DOSSIER

TO BE FILLED BY TEACHER/ ACADEMIC

1. Details of the Teacher/ Academic :

Name:	SHUBHA GOKHALE
Date of Birth	12.10.1962
Date of Joining in IGNOU:	07.09.2000
Current Designation :	PROFESSOR OF PHYSICS
Level as on date :	Level-14
Highest Educational Qualifications	M.Sc. (PHYSICS), PH.D.(PHYSICS) LLM (INTELLECTUAL PROPERTY RIGHTS)
School/ Division/ Institute/ Centre/ Cell	SCHOOL OF SCIENCES

2. Honour/Award/Fellowship/membership of Professional body/ Statutory body (internal/ external) received by the Teacher/ Academic:

Name of the recipient	Honour /Award/ Fellowship name/ membership of Professional body/ Statutory body	Agency name /Name of statutory body/ institution/ Apex body	Period
	Second best research paper award	IGNOU	2005 (20th Convocation)
	Post Doctoral fellowship to conduct research at Technical University, Mun Germany	DAAD	1994-1996
	INSA fellowship under Scientific Exchange Programme to conduct research at the Fritz-Habe Institut der Max-Planck-Gesellschaft , Berlin, Germ	INSA	November 2002-January 2003
	S.S.Joshi award for Topping in M.Sc. (Physics)	Pune University	1985

3. Books/Book Chapter: PLEASE REFER APPENDIX-1 (TOTAL-02)

- Co-author/co-editor if any, title, place of publication, publisher, Year, page (no) s, ISBN No

SNo.	Name of Author1/ Editor 1, & Co- author (s) / Co-editor (s) (if any)	Title of chapter/book	Place of publication	Publisher	Year	Total Pages	ISBN No.

4. Research Articles/Publications: PLEASE REFER APPENDIX-2 (TOTAL : 32)

SNo.	Author/ Co-author (if any)	Title	Name of Journal	Volume	page no. (s)	Year	ISSN No
1.							
2.							

5. Policy Documents Reports/ Mimeos:

SNo.	Title	Institution/ Agency	Year
1.	IPR POLICY FOR IGNOU	IGNOU	2015

6. MOOCs/ eSLMs/ eModules developed : NIL

SNo.	Author/ Co-author (if any)	Title	Credits	Level	Host Portal: (SWAYAM/ NPTEL/ NMEICT/ ePG Pathshala/ Any Other)	Year	Weblink

7. Presentation/Invited talk/Chair in National or International Seminar/Conference/ Workshops (Please do not mention if it is only participation without presentation)

PLEASE REFER APPENDIX-3 (TOTAL : 12)

SNo.	Author/ Co author (if any)	Title of presentation, /Talk/Lecture	Name Organizing institute	Conference	City	Date and Year

8. Consultancy assignment (if any): NIL

SNo.	Organization/ agency	Cost, title of consultancy	Duration

9. Details of Institution/ Government/ Industry / own Institution Sponsored Research Projects (including Programme Evaluation) and Amount (Both completed and ongoing):

SNo.	Agency	Amount	Duration with dates	Status i.e. ongoing/ completed
1	IUAC, NEW DELHI	Rs. 2,OO,OOO/-	AUG 2009-JUL 2013	COMPLETED

10. Details of PhD and MPhil Scholars (including those awarded degree):

SNo.	Name and enrolment no:	Year of registration	Year of completion/ award
1.	RICHA JAIN (144500034)	JANUARY 2014	2021

11. Details of Programmes/ Courses coordinated/ written/ edited/ translated (if applicable):

PLEASE REFER APPENDIX-4

SNo.	Programme	Course	Unit (print)/ Audio/Video/ eSLM	Coordinated/Written / Edited (content/ language/ format)/ Translated	Period

