Dr. Medha Shirish Gijare

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Date & Place of birth 17.07.1968 & Aurangabad (Maharashtra), India

Nationality Indian

Place of work: General Science & Humanities department All India Shri Shivaji Memorial Society's Polytechnic, Kennedy Road, Pune-411 001, Maharashtra, INDIA

Ph: (Off): 020-26058077-3028

Employment profile: Total Teaching experience :33 Years

Aug. 1, 1996 – till date	Selection grade Lecturer in Physics at All India Shri Shivaji Memorial Society's Polytechnic, Pune, Maharashtra, India.
July 22, 1993 – July 31,1996	Lecturer in BCS Electronics at Nowrosjee Wadia College, Pune, Maharashtra, India.
July 17, 1989 – April 20,1993	Lecturer in BCS Electronics at Nowrosjee Wadia College, Pune, Maharashtra, India.

Academic profile:

Educational Qualifications				
Examination	Name of the Institute/ university	Subject	Date of passing	Percentage of Marks
SSC	SSC Board Pune	English, Marathi, Maths, Hindi, Science, Soc. Science	12 th June 1983	77.29 %
B.Sc.	University of Pune	Electronic Science	12 th July 1988	65 %
M.Sc.	University of Pune	Physics	30 th July 1993	65.42 %
M.Phil	University of Pune	Some investigations of Cu/Fe, Cu/Co, Electrodeposited multilayer Films	8 th August 2000	'A' Grade
Ph.D	University of Pune	Synthesis and characterization of functionalized graphene for its applications as biosensors	4 th January 2022	'A' Grade
ADCCSSAA	MSBTE Mumbai	Computer Applications	6 th October 1990	68 %
MSCIT	MSBTE Mumbai	Information Technology	September 2003	85 %
Academic	SWAYAM-UGC	Online certification course-16	December2019	94%
Writing Garwhal University		weeks		Gold Medal
Biomedical	NPTEL-SWAYAM	Online FDP certification	November 2019	73%
Nanotechnology	IIT-Roorkee	course-4 weeks		Elite
Teaching and	NPTEL-SWAYAM	Online FDP certification	September-	77%
Learning for General Program [TALG]	IISC-Banglore	course-4 weeks	2019	Silver Medal
Area of Specialization: Basic Physics, Applied Physics, Basic electronics, nanotechnology				

Awards/ Fellowships/Recognition:

- Received second position in paper presentation at Raman Memorial conference organized by the department of Physics, SPPU, Pune in March 2021
- Felicitated with "AISSMS EXCELLENCE AWARD "on 5th Sept 2019
- Winner of SPPU's "Avishkar-17" zonal research competition.
- Received "Certificate of Appreciation" from MSBTE Mumbai for preparation of Laboratory manuals for First year Diploma Engineering.
- Resource person for the FDP program "Pedagogy Driven Accreditation" conducted by RIT polytechnic, Pune
- Trainer for Teachers of Physics in Maharashtra on behalf of MSBTE.
- Resource person for Web-based learning material for GPDL students on VIDYA VAHINI for distance education.

Institute Level Academic and Administrative Portfolios:

- National Board of Accreditation (NBA) coordinator since 2014 in AISSMS'S Polytechnic, Pune.
- Academic Co-ordinator (MSBTE representative) since 2001 in AISSMS'S Polytechnic, Pune.
- Officer in charge in regional assessment center (RAC)
- The member of a three-member committee in regional review assessment center RRAC
- Project Co-ordinater & Subject Expert for Curriculum revision and preparation of laboratory Manuals of MSBTE, Maharashtra State Board of Technical Education, Mumbai for the first-year diploma students in Maharashtra, for 'C', 'E', "G' 'I' scheme.
- Head of Department of General Science & Humanities in AISSMS'S Polytechnic, Pune from June 1997 to January 2002.
- 'MSBTE representative' in the External Academic Monitoring Committee (EAMC- Inspection Committee) every year since 2001.
- Paper Setter in MSBTE Mumbai since 2006.
- Controller of Examination for Summer & winter Examinations conducted by MSBTE Mumbai in various institutions.
- Member of First Year Diploma Engineering admission committee in the institute since 1997 (11 years).
- Senior Supervisor of MSBTE Mumbai examinations.
- MSBTE representative in External Flying Squad for the Examinations conducted by MSBTE.
- Coordinator of Cultural committee & actively arranged various cultural programs such as Debate competition, Quiz, Rangoli, Flower arrangement, Seminars, Vishakha cell, Self-defense activity in the institute
- Coordinator of Industrial Visit committee & organized visits for first year diploma students such as ELPRO, Telephone Exchange, Sugar factory etc.
- Coordinator of discipline committee, antiragging squad, grievance and redressal cell.

