Course. The original certificates may also be produced.

Encl. As above

Mr. Akshita Rajan
71, Plot No.-26/3,
Saraswati Enclave,
Sector-19, Rohini,
Delhi-110085.

Asst. Dy. Registrar (Science)

Copy forwarded for information to:

- 1 The Head of the Department of Physics & Astrophysics University of Delhi, Delhi-7
- 2 Supervisor, Prof./Dr. Monika Tomar, Miranda House University of Delhi, Delhi-7
- 3 The Finance Officer, University of Delhi, Delhi-110007
- 4 Co-Jt. Supervisor, Prof. Dr.

Section Officer (Science)



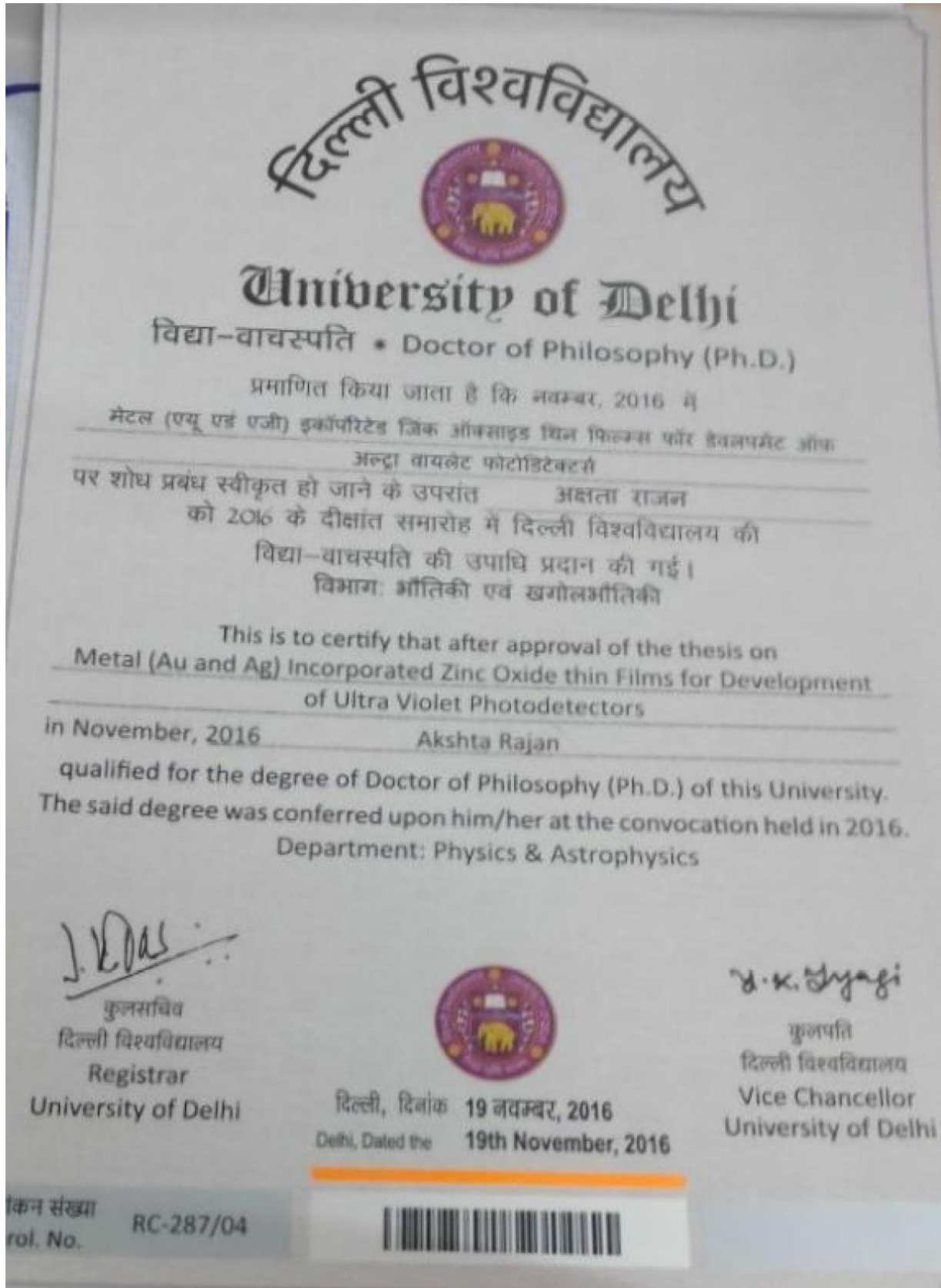
Miranda House

UNIVERSITY OF DELHI

Relevant supporting document for award of Ph.D. (Certificate/Degree/Result issued to student on successfully completing Ph.D.):