12. Training programmes designed and conducted, duration and dates : NIL

SNo.	Programme	Dates	Place	Number of Participants

13. Details of Counselling sessions conducted:

SNo.	Programme	Course	Place	Dates	Duration	Mode (Specify- Face to Face Radio counselling Teleconferencing Web conferencing Any Other)
1	B.Sc.	PHe-10	EMPC	2005-2024	~20 sessions of 45 min each	Teleconference
2	B.Sc.	PHE-16	EMPC	2005-2014	~20 sessions of 45 min each	Teleconference
3	PGDIPR	MIP-001 to 008	EMPC	2005-2007	~ 50 sessions of 45 min	Teleconference

					each	
4	B.Sc.	Physics Electives	EMPC	1016-1024	~30 sessions of 60 min each	Radio counselling
5	M.Sc.	Physics	EMPC	2023-24	03 sessions of 60 min each	Radio counselling
6	CPLT	Physics Electives	EMPC	2018-2024	05 Sessions of 60 min each	Radio counselling
7	ACE	ACE	VCO	20.03.2019	01 session of 45 min	Web conferencing

14. Details of Patents granted (if any): NIL

15. Contribution to IGNOU's corporate life:

SNo.	Chairperson/ Member of Committee	Name of the Committee	Date/ period
1.	Member	Board of Management	Nov-2022 - Till date
2.	Member	Academic Council	Aug 2014- May 2015
3.	Member	Guest House Committee	2013-2018
4.	Member	House Allotment Committee	2018-2020

16. Administrative position/s held in the University (even as in charge) : NIL

SNo.	Designation	Period

17. Any other contribution/information

Signature of Teacher /Academic

APPENDIX-1

CHAPERS IN BOOKS

1. Synthesis, Characterization and Investigations of Antimicrobial Properties of Silver Nanoparticles Via a Green Method Using Mulberry (Morus Alba L) Tree Leaves
   R. Rubia, Yashika Remy, Namrata Rajeshwari, Indu Tucker Sidhwani, Kavita Vasdev, Mangala Joshi, **Shubha Gokhale** and Vandna Luthra
   Chapter in the book: Nano Biomaterials, Edited by V. Rajendran, P. Prabu and K. E. Geckeler, (2013): pages 149-154; . Bloomsbury Publishing Pvt Ltd., ISBN: ISBN 10: 9382563377/
   ISBN 13: 9789382563372

2. Synthesis and characterization of metallic multilayer films
   S.K.Kulkarni, M.Vedpathak, A.S.Nigavekar, **Shubha Gokhale,** R.Krishnan, H.Lassari and M.Tessier in the book "Advances in Physical Metallurgy" Ed. S.Banerjee and R.V.Ramanujan (Golden Breach Publishers, Netherlands) (1996) 143-149, ISBN 2-88449-210-0

APPENDIX-2

LIST OF PUBLICATIONS IN REFEREED JOURNALS

INTERNATIONAL JOURNALS:

1. Optimization of magnetic properties of $MnFe_2O_4$ by modulating molarity of NaOH as precipitating agent
   Sudha Gulati, **Shubha Gokhale** and Vandna Luthra
   International Journal of Materials Research **115**(2024) 266-273(IMPACT FACTOR: **0.80**)

2. Effects of Yb Doping on Structural, Morphological, and Temperature Dependent Magnetic Properties of $MnFe_2O_4$ Nanoparticles
   Sudha Gulati, **Shubha Gokhale** and Vandna Luthra
   Journal of Superconductivity and Novel Magnetism **36** (2023) 1033-1041 (IMPACT FACTOR: **2.683**)

3. Structural, morphological and optical properties of gadolinium doped magnetite nanoparticles
   Richa Jain, Vandna Luthra, Manju Arora and **Shubha Gokhale**
   Advanced Science, Engineering and Medicine **11** (2019) 88–91
   (ISSN:2164-6627 (print); EISSN: 2164-6635 (online))

4. Dysprosium doping induced correlated electrical and optical behaviour of magnetite
   Richa Jain, Vandna Luthra and **Shubha Gokhale**
   AIP Conference Proceedings **2136** (2019) 040002
   (ISSN: 0094-243X (print) 1551-7616 (online)) (IMPACT FACTOR: **0.40**)

5. Infrared Spectroscopic Study of Magnetic Behavior of Dysprosium Doped Magnetite Nanoparticles
   Richa Jain, Vandna Luthra, Manju Arora and **Shubha Gokhale**
   Journal of Superconductivity and Novel Magnetism **32**(2019) 325–333
   (ISSN: 1557-1939 (Print) , 1557-1947 (Online)) (IMPACT FACTOR: **1.130**)

