

Resume of Dr. Govind G. Umarji

Address

Residence

H No-33, Musddiq Complex, lane no 14B
Handewadi Road, Near Ganga Village ,
Hadapsar, Pune 411028
INDIA
Telephone: (020) 26970376

Office

Center For Materials For Electronics Technology (C-MET)
Panchawatti , Off Pashan Road
Pune -411008
Maharashtra, India
Telephone: +91 020 25899273
Mobile No +91 9890795233

E-mail Address # govindgumarji@cmet.gov.in,
govindgumarji@gmail.com

Personal Information

Date of Birth : February 26, 1981
Place of Birth : Nargund, Karnataka, INDIA
Marital Status : Married
Nationality : Indian

Academic Information

* Educational Qualifications

Degree & Year	University & Location	Class Obtained	Subject (s)/ Scientific field
Ph.D. (2010)	Dept. of Elect.Sci. Poona University, Pune, India	Thesis +	Electronics Materials
M.Sc. (2003)	Dept. of Elect.Sci., Pune University, Pune, India	Higher Second	Electronics
B.Sc. (2001)	Pune University, Pune, India	First Class (Distn)	Electronics, Physics and Chemistry
HSC (1998)	Pune University, Pune, India	First Class	Gen. Science, Physics, Chemistry, Maths and Languages
S.S.C. (1996)	S.S.C.E Board, Pune Division	First Class	Gen. Science, Physics, Chemistry, Maths and Languages

+ Thesis Title: Preparation and Characterization of photopatternable thick films of conductors and photoconductor composites

Experience/Employment Profile

Sl. No.	Post Held/Period	Work Place	Nature of Work	Nature of Employment
1	Project Fellow [8/2003—/2007]	Centre for Materials for Electronics Technology (C-MET), Govt. of India, Pune, India.	Research and Development on Advanced Thick Film Technology for Hybrid Micro Circuits (HMC)	Temporary
2	Research Fellow [9/2007—3-2008]	Dept. of Physics, University of Pune ,Pune, India	Research and Development under Center for Nanomaterials and Quantum Systems Program	Temporary
3.	Research Fellow [4/2008-8/2010]	Centre for Materials for Electronics Technology (C-MET), Govt. of India , Pune, India.	Research and Development on Large Scale Generation of Nanomaterials by Transferred Arc Thermal Plasma Reactor	Temporary
4.	Senior Scientific Technical [9/2010-10/2016]	Centre for Materials for Electronics Technology (C-MET), Govt. of India , Pune, India.	Research & Development on Hybrid Solar Cell, Micro-photosensor	Permanent
5	Scientist A 11/2016-12/2020	Centre for Materials for Electronics Technology (C-MET), Govt. of India , Pune, India.	Research & Development on Micro-photosensor , Humidity sensor, temperature sensor	Permanent
6	Research professor 8/2018-8/2019	Sungkyounkwan University (SKKU), Suwon, South Korea	Solid Oxide Fuel Cell and Sensor	Temporary

7.	Scientist B 12/2020- till date	Centre for Materials for Electronics Technology (C- MET), Govt. of India , Pune, India.	Research & Development on Micro-photosensor , Humidity sensor, temperature sensor	Permanent
----	--------------------------------------	--	---	-----------

Details of Project handled

S. No.	Project	Sponsoring agent	Outlay (Rs in lakhs)	Title	Period
1	Core	DeitY	-	<ul style="list-style-type: none"> Nano materials, polymer nanocomposites & Devices Materials for renewable energy 	11/2008 - 6/ 2014
2	Sponsored (Member)	DeitY	100.00	<ul style="list-style-type: none"> Hybrid solar cells based on organic polymers and Inorganic nanoparticles 	6/2010- 6/2013
3	Sponsored (Member)	DRDO New Delhi	48.35	<ul style="list-style-type: none"> Development of "Green" low temperature fireable thick film piezo-resistive composite pastes for strain gauge applications 	Dec. 2010- Sept.2014
4	Sponsored (PI-I)	DietY, New Delhi	90.00	<ul style="list-style-type: none"> In-house development of photo-conducting paste (using semiconductor nanostructures) for exploration in photopatternable thick film technology for advanced optoelectronic applications 	April 2012- Feb 2016
5	Sponsored (PI-II)	Ar & DB DRDO, New Delhi	64.62	<ul style="list-style-type: none"> Proof of the concept development of photopatternable thick 	Jan 2016- Jan 2018