Title of Ph.D Thesis: Synthesis and characterization of functionalized graphene for its applications as biosensors

Computational skills:

•	Programming language :		Fortran 90/95, COBOL, BASIC, C, C++
•	System environment familiarity :		Windows
•	Scientific Tools/ Packages :		MS office, MS Power Point, Origin, LaTex
•	Methodology used in teaching: :	:	Direct Instructional method, Flipped class room,
	learning		Interactive Teaching method, Google Class Room,
	-		Demonstration method, Project Based method, ICT
			Tools, NPTEL, Audio-Visual aids

Language skills:

- English : Fluent (Professional level)
- Hindi : **Fluent** (Professional level)
- Marathi : **Fluent** (Professional level) (Mother tongue)

Research done:

- Synthesis and characterization of graphene oxide.
- Green synthesis and characterization of reduced graphene oxide using plant extract.
- Functionalization of graphene with metallic oxide nanoparticles like CuO and TiO₂.
- Application of functionalized graphene as a glucose biosensor.

Professional affiliations:

ISTE member: LM30578

Invited talk/s or presentation/s:

- 1. Resource person for the FDP program "Pedagogy Driven Accreditation" conducted by RIT polytechnic, Pune
- 2. Trainer in orientation workshops for Physics teachers in Maharashtra on behalf of MSBTE.
- 3. Resource person for Web-based learning material for GPDL students on VIDYA VAHINI for distance education.

Books/Book-chapters (Authored/co-authored/Edited/Co-edited):

1. Reviewer of the book Applied Physics-1 "AICTE- MODEL Curriculum for diploma" New Delhi

- 2. Reviewer of the book Applied Physics "Wiley India" publication
- 3. Basic Physics I-scheme, Tecknowledge Publication
- 4. Applied science, I-scheme, Tecknowledge Publication
- 5. Basic Physics I-scheme, Techmax Publication
- 6. Applied science, I-scheme, Techmax Publication
- 7. Basic Physics G-scheme, Techmax Publication
- 8. Applied science, Karnataka state university, Techmax Publication
- 9. Applied science, Gujrat university, GTU, Techmax Publication
- 10. Applied science, BATU, Techmax Publication

Participation in schools / training / scientific meeting:

S. NO	Event	Organized by	Date
1	Health at workplace	AISSMS, COE	11.10.19
2	Workshop on "I-scheme lab manual development"	NITTR, extension center, Pune	March 17 to June 17
3	Workshop on "Outcome based Education: NBA accreditation"	MSBTE, Mumbai VES polytechnic, Chembur Mumbai	2 Jan 17 to 6 Jan 2017
4	Orientation Program of 'I' Scheme, MSBTE	MSBTE, Mumbai Siddheshwar Polytechnic, Solapur	July 2017
5	Organized one day Orientation Program on NBA accreditation for polytechnic faculty members	AISSMS's Polytechnic, pune 1	28.12.16
6	INDO-US colloquium on technical education	AISSMS's society, Pune -05	05.02.2013 06.02.2013
7	Orientation Program of 'G' Scheme, MSBTE	MSBTE, Mumbai at RBTE, Aurangabad	03.08.2012-04.08.2012
8	Orientation Program of 'G' Scheme, MSBTE	Sandip Polytechnic, Nasik	24.12.2012
9	Workshop on Recent Advances in Engineering Material Science	AISSMS'S College of Engineering, Pune -1,	2.03.2012
10	Zero Error RAC	MSBTE, Mumbai at VPM, Polytechnic, Mumbai	18.10.2011
11	Career Guidance for students and teacher	PDEA's Baburao Gholap College, Sangvi,	11.02.2011-12.02.2011

12	Information Technology Orientation for engineering teachers	Dwarkadas J. Sangavi College of Engineering, Mumbai	19.12.2005-30.12.2005
13	Development of Generic Skills –Module –I	Sau Venutai Chavan Polytechnic, Pune	25.10.2004-06.11.2004
14	Induction Training Phase –II	ISTE, Government Polytechnic, Pune	25.10.2002-20.11.2002
15	Induction Training Phase –I	ISTE, Government Polytechnic, Pune	17.06.2002-12.07.2002
16	Effective Curriculum Implementation	Government Polytechnic, Pune	03.09.2001-07.09.2001