Miranda House UNIVERSITY OF DELHI





Miranda House

UNIVERSITY OF DELHI

Name of the student:	Manvi Tak
Year of registration:	01-03-2011
Year of obtaining Ph.D.:	
Supervisor:	Prof. Monika Tomar
Co-supervisor, if any:	
Title of the thesis:	Growth of metal oxide nanostructures for detection of Urea and Manengities

Relevant supporting document (issued by the BRS):



Miranda House UNIVERSITY OF DELHI

COURSE WORK IS COMPULSORY FOR EVERY CANDIDATE UNLESS NOT ELIGIBLE FOR LECTURESHIP

D.U.P. 407-7-07-50Px200

**BOARD OF RESEARCH STUDIES (SCIENCE)
FACULTY OF SCIENCE
UNIVERSITY OF DELHI**

(2)

Ref. No. SF-I/Ph.D./ 80562

Dated : 01.03.2011

With reference to his/her application for admission to Ph. D. Programme in Physics & Astrophysics
Mr./Mrs./Miss Manvi Tak is hereby informed that the Board of Research Studies
for Science in its meeting held on 18.02.2011 has provisionally selected him/her for registration to Ph.D.
Programme and has assigned him/her to Physics & Astrophysics Department under supervision
of Prof./ Dr. Dr. Monika Tomar on the following title of thesis:-

Growth And Characterization of Hybrid-Composit Thin Films For Electronic
Device Applications

1. His/her admission to Ph.D. Programme shall be provisional and the same shall be confirmed only when he/she has qualified in the course work and has completed other requirement such as passing in the oral test etc. to be laid down by the Departmental Research Committee in each case.
2. At the end of the six months, the Advisory Committee shall assess the progress after comprehensive written and or oral examination.
3. If the Advisory Committee is satisfied, it would recommend confirmation of the provisional admission previously granted and the Board if satisfied would confirm the provisional admission.
4. If the overall performance in respect of the above is found not to be satisfactory he/she shall be required to repeat the same within the next six months when his/her performance would be re-examined. If the performance is again found not to be satisfactory the Advisory Committee may recommend either a further chance to improve his/her performance or cancellation of the provisional admission granted to him/her.

He/She is further informed that the date of his/her joining and starting research in the Department will be his/her date of registration. He/She is therefore, requested to intimate this office the date from which he/she started his/her research in the Department. A blank form for joining Report is enclosed herewith which should be returned to this office duly filled in and signed by his/her supervisor and Head of the Department to enable his/her to deposit the prescribed supervision and other fees with the Cashier, Delhi University, within 15 days from the date of issue of this letter, i.e. till 29/3/11 failing which his/her selection to the course shall be deemed as cancelled.

His/her registration is governed by the provisions of Ordinance VI-B relating to Doctorate of Philosophy (Ph.D.) of this University

In case he/she passed the M/Sc. Examination from a University other than Delhi University he/she is required to be enrolled as a student of this University. An enrolment form is enclosed which must be sent to Academic Branch duly filled and signed by the Head of the Department immediately after joining the Ph.D. Course. The original certificates may also be produced.

Encl - As above.

Manvi Tak,
F-79, V/G-I,
Dilshad Colony,
Delhi-95

sell
Asstt./Dy Registrar (Science)

Copy forwarded for information to:- Physics & Astrophysics

1. The Head of the Department of University of Delhi, Delhi-7
Dr. Monika Tomar, Miranda House
2. Supervisor, Prof./Dr. University of Delhi, Delhi-7.
3. The Finance Officer, University of Delhi, Delhi-110007.
4. Co./Jt. Supervisor, Prof. Dr. _____

R-1415
5/3/11

Pras
Section Officer (Science)

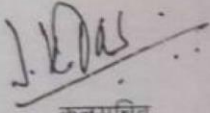



Miranda House UNIVERSITY OF DELHI

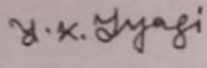
Relevant supporting document for award of Ph.D. (Certificate/Degree/Result issued to student on successfully completing Ph.D.):