				film thermistor composite materials for temperature sensor application	
6	Sponsored (Co-PI)	MeitY	108.84	<ul style="list-style-type: none"> • Development of printable silver thick film ink for Radio Frequency • identification (RFID) Tags on environment friendly, flexible substrate for smart applications 	Nov-2018- Nov 2021
6	Sponsored (Co-Investigator)	MeitY	896.55	<ul style="list-style-type: none"> • ADDITIVE Manufacturing Centre for Excellence 	Aug 2020 – Aug 2023
7	Sponsored (Co-PI)	MeitY	153.70	<ul style="list-style-type: none"> • Development of Proof of concept VOC biomarker sensors related to diagnosis of infectious Pulmonary Tuberculosis through breath. 	Submitted

Current Research Interests

- Thick Film Materials
- Photopatternable Pastes
- Photoconducting Materials
- Nano-materials for electronics applications
- Materials for Renewable Energy and Sensors

SUMMARY OF RESEARCH PUBLICATIONS

1	In Peer reviewed International Journals	30
2	In Conferences/ Symposia	> 30
3	India Patent Applications	03
4	US Patent PCT Applications	01
5	Award in oral/ Poster presentations in national and International Conferences	07

Total Citations till date 409 & Scholar Google H index is 09

<https://scholar.google.co.in/citations?user=iMiyDWsAAAAJ&hl=en>

• Patents :-

1. **"A Micro/Nano Photoconductor"** (2010) ,**G.G. Umarji**, S.W. Gosavi, U.P.Mulik ,D.P.Amalnerkar
2. **"A Micro/Nano Photoconductor"** (International PCT/IN2011/000341) , **G. G. Umarji**, S. W. Gosavi, U. P. Mulik , D. P. Amalnerkar
3. **"Control system for climate and vapour pressure deficit (VPD)control inside green house"**. Indian Patent (2854/MUM/2015)
4. **"Low temperature firable 'green' thick film piezoresistor compositions for flexible (steel) substrates"**Sunit Rane, Pradnya Pujari, **Govind Umarji** (DEITY/IPR/IVB/344/2016) IN PROCESS

• International Journals

Sr. No.	Name of the Authors	Title of the paper	Name of Journal Year & ISSN No.
1	G G Umarji , S A Ketkar, G J Phatak, T Seth, U P Mulik, D.P. Amalnerkar	Photoimageable silver paste for high density interconnection technology	Materials Letters 59/4, 503, 2005 & ISSN: 0167-577X IF: 2.437
2	G G Umarji , S A Ketkar, G J Phatak, V D Giramkar, U P Mulik, D.P. Amalnerkar	An Aqueous Developable Photoimageable Silver Conductor Composition for High Density Electronic Packaging	Microelectronics Reliability 45,1903, 2005 7 ISSN: 0026-2714 IF : 1.202