Online workshops/ faculty development programs attended during Covid-19 pandemic

S. No.	Name of the course/ Summer School	Place	Duration	Sponsoring Agency
1	Biomedical nanotechnology	online FDP	4 weeks	NPTEL-IIT Roorkee and AICTE
2	Teaching and learning in general programs	online FDP (Silver Medal)	4 weeks	NPTEL-IIT Madras and AICTE
3	"Prayog- Experiments on click "using virtual labs	Online FDP	2 weeks	Dept. of instrumentation, Vidyavardhini's college of engineering and tecnologu, Vasai, Mumbai in association with college of engineering, pune (COEP)
4	"FDP on Moodle LMS"	Online FDP	1 week	Pimpri Chinchwad Polytechnic, Pune in association with Spoken Tutorial IIT-Bombay
5	"Promoting Quality Culture in Technical Institutions"	Online FDP	1 week	AISSMS's COE under Paramarsh Scheme
6	"Research Methodology: Data Collection Methods, Research Tools and Techniques"	Online FDP	1 week	Research and Development Cell, AISSMS's IOIT, Pune
7	Academic Writing	Online refresher Course (94%, Distinction)	12 weeks	NPTEL-UGC- Swayam
8	Pedagogy of Environmental Studies	Online certificate course	14 weeks	NPTEL-Swayam-NCERT
9	Effective engineering teaching in Practice	Online certificate course	4 Weeks	NPTEL- SWAYAM, IIT Madras
10	X-ray Crystallography	Online certificate course	16 Weeks	NPTEL- SWAYAM, IISC Banglore, AICTE
11	E- Assessment in Higher Education	Online FDP	1 day	Departments of Home Science and Physics, JMJ College for Women (Autonomous), Tenali
12	"LaTeX Workshop 2020"	Online refresher course	5 days	Department of Nanotechnology Organized by Noorul Islam Centre for Higher Education Kumaracoil, Kanyakumari District, Tamilnadu - 629 180
13	"CYBER SECURITY FOR ONLINE EDUCATION TOOLS"	Online Webinar	1 day	Department of information Technology, K K wagh Polytechnic, Nashik
14	Century of Quantum mechanics and still going strong	Online Webinar	1 day	Maharaja Sayajirao Gujrat university, IAP, IAPT, NASI, Delhi
15	International Yoga Day-2020	Virtual event	1 day	Heartfullness Institute; partnered with All India Shri Shivaji Memorial Society's College of

				Engineering, Pune and Ministry of AYUSH,Govt. Of India
16	"Leadership Development In Women Professional Entrants"	Online Webinar	1 day	Department Of Electronics and Telecommunication, AISSMS COE, Pune in Association with Institution Of Engineers (INDIA), Kolkata, Principal Global Services, Pune and Rotary Club of Pune Synergy
17	E-learning Resource Creation	Online Webinar	1 day	MATOSHRI COLLEGE OF PHARMACY, Nashik
18	"Effective and efficient writing of research papers for web of science, Scopus indexed journal and Conference papers using Typeset Research Studio"	Online Webinar	1 day	Department of Electronics & Telecommunication & Central Library, AISSMS COE,
19	Characterization Techniques of Nanomaterials	Online Webinar	1 day	TEQIP-3, National institute of engineering, Mysuru
20	""	Online Webinar	1 day	Department of Electronics & Telecommunication and Instrumentation, AISSMS's Polytechnic, Pune
21	"Nanostructured Materials for Controlling the Flow of Light"	Online Webinar	1 day	Department of Physics & Department of Electronics in association with IQAC, SRI Y N COLLEGE, Andhra Pradesh
22	" \$ "	Online training	3 days	Sanjay Ghodavat Polytechnic, Atigre
23	SOCIAL AWARENESS CAMPAIGN ABOUT COVID-19	"COVID-19 Pandemic General Health Awareness Quiz"	1 day	AISSMS'S Institute of Information and Technology, Pune
24	"Awareness on LMS and E-Learning"	Online Quiz	1 day	Department of Electronics & Telecommunication, AISSMS's Polytechnic, Pune
25	Awareness of online teaching aids for Teachers	Online Quiz	1 day	AISSMS'S Institute of Information and Technology, Pune
26	"Modern Physics Quest"	Online Quiz	1 day	Department of Physics, Rajapalayam Rajus` College, Rajapalayam
27	"Spitting Kills"	"COVID-19 Pandemic General Health Awareness Quiz"	1 day	AISSMS's Polytechnic, Pune