6. Probing influence of rare earth ions (Er3+, Dy3+ and Gd3+) on structural, magnetic and optical properties of magnetite nanoparticles
   Richa Jain, Vandna Luthra and **Shubha Gokhale**
   Journal of Magnetism and Magnetic Materials **456** (2018) 179–185
   (ISSN: 0304-8853) (IMPACT FACTOR: **2.683**)

7. Dysprosium doping induced shape and magnetic anisotropy of $Fe_{3-x}Dy_xO_4$ (x=0.01–0.1) nanoparticles,
   Richa Jain, Vandna Luthra and **Shubha Gokhale**,
   Journal of Magnetism and Magnetic Materials **414**(2016) 111–115
   (ISSN: 0304-8853) (IMPACT FACTOR: **2.683**)

8. Modifying the morphology and magnetic properties of magnetic nanoparticles using swift heavy ion irradiation
   Shubha Gokhale, S. Lamba, Neha Kumari, Bhupendra Singh, D.K. Avasthi and S.K. Kulkarni
   Nuclear Inst. and Methods in Physics Research, **B 333** (2014) 64-68
   (ISSN: 0168-583X) (IMPACT FACTOR: **1.210**)

9. A magnetic nano-composite soft polymeric membrane
   Akanksha Singh, Mandar Shirolkar, Mukta V. Limaye, **Shubha Gokhale**, Chantal Khan-Malek and Sulabha K. Kulkarni
   Microsystem Technologies **19** (2013) 409
   (ISSN: 0946-7076 (Print) 1432-1858 (Online)) (IMPACT FACTOR: **1.513**)

10. Iron substitution in CdSe nanoparticles: Magnetic and optical properties

Shashi B. Singh, Mukta V. Limaye, Sadgopal K. Date, **Shubha Gokhale,** and Sulabha K. Kulkarni
Phys. Rev. **B 80** (2009) 235421
(ISSN: 2469-9950 (print)/2469-9969 (online)) (IMPACT FACTOR: **3.813**)
(Selected for the Virtual Journal of Nanoscale Science & Technology Vol 21, Issue 1, January 4, 2010)

11. Template-free ZnS nanorod synthesis by microwave irradiation
Mukta V. Limaye, **Shubha Gokhale**, S. A. Acharya and S. K. Kulkarni
Nanotechnology **19** (2008) 415602
(ISSN: Online ISSN: 1361-6528/ Print ISSN: 0957-4484) (IMPACT FACTOR: **3.399**)

12. Self-organization of Pb thin films on Cu(111) induced by quantum size effects
J. H. Dil, J.W. Kim, Shubha Gokhale, M. Tallarida and K. Horn
Physical Review **B 70** (2004) 045405
(ISSN: 2469-9950 (print)/2469-9969 (online)) (IMPACT FACTOR: **3.813**)
(Selected for the Virtual Journal of Nanoscale Science & Technology Vol 10, Issue 4, July 26, 2004)
13. Probing interface electronic structure with overlayer quantum well resonances: Al/Si (111)
L.Abelle, C.Rogero, P.Kratzer, **Shubha Gokhale** and K.Horn
Physical Review Letters **87** (2001) 156801-1
(ISSN: 0031-9007 (print)/1079-7114 (online)) (IMPACT FACTOR: **8.839**)

14. Quantum well states in ultrathin aluminium films on Si(111)
L. Abelle, C.Rogero, **Shubha Gokhale**, S. Kulkarni and K.Horn
Surface Science **482-485** (2001) 488
(ISSN: 0039-6028) (IMPACT FACTOR: **1.849**)

15. Silicon bonding for ultrahigh vacuum surface science studies
Shubha Gokhale, A. Fink, P.Trischberger, K. Eberle and W.Widdra
Journal of Vacuum Science Technology **A19** (2001) 706
(ISSN: 0734-2101) (IMPACT FACTOR: **1.833**)
(Selected for the Virtual Journal of Nanoscale Science & Technology Vol 3, Issue 13, March 26, 2001)

16. Surface morphology and electronic structure of Ge/Si(111) 7 × 7 system
A.Lobo, **Shubha Gokhale**, and S.Kulkarni
Applied Surface Science **173** (2001) 270
(ISSN: 0169-4332) (IMPACT FACTOR: **5.155**)