3	S A Ketkar, G G Umarji , G J Phatak, J D Ambekar, U P Mulik, D.P. Amalnerkar	Effect of glass content variation on the properties of photoimageable silver conductor paste	Materials Chemistry and Physics 96,145, 2006 & ISSN: 0254-0584 IF : 2.101
4	S A Ketkar, G G Umarji , G J Phatak, J D Ambekar, I C Rao, U P Mulik, D.P. Amalnerkar	Lead-Free Photoimageable Silver Conductor Paste Formulation for High Density Electronic Packaging	Material Science and Engineering: Part B , 132, 215, 2006 & ISSN: 0921-5107 IF : 2.331
5	S A Ketkar, G G Umarji , G J Phatak, T Seth, U P Mulik, D.P. Amalnerkar	Glass Frit Content – Property Co-relation in Thick Films of Photoimageable Silver Conductor Paste	Material Science and Engineering: Part B 132, 197, 2006 & ISSN: 0921-5107 IF : 2.331
6	R R Hawaldar, G G Umarji , S A Ketkar, S D Sathaye, U P Mulik, D.P. Amalnerkar	Nanoscale Multilayer PbS Thin films Fabricated by Liquid-Liquid Interface Reaction Technique for Solar Photovoltaic Applications	Material Science and Engineering: Part B 132, 170, 2006 & ISSN: 0921-5107 IF : 2.331
7	G Umarji , S Ketkar, R Hawaldar, S Gosavi, K Patil, U Mulik, D.P. Amalnerkar	XPS and AFM investigations on silver-based photoimageable thick film systems	Microelectronics International 25(1), 46, 2008 & ISSN: 1356-5362 IF : 0.888
8	G Lakhotia, G Umarji , S Jagtap, S Rane, U Mulik, D.P. Amalnerkar, S W Gosavi	An investigation on TiO₂-ZnO based thick film 'solar blind', photo-conductor for 'green' electronics	Materials Science and Engineering B 168 (1), 66-70, 2010 & ISSN: 0921-5107 IF : 2.331
9	M D Shinde, P G Chavan, G G Umarji , S S Arbuji, SB Rane, M A More, DS Joag, D.P. Amalnerkar	Field Emission and Photo-Catalytic Investigations on Hierarchical Nanostructures of Copper Doped CdS Synthesized by Kitchen-Chemistry Approach	Journal of Nanoscience and Nanotechnology 12 (5), 3788-3798, 2012 & ISSN: 1533-4880 (Print); EISSN: 1533-4899 (Online) IF : 1.338
10	Narendra Rumale, Sudhir Arbuji, Govind Umarji , Manish Shinde,	Simplistic approach for <i>in situ</i> generation of ZnS quantum dots in polyphenylene sulphide	physica status solidi (a) , 210(2), 345–348, 2013.

	Uttam Mulik, Anuj Pokle, Dinesh Amalnerkar	matrix via chalcogen enriched solid–solid reaction technique	ISSN 1862-6319, IF : 1.648
11	N Rumale, S Arbuji, G Umarji , M Shinde, U Mulik, A Pokle, D Amalnerkar	Single Step Solid-Solid Reaction Scheme for the Synthesis of Cobalt Sulphide-Oxide Nanoparticles in Polymer Matrix	Advances in Nanoparticles 2013 ISSN: 2169-0529 (Online) IF : 1.79
12.	N. Rumale, S. Arbuji, G. Umarji , M. Shinde, U. Mulik, A. Pokle, R. Hawaldar and D. P. Amalnerkar	Thermoplastic Polymer Domain for Synthesis of Manganese Sulphide Nanoparticles by Simple Solid-Solid Reaction	Nanoscience and Nanotechnology Letters , 5 (8), 902-906, 2013 ISSN: 1941-4900 IF : 1.007
13	Narendra Rumale, Sudhir Arbuji, Govind Umarji , Manish Shinde, Uttamrao Mulik, Anuj Pokle, Shital Shinde, Dinesh Amalnerkar	In-situ fabrication of cobalt oxide / sulphide mixed phase nanoparticles in Polyphenylenesulphide matrix	Carbon Science and Technology , 5/1 ,236 – 243, 2013
14	G Umarji , S ketkar, S Gosavi, U Mulik and D.P. Amalnerkar	Comprehensive review on materials, processing and formulation attributes of photopatternable conductor thick film pastes	i-managers Journal of Material Science , 1/1 (2013) 25 ISSN Print: 2347-2235 ISSN Online: 2347-615X
15	R Chauhan, A Kumar, G.G. Umarji , U.P. Mulik, D.P. Amalnerkar	Morphological Variation in Nickel Sulfide Using Diversified Sulfur Sources and Its Magnetic Behavior	Materials Focus 3 (3), 200-204, 2014 ISSN: 2169-429X (Print) EISSN: 2169-4303 (Online)
16	Animesh Roy, Snehal Dige, Govind G. Umarji , Manish D. Shinde, Sunit B. Rane, Uttam P. Mulik, Dinesh P. Amalnerkar, and Ratna Chauhan	<i>Solvothermal Syntheses of Cadmium Sulfide Nanoparticles with Varying Concentration of Ammonia and Reaction Time and Their Effect on Optical Properties,</i>	Materials Focus , 4, 2015, 142-149 ISSN: 2169-4303)
17	N. Rumale, S. Arbuji, G. Umarji , M. Shinde, U.	Tuning Magnetic Behavior of Nanoscale Cobalt Sulphide and	Journal of Electronic Materials 2015,