दिल्ली विश्वविद्यालय
University of Delhi
विद्या-वाचस्पति * Doctor of Philosophy (Ph.D.)
प्रमाणित किया जाता है कि सितम्बर, 2016 में
गोथ एंड कैरेक्टराइजेशन ऑफ हाइब्रिड कम्पोजिट थिन फिल्मस फॉर बायोसेन्सिंग
एप्लिकेशन्स
पर शोध प्रबंध स्वीकृत हो जाने के उपरांत मानवी टाक
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 Hybrid Composite Thin Films for
Biosensing Applications
in September, 2016 Manvi Tak
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



कुलसचिव
दिल्ली विश्वविद्यालय
Registrar
University of Delhi




कुलपति
दिल्ली विश्वविद्यालय
Vice Chancellor
University of Delhi

दिल्ली, दिनांक 19 नवम्बर, 2016
Delhi, Dated the 19th November, 2016

नामांकन संख्या
Enrol. No. MH-713/04



002586



Miranda House

UNIVERSITY OF DELHI

Name of the student:	Surbhi Gupta
Year of registration:	29-12-2015
Year of obtaining Ph.D.:	2019
Supervisor:	Prof. Monika Tomar
Co-supervisor, if any:	
Title of the thesis:	Development of multi-component thin film for energy harvesting applications

Relevant supporting document (issued by the BRS):



Miranda House UNIVERSITY OF DELHI

J.U.P.-733-03-15-10 Page X 100

BOARD OF RESEARCH STUDIES (SCIENCE) FACULTY OF SCIENCE UNIVERSITY OF DELHI

Ref. No. Ref. : FOS-I/114/Ph.D./ 582-4

Dated : 06.01.2016
Physics & Astrophysics

With reference to his/her application for admission to Ph.D./ Programme in
Mr./Mrs./Miss. Ms. Surbhi Gupta is hereby informed that the Board of Research Studies for Science in
its meeting held on 29.12.2015 has provisionally selected him/her for registration to Ph.D. Programme and has
assigned him/her to Physics & Astrophysics Department under the supervision of
Prof./Dr. Dr. Monika Tomar, on the following proposed area of
research "Development of Multicomponent thin films for energy harvesting applications"

1. His/her admission to Ph.D. Programme shall be provisional and the same shall be confirmed only when he/she has qualified in the course work and has completed any other requirements, such as passing in the oral test etc., to be laid down by the Departmental Research Committee in each case.
2. In case the candidate is employed, provisional admission to Ph.D. would be allowed only if leave requirement is fulfilled.
3. At the end of six months, the Advisory Committee shall assess the progress of the candidate through a comprehensive written and oral examination/presentation.
4. If the Advisory Committee is satisfied, it would recommend confirmation of the provisional admission previously granted and the Board, if satisfied, would confirm the provisional admission.
5. If the overall performance in respect of the above is not found to be satisfactory, the candidate shall be required to repeat the same within the next six months when his/her performance would be re-examined. If the performance is again found not to be satisfactory the Advisory Committee may recommend either a further chance to improve his/her performance or cancellation of the provisional admission granted to him/her.

He/she is further informed that the date of his/her joining will be treated from the date of submission of fees in this University. A blank form for joining Report is enclosed herewith which should be returned to this office duly filled in and signed by his/her supervisor and Head of the Department to enable him/her to deposit the prescribed supervision and other fees with the Cashier, Delhi University, within 15 days from the date of issue of this letter i.e. 04.01.16 failing which his/her selection to the course shall be deemed as cancelled.

His/her registration is governed by the provisions of Ordinance VI-B relating to Doctorate of Philosophy (Ph.D.) of this University.

In case the candidate has passed the M.Sc. Examination from a University other than Delhi University, he/she is required to be enrolled as student of this University. An enrolment form is enclosed which must be sent to Academic Branch duly filled and signed by the Head of the Department immediately after joining the Ph.D. Course. The original certificate may also be produced.

Encl.: As above.
Ms. Surbhi Gupta,
29, Sawan Park Extension,
Ashok Vihar, Phase III,
Delhi-110052

Assistant Registrar (Science)

Copy forwarded for information to :-



Miranda House UNIVERSITY OF DELHI

Relevant supporting document for award of Ph.D. (Certificate/Degree/Result issued to student on successfully completing Ph.D.):



University of Delhi

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

प्रमाणित किया जाता है कि अक्टूबर, 2020 में

डिवेलपमेंट ऑफ स्ट्रॉंटीयम बैरियम नीयोबेट (एसबीएन) थिन फिल्म बेस्ड इलेक्ट्रो-ऑप्टिक मॉड्यूलटर

पर शोध प्रबंध स्वीकृत हो जाने के उपरांत सुरभि गुप्ता

को 2021 के दीक्षांत समारोह में दिल्ली विश्वविद्यालय की
विद्या-वाचस्पति की उपाधि प्रदान की गई |
विभाग: भौतिकी एवं खगोल भौतिकी

This is to certify that after approval of the thesis on
Development of Strontium Barium Niobate (SBN) thin film based Electro-optic
modulator

in October, 2020 Surbhi Gupta
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 2021.