17. Temperature-dependent impedance anomaly, microwave GMR and exchange-coupling in thin Ni/Cu multilayerd films
B.K. Kuanr, **Shubha Gokhale**, M. Vedpathak, A.V. Kuanr and G. Nimtz
Journal of Physics D: Applied Physics **33** (2000) 34
(ISSN Online ISSN: 1361-6463/Print ISSN: 0022-3727) (IMPACT FACTOR: **2.829**)

18. Deposition and characterization of $Cd_xHg_{1-x}Te$ films electroplated from a non-aqueous bath
J.P. Nair, R. Jayakrishnan, N.B. Chaure, **Shubha Gokhale**, A.Lobo, S.K. Kulkarni and R.K. Pandey
Journal of Physics and Chemistry of Solids **60** (1999) 1693
(ISSN: 0022-3697) (IMPACT FACTOR: **2.752**)

19. Studies with Ni/Ti multilayer films using x-ray photoelectron spectroscopy and neutron reflectometry: Microscopic characterization of structure and chemical composition
M. Vedpathak, S.Basu, **Shubha Gokhale** and S.K.Kulkarni
Thin Solid Films **335** (1998) 13
(ISSN: 0040-6090) (IMPACT FACTOR: **1.888**)

20. Density functional investigations of the geometric and electronic structure of Ethylene adsorbed on Si(001)
U.Birkenheuer, U.Gutdeutsch, N. Rösch, A.Fink, **Shubha Gokhale,** P.Trischberger, D.Menzel and W.Widdra
Journal of Chemical Physics **108** (1998) 9868
(ISSN: 0021-9606) (IMPACT FACTOR: **2.997**)

21. One-dimensional delocalized adsorbate Bloch states on a semiconductor surface C_2H_4/Si(001)−(2×1)
W. Widdra, A. Fink, **Shubha Gokhale**, P. Trischberger, D. Menzel, U. Birkenheuer, U. Gutdeutsch and N. Rösch
Physics Review Letters **80** (1998) 4269
(ISSN: 0031-9007 (print)/1079-7114 (online)) (IMPACT FACTOR: **8.839**)

22. Electronic structure of benzene adsorbed on single domain Si(001)-(2X1) : A combined experimental and theoretical study
Shubha Gokhale, P. Trischberger, D. Menzel, W. Widdra, H. Dröge, H.-P. Steinrück, U. Birkenheuer, U. Gutdeutsch and N. Rösch
Journal of Chemical Physics **108** (1998) 5554
(ISSN: 0021-9606) (IMPACT FACTOR: **2.997**)

23. One dimensional xenon band structures on hydrogen modified and stepped platinum surfaces.
P. Trischberger, H. Dröge, **Shubha Gokhale,** J.Henk, H.-P. Steinrück, W. Widdra and D. Menzel
Surface Science **377-379** (1997) 155
(ISSN: 0039-6028) (IMPACT FACTOR: **1.849**)

24. One dimensional band structure - rare gases on Pt(110) 1X 2
M.Weinelt, P. Trischberger, W.Widdra, K.Eberle, P.Zebisch, **Shubha Gokhale,** D. Menzel, J. Henk, R.Feder, H. Dröge and H.-P. Steinrück
Physical Review **B 52** (1995) R-17048
(ISSN: 2469-9950 (print)/2469-9969 (online)) (IMPACT FACTOR: **3.813**)

25. Dielectric function and optical conductivity of TiO_x ($0.8< x < 1.3$) determined from electron energy loss spectroscopy
Shubha Gokhale, S. R. Barman and D.D. Sarma
Physical Review **B 52** (1995) 14526
(ISSN: 2469-9950 (print)/2469-9969 (online)) (IMPACT FACTOR: **3.813**)

26. Chemical reactivity and band off-set at CdS/Si interface
M.Kundu, S.Mahamuni, **Shubha Gokhale** and S.K.Kulkarni
Applied Surface Science **68** (1993) 95
(ISSN: 0169-4332) (IMPACT FACTOR: **5.155**)

27. X-ray photoelectron spectroscopy analysis of SS 304 samples treated with argon glow discharge conditioning
S.Anjali, V.P.Salvi, S.V.Gogawale, S.K.Kulkarni and **Shubha Gokhale**
Vacuum **43** (1992) 1197
(ISSN: 0042-207X) (IMPACT FACTOR: **2.515**)