Participation in Workshops, Seminars, Conferences etc.:

Research Publications

- A facile synthesis of GO/CuO-blended nanofiber sensor electrode for efficient enzyme-free amperometric determination of glucose. <u>Gijare, M</u>., Chaudhari, S., Ekar, S., Garje, A. Journal of analytical science and technology (Springer Nature) 12, 40, 2021. <u>https://doi.org/10.1186/s40543-021-00289-z</u>
- Study of structural, optical and electrochemical properties of GO/TiO₂ nanostructures prepared by microwaveassisted technique for its application as a glucose sensor. <u>Medha Gijare</u>, Sharmila Chaudhari, Satish Ekar and Anil Garje

Advances in Natural Sciences: Nanoscience and Nanotechnology (IOP) 12, 035015, 2021. https://doi.org/10.1088/2043-6262/ac2ba4

- Reduced Graphene Oxide Based Electrochemical Nonenzymatic Human Serum Glucose Sensor <u>Medha Gijare</u>, Sharmila Chaudhari, Satish Ekar and Anil Garje Engineered Science Materials & Manufacturing, 14, 110-119, 2021. DOI:<u>10.30919/esmm5f486</u>
- Green reduction of graphene oxide using citrus aurantium dulcis and functionalized rice bran-like rGO/CuO nanostructures for enzymeless glucose sensing <u>Medha Gijare</u>, Sharmila Chaudhari, Satish Ekar and Anil Garje Journal of Huazhong University of Science and Technology, 50, 5, 2021
- 5. A Facile Green Preparation of Reduced Graphene Oxide Using Citrus Limetta Decorated rGO/TiO₂ Nanostructures for Enzymeless Glucose Sensing <u>Medha Gijare</u>, Sharmila Chaudhari, Satish Ekar and Anil Garje Accepted by Physica Scripta, IOP science, Article reference: PHYSSCR-118065
- Green Synthesis and Characterization of Nanocrystalline Graphene Oxide <u>Gijare Medha¹</u>, Chaudhari Sharmila² and Garje Anil³* Int. Res. J. of Science & Engineering, 29-34, 2017.
- A study on characteristics of eco-friendly synthesis of graphene oxide using citrus limetta and l-ascorbic acid <u>Medha Gijare</u>¹ Sharmila Chaudhari² Anil Garje^{3#} Journal of Emerging Technologies and Innovative research 6, 1, 2019.
- Synthesis and characterization of rGO + SnO₂ composite for bio sensor application <u>Medha Gijare¹</u> Suyog Danane², Manisha Modak³, Anil Garje^{4#} Journal of emerging Technologies and innovative research 6, 5, 2019.

Papers presented:

International Conference

- 1. Microwave assisted non-enzymatic glucose biosensor using GO/TiO₂ nocomposite" International conference MEMP-2021 organized by CMET Pune on 25 -27 Mar. 2021.
- 2. A study on characteristics of eco-friendly synthesis of graphene oxide using citrus limetta and l-ascorbic acid"

International Conference on "Sustainable Materials for Advanced Research in Technology (SMART-2019)" held at Baburaoji Gholap College, Pune on 6-7 Feb.2019.

- 3. Synthesis and characterization of rGO + SnO₂ composite for bio sensor application" International Conference on "Sustainable Materials for Advanced Research in Technology (SMART-2019)" held at Baburaoji Gholap College, Pune on 6-7 Feb.2019.
- 4. Effect of Reflux Time and Cow urine Concentration on Green Synthesis of Reduced Graphene Oxide (rGO)",

International conference organized by Bharti Vidyapeeth's deemed to be University, BVDU NANOCON, 7-9 Oct.2018.

5. Synthesis and characterization of nanocrystalline graphene oxide using aqueous leaf extract of lantana camara and its application as biosensor"

International Conference on Nanotechnology for Human Welfare 2018 organized by Haribhai V. Desai College, Pune, MS, India in collaboration with COEP, 1-3 Feb. 2018

6. Green Synthesis and Characterization of Nanocrystalline Graphene Oxide" International Conference on Applied Nanotechnology & Nanoscience-2017 (ICANN-2017) at Tuljaram Chaturchand College of Arts, Science and Commerce, Baramati (Pune) Maharashtra, India on 7-9 Dec. 2017.

National Conference

"Non-enzymatic glucose sensor using GO/CuO nanocomposite"

Raman Memorial Conference (RMC-2021) organized by the Department of Physics, Savitribai Phule Pune University, on 8-9 Mar. 2021.