Department: **Physics & Astrophysics**

Yikes Gupta

कुलसचिव
दिल्ली विश्वविद्यालय
Registrar
University of Delhi



दिल्ली, दिनांक 27 फरवरी, 2021
Delhi, Dated the 27th February, 2021

Ron

कुलपति
दिल्ली विश्वविद्यालय
Vice Chancellor
University of Delhi

नामांकन संख्या
Enrol.No. HR-670/2010



1005/75



Miranda House

UNIVERSITY OF DELHI

Name of the student:	Surbhi Jain
Year of registration:	29-12-2015
Year of obtaining Ph.D.:	2022
Supervisor:	Prof. Monika Tomar
Co-supervisor, if any:	
Title of the thesis:	Growth of thin films for optical device applications

Relevant supporting document (issued by the BRS):



Miranda House UNIVERSITY OF DELHI

I.P.-732-03-15-10 Page X 100

BOARD OF RESEARCH STUDIES (SCIENCE) FACULTY OF SCIENCE UNIVERSITY OF DELHI

Ref. No. Ref.: FOS-I/114/Ph.D./ 6485

Dated: 07.12.2016
26
Physics & Astrophysics

With reference to his/her application for admission to Ph.D./ Programme in
Mr./Mrs./Miss Ms. Surbhi Jain is hereby informed that the Board of Research Studies for Science in
a meeting held on 25.11.2016 has provisionally selected him/her for registration to Ph.D. Programme and has
assigned him/her to Physics & Astrophysics Department under the supervision of
Prof./Dr. Dr. Monika Tomar on the following proposed area of
research.

GROWTH OF OPTICAL APPLICATION DEVICES APPLICATIONS
THIN FILMS FOR

1. His/her admission to Ph.D. Programme shall be provisional and the same shall be confirmed only when he/she has qualified in the course work and has completed any other requirements, such as passing in the oral test etc., to be laid down by the Departmental Research Committee in each case.
2. In case the candidate is employed, provisional admission to Ph.D. would be allowed only if leave requirement is fulfilled.
3. At the end of six months, the Advisory Committee shall assess the progress of the candidate through a comprehensive written and oral examination/presentation.
4. If the Advisory Committee is satisfied, it would recommend confirmation of the provisional admission previously granted and the Board, if satisfied, would confirm the provisional admission.
5. If the overall performance in respect of the above is not found to be satisfactory, the candidate shall be required to repeat the same within the next six months when his/her performance would be re-examined. If the performance is again found not to be satisfactory the Advisory Committee may recommend either a further chance to improve his/her performance or cancellation of the provisional admission granted to him/her.

He/she is further informed that the date of his/her joining will be treated from the date of submission of fees in this University. A blank form for joining Report is enclosed herewith which should be returned to this office duly filled in and signed by his/her supervisor and Head of the Department to enable him/her to deposit the prescribed supervision and other fees with the Cashier, Delhi University, within 15 days from the date of issue of this letter i.e. 4.1.2017 failing which his/her selection to the course shall be deemed as cancelled.

His/her registration is governed by the provisions of Ordinance VI-B relating to Doctorate of Philosophy (Ph.D.) of this University.

In case the candidate has passed the M.Sc. Examination from a University other than Delhi University, he/she is required to be enrolled as student of this University. An enrolment form is enclosed which must be sent to Academic Branch duly filled and signed by the Head of the Department immediately after joining the Ph.D. Course. The original certificate may also be produced.

Assistant Registrar (Science)

Encl.: As above.

.....
Ms. Surbhi Jain
House No. 3791
Street No. -4, Kanhaiya Nagar,
Tri Nagar, Delhi-110035.