28. Chemical interaction at Tm/Si(111) interface
Shubha Gokhale, S. Mahamuni, K.Joshi, A.S. Nigavekar and S.K.Kulkarni
Surface Science **257** (1991) 157
(ISSN: 0039-6028) (IMPACT FACTOR: **1.849**)

29. Photoemission and x-ray diffraction study of Er/Si(111) interface
Shubha Gokhale, S.Mahamuni, S.V.Deshmukh, V.J.Rao, A.S.Nigavekar and S..K.Kulkarni
Surface Science **237** (1990) 127

(ISSN: 0039-6028) (IMPACT FACTOR: **1.849**)

30. XPS and XRD investigations of Dy/Si interface
Shubha Gokhale, N.Ahmed, S.Mahamuni, V.J.Rao, A.S,Nigavekar and S.K.Kulkarni
Surface Science **210** (1989) 85
(ISSN: 0039-6028) (IMPACT FACTOR: **1.849**)

NATIONAL JOURNALS

31. Design, development and fabrication of deformable mirror
S. Shinde, **Shubha Gokhale** and S. Phadke
Journal of Instrumentation Society of India **32** (2002) 213
(ISSN: 0970-9983)

32. Nanostructures bring quantum mechanics in reality
Shubha Gokhale
Physics Education **14** (1998) 389
(ISSN: 0970-5953)

APPENDIX-3

LIST OF PRESENTATIONS IN CONFERENCES/WORKSHOPS

1. XPS and XRD investigations of some Rare Earth Metal/ silicon interfaces
   Shubha Gokhale, A.S.Nigavekar and S.K.Kulkarni
   Third National seminar on X-ray Spectroscopy and Allied Areas,
   REC, Srinagar (8-12 October 1989)

2. GaAs/Dy interface investigations using HREELS and XPS
   Shubha Gokhale, A.S.Nigavekar and S.K.Kulkarni
   Materials Research Society **EA-21** (1990) 99.

3. One dimensional band structures - rare gases on Pt(11)-(1X2)
   M.Weinelt, P.Trischberger, W.Widdra, K.Eberle, P.Zebisch, **Shubha Gokhale**,
   D. Menzel, J.Henk, R.Feder, H.Dröge and H.-P. Steinrück
   Röntgen Centennial Conference, Würzburg, Germany (23-27 October 1995)

4. Study of Benzene on Si(100)-(2X1)
   Shubha Gokhale, W.Widdra, P.Trischberger, D.Menzel, H.Dröge, H. Koschel
   and H.-P. Steinrück
   German Physical Society Spring Meeting, Regensburg, Germany
   (25-29 March 1996)

5. One dimensional band structure of Xe on H modified Pt(110)-(1X2)
   P.Trischberger, **Shubha Gokhale**, W.Widdra, D.Menzel, H.Dröge and
   H.-P.Steinrück
   German Physical Society Spring Meeting, Regensburg, Germany
   (25-29 March 1996)

6. Angle Resolved Photoemission Spectroscopy of Benzene/ Si(100)-(2X1)
   interface.
   Shubha Gokhale, W.Widdra, P.Trischberger, D.Menzel, H.Dröge, H. Koschel
   and H.-P. Steinrück
   Conference on Frontiers in Materials Modelling and Designe (FMMD),
   Indian Institute of Metals, IGCAR, Kalpakkam (20-23 August 1996)

7. Investigations of Ge/Si interface using X-ray photoelectron spectroscopy and
   atomic force microscopy.
   A.Lobo, **Shubha Gokhale** and S.K.Kulkarni
   Sixth National seminar on X-ray Spectroscopy and Allied Areas,
   Govt. Post Graduate Arts and Science College, Ratlam (17-19 November 1997)

8. Indigeneous development of Shack-Hartmann type wavefront sensor
   Shubha Gokhale, S.Shinde, A.Kalkarni and S.Phadke
   National Symposium on Instrumentation (NSI-25) Bangalore (8-12 Nov. 2000)

9. Resource person on "Robotics" in the Refresher Course in Instrumentation organized by
   University of Pune (December 2000)

10. Panellist in the National Symposium on IP education, training and research Organized by WIPO-MHRD-IIT, Delhi, New Delhi (17-18 May 2005)

11. Resource person at Curriculum Development Workshop on "Teaching of Intellectual Property Rights" at Department of Management Studies, IIT, Delhi, (25-26 March 2006)

12 Lecture on "Nanocoatings" at Short term Training Programme on Recent Developments in Nano & Micro Manufacturing organized by SOET, IGNOU (15-19 April 2013).

APPENDIX-4

Details of Programmes/ Courses coordinated/ written/ edited/ translated

S No	Programme	Course	Unit (print)/ Audio/ Video/ eSLM	Coordinated/Written/ Edited (content/ language/ format)/ Translated	Period
1	M.Sc. (Physics)	Nanoscience (E) (MPHE-027)	Print	Coordination, Content and Format editing	July 2022 – till date
2	M.Sc. (Physics)	Materials Science (E) (MPHE-025)	OERs	Coordination, Curetting of OERs	July 2022 – till date
3	M.Sc. (Physics)	Electronics Laboratory (E) (MPH-010)	Print	Coordination, Content and Format editing	July 2021 – till date
4	M.Sc. (Physics)	Electronics (E) (PHE-005)	OERs	Coordination, Curetting of OERs	July 2021 – till date
5	BSCG	Mechanics: Laboratory (E&H) (BPHCL-132)	Print	Coordination, Course writing, Content and Format editing	Jan 2016 – till date
6	BSCG	Electricity and Magnetism: Laboratory (E&H) (BPHCL-134)	Print	Coordination, Course writing, Content and Format editing	Jan 2016 – till date
7	BSCG	Thermal Physics and Statistical Mechanics (E&H) (BPHCT-135)	Print	Course writing, Content and Format editing	Jan 2016 – till date
7	BSCG	Thermal Physics and Statistical Mechanics: Laboratory(E&H) (BPHCL-136)	Print	Coordination, Course writing, Content and Format editing	Jan 2016 – till date
8	BSCG	Waves and Optics (E&H) (BPHCT-137)	Print	Course writing, Content and Format editing	Jan 2017 – till date
9	BSCG	Digital and Analog Circuits and Instrumentation (E&H) (BPHET-143)	Print	Coordination, Course writing, Content and Format editing	Jan 2017 – till date
10	BSCG	Digital and Analog Circuits and Instrumentation: Laboratory (E&H) (BPHEL-144)	Print	Coordination, Course writing, Content and Format editing	Jan 2017 – till date
11	B.Sc.	Physics Laboratory-I (PHE-03/BPHL-103	Print	Coordination, Content and Format editing of revised version	Aug 2002 - till date
12	B.Sc.	Thermodynamics and Statistical Mechanics (PHE-06/BPHE-106)	Print	Course team member, Content and Format editing of revised version	Sept 2000 - till date
13	B.Sc.	Electrical Circuits and Electronics (PHE-10)	Print	Coordination	Aug 2002- till date
14	B.Sc.	Physics of Solids (PHE-13)	Print	Content and Format editing	Sept 2000 – till date

15	B.Sc.	Communication Physics (PHE-16)	Print	Coordination, Content and Format editing	Jan 2002- till date
16	CPLT	Laboratory Techniques in Physics (CLT-104)	Print	Content and Format editing of revised version	Jan 2013- till date
17	CPLT	Basic Experiments in Physics (CLTL-104)	Print	Coordination, Content and Format editing of revised version	Jan 2013- till date
18	PGDIPR	General Overview of Intellectual Property (MIP-001)	Print	Coordination, Content and Format editing	Feb 2004 – Jan 2008
19	PGDIPR	Industrial Property: Patents, Designs, Plant Varieties (MIP-002)	Print	Coordination, Content and Format editing	Feb 2004 – Jan 2008
20	PGDIPR	Industrial Property : Trademarks, Geographical Indications, Trade Secrets and Unfair Competition (MIP-003)	Print	Co-coordination, Content and Format editing	Feb 2004 – Jan 2008
21	PGDIPR	Protection of Industrial Property at National Level (MIP-005)	Print	Coordination, Content and Format editing	Feb 2004 – Jan 2008
22	PGDIPR	Contemporary Intellectual Property Issues (MIP-008)	Print	Coordination, Content and Format editing	Feb 2004 – Jan 2008