Miranda House UNIVERSITY OF DELHI

Relevant supporting document for award of Ph.D. (Certificate/Degree/Result issued to student on successfully completing Ph.D.):



दिल्ली विश्वविद्यालय



University of Delhi

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

प्रमाणित किया जाता है कि फरवरी, 2022 में

डिवेलप्मेंट ओफ एलआर-एसपीआर बेसड हैंडहेल्ड ऑप्टिकल सेन्सर्स फॉर डिटेक्शन ओफ बायोलॉजिकल एंड गेशियस एनालाइट्स

पर शोध प्रबंध स्वीकृत हो जाने के उपरांत **सुरभि जैन**

को विद्या-वाचस्पति की उपाधि प्रदान की गई |

विभाग: **भौतिकी एवं खगोल भौतिकी**

This is to certify that after approval of the thesis on

Development of LR-SPR based handheld optical sensors for detection of

biological and gaseous analytes

in February, 2022 **Surbhi Jain**

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

Department: **Physics & Astrophysics**

Yilias Gupta

कुलसचिव
दिल्ली विश्वविद्यालय
Registrar
University of Delhi



दिल्ली, दिनांक 26 फरवरी, 2022
Delhi, Dated the 26th February, 2022

6-2-19

कुलपति
दिल्ली विश्वविद्यालय
Vice Chancellor
University of Delhi

नामांकन संख्या
Enrol.No. HR-313/11



511517



Miranda House

UNIVERSITY OF DELHI

Name of the student:	Shweta Sharma
Year of registration:	20-12-2016
Year of obtaining Ph.D.:	2022
Supervisor:	Prof. Monika Tomar
Co-supervisor, if any:	
Title of the thesis:	Development of Lead Free Ferroelectrics based energy harvesters

Relevant supporting document (issued by the BRS):



Miranda House UNIVERSITY OF DELHI

U.P.-733-03-15-10 Pads X 100

BOARD OF RESEARCH STUDIES (SCIENCE) FACULTY OF SCIENCE UNIVERSITY OF DELHI

Ref. No. Ref. : FOS-I/114/Ph.D./ 65-23

Dated : 08.12.2016
Physics & Astrophysics

With reference to his/her application for admission to Ph.D./ Programme in
Mr./Mrs./Miss..... Ms. Shweta Sharma is hereby informed that the Board of Research Studies for Science
its meeting held on 25.11.2016 has provisionally selected him/her for registration to Ph.D. Programme and l
assigned him/her to Physics & Astrophysics Department under the supervision

Prof./Dr. Dr. Munika Tomar on the following proposed area
research..... "DEVELOPMENT OF LEAD FREE FERROELECTRIC BASED
ENERGY HARVESTERS"

1. His/her admission to Ph.D. Programme shall be provisional and the same shall be confirmed only when he/she is qualified in the course work and has completed any other requirements, such as passing in the oral test etc., to be laid down by the Departmental Research Committee in each case.
2. In case the candidate is employed, provisional admission to Ph.D. would be allowed only if leave requirement fulfilled.
3. At the end of six months, the Advisory Committee shall assess the progress of the candidate through a comprehensive written and oral examination/presentation.
4. If the Advisory Committee is satisfied, it would recommend confirmation of the provisional admission previously granted and the Board, if satisfied, would confirm the provisional admission.
5. If the overall performance in respect of the above is not found to be satisfactory, the candidate shall be required to repeat the same within the next six months when his/her performance would be re-examined. If the performance again found not to be satisfactory the Advisory Committee may recommend either a further chance to improve his/her performance or cancellation of the provisional admission granted to him/her.

He/she is further informed that the date of his/her joining will be treated from the date of submission of fees in this University. A blank form for joining Report is enclosed herewith which should be returned to this office duly filled in and signed by his/her supervisor and Head of the Department to enable him/her to deposit the prescribed supervision and other fees with the Cashier, Delhi University, within 15 days from the date of issue of this letter i.e. 28.12.16 failing which his/her selection to the course shall be deemed as cancelled.

His/her registration is governed by the provisions of Ordinance VI-B relating to Doctorate of Philosophy (Ph.D.) of this University.

In case the candidate has passed the M.Sc. Examination from a University other than Delhi University, he/she is required to be enrolled as student of this University. An enrolment form is enclosed which must be sent to Academic Branch duly filled and signed by the Head of the Department immediately after joining the Ph.D. Course. The original certificate may also be produced.

Encl.: As above.

sel
Assistant Registrar(Science)

.....
..... Ms. Shweta Sharma
..... 26-HIG, Taj Nagri, Phase 1,
..... Agra, U.P.

Copy forwarded for information to :-

1. The Head, Department of Physics & Astrophysics




Miranda House UNIVERSITY OF DELHI

Relevant supporting document for award of Ph.D. (Certificate/Degree/Result issued to student on successfully completing Ph.D.):

54



दिल्ली विश्वविद्यालय



University of Delhi
विद्या-वाचस्पति * Doctor of Philosophy (Ph.D.)
प्रमाणित किया जाता है कि फरवरी, 2022 में
ग्रोथ एंड कैरेक्टराइजेशन ओफ के.एन.एन थिन फिल्मस फोर नॉन-लीनीअर ऑप्टिकल ऐप्लिकेशन्स एंड
एम.ई.एम.एस डिवाइसेज

पर शोध प्रबंध स्वीकृत हो जाने के उपरांत **श्वेता शर्मा**
को विद्या-वाचस्पति की उपाधि प्रदान की गई।
विभाग: भौतिकी एवं खगोल भौतिकी

This is to certify that after approval of the thesis on
**Growth and Characterization of KNN Thin Films for Nonlinear Optical
Applications and MEMS Devices**
in February, 2022 **Shweta Sharma**
qualified for the degree of Doctor of Philosophy (Ph.D.) of this University.

Department: **Physics & Astrophysics**

Yash Gupta
कुलसचिव
दिल्ली विश्वविद्यालय
Registrar
University of Delhi


दिल्ली, दिनांक 26 फरवरी, 2022
Delhi, Dated the 26th February, 2022

6/2/22
कुलपति
दिल्ली विश्वविद्यालय
Vice Chancellor
University of Delhi

नामांकन संख्या
Enrol.No. HR-310/2011



510089



Miranda House

UNIVERSITY OF DELHI

Name of the student:	Rakesh Sonkar (M.Phil)
Year of registration:	09-01-2011
Supervisor:	Prof. Monika Tomar
Co-supervisor, if any:	-
Title of the thesis:	Growth and Characterization of nanostructured thin film for gas sensor applications
Whether receiving scholarship, Name of the scholarship:	-

Relevant supporting document (issued by the BRS):



Miranda House UNIVERSITY OF DELHI

Roll No. 10122007

S. No. 4328

बुन्देलखण्ड विश्वविद्यालय



BUNDELKHAND UNIVERSITY

दर्शन निष्णात
(एम. फिल.)

प्रमाणित किया जाता है कि राकेश कुमार सोनकर को निर्धारित पाठ्यक्रम पूर्ण करने के उपरान्त वर्ष 2011 की परीक्षा में भौतिक विज्ञान विषय लेकर प्रथम श्रेणी में उत्तीर्ण होने पर दर्शन निष्णात की उपाधि प्रदान की जाती है।

MASTER OF PHILOSOPHY
(M. PHIL)

This is to certify that RAKESH KUMAR SONKAR completed the prescribed course of study in PHYSICS and passed the examination of 2011 in FIRST division. He/She is conferred the degree of Master of Philosophy.

Bundelkhand University
Uttar Pradesh, India
PIN-201 002, Email: UP 384128

22 FEB 2013

Date: _____
Registrar: _____
Vice-Chancellor: _____



Miranda House UNIVERSITY OF DELHI

BUNDELKHAND UNIVERSITY, JHANSI

DEPARTMENT OF PHYSICS

M. Phil. (Physics) 2010-11

TOPIC APPROVAL OF DISSERTATION/THESIS

I. The Scholar

1. Name Rakesh Kumar Sonkar
2. Address Mo-Sukhipur, Post-Sadar, Distt -Jaunpur (U.P.), PinCode 222001

II. Supervisor

1. Name Dr. MONIKA TOMAR
2. Designation Assistant Professor
3. Institute address Department of Physics, Miranda House, Univ. of Delhi
4. Academic Qualification M.Sc., Ph.D. Physics

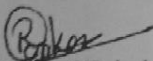
III. Co-supervisor

1. Name
2. Designation
3. Institute address
4. Academic Qualification

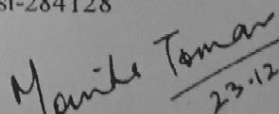
IV. Topic Chosen Growth and Characterization of tin oxide (SnO_2) thin film for gas sensor application.

I Dr. Monika Tomar

Mr/Ms/Mrs. Rakesh Kumar Sonkar prepared to guide
a M. Phil
Scholar of the department of physics, Bundelkhand University, Jhansi-284128


Sign. of Scholar

Sign. of Co-supervisor


23.12.2010
Sign. of Supervisor

Signature of Head
Department of Physics,
Bundelkhand university, Jhansi-284128