	Mulik, P. Joy, and D. Amalnerkar	its Nanocomposite with Engineering Thermoplastic	2308-2311 ISSN: 0361-5235 IF : 1.579
18	V. Lekhya Subhashini, Govind G. Umarji , Manish D. Shinde, Sunit B. Rane, Uttam Mulik, Dinesh Amalnerkar,	Synthesis of Hybrid Hierarchical Nanostructures for Photo-Sensor Applications	Journal of Basic and Applied Engineering Research , 1,5,2015,97-102 ISSN: 2350-0077 Cosmos IF : 4.236
19	A. Roy, Y. Waghadkar, S. Arbuji, G. Umarji , M. Shinde, R. Chauhan, S. Gosavi, S. Rane	<i>Coupled Semiconductor Nanosystem Based on SnO/SnO₂ Nanocomposites for Photocatalytic Applications,</i>	Journal of Nanoengineering and Nanomanufacturing , 5, 2015, 210-215 SSN: 2157-9326 (Print): EISSN: 2157-9334 (Online)
20	SS Patil, M S Tamboli, V G Deonikar, G. G Umarji , J D Ambekar, M V Kulkarni, Sanjay S Kolekar, Bharat B Kale, Deepak R Patil ,	<i>Magnetically separable Ag₃PO₄/NiFe₂O₄ composites with enhanced photocatalytic activity,</i>	Dalton Transactions , 44,(46) 2015, ISSN :20426-20434
21	R. Chauhan, A .Kumar, G.G. Umarji , U.P. Mulik, D.P. Amalnerkar	Comparison of optical and photovoltaic properties of ZnO chemically synthesized by using different hydrolyzing agents	Journal of Solid State Electrochemistry , 19,1,2015,161-168 ISSN: 1432-8488 (Print) 1433-0768 (Online) IF : 2.327
22	AJ Hake, K B Sapnar, G G Umarji , S W Gosavi, U P Mulik, Anil Patil	Synthesis and Fabrication of Effective In-Situ Zinc Oxide-Graphene Nanocomposite for Swift Response Resistive Humidity Sensor,	Sensor Letters , 14,8,2016,824-834 ISSN: 1546-198X (Print): EISSN: 1546-1971 (Online)
23	Govind Umarji , Nilam Qureshi, Suresh Gosavi, Uttam Mulik, Atul Kulkarni, Taesung Kim , Dinesh Amalnerkar	Electrically Conductive Photopatternable Silver Paste for High Frequency Ring Resonator and Band Pass Filter	Journal of Electronic Materials 46 (2), 1307-1318 2017 ISSN: 0361-5235 IF : 1.579
24	Animesh Roy, Sudhir Arbuji, Yogesh	Concurrent synthesis of SnO/SnO₂ nanocomposites and	Journal of Solid State Electrochemistry , 21

	Waghadkar, Manish Shinde, Govind Umarji , Sunit Rane, Kashinath Patil, Suresh Gosavi, Ratna Chauhan,	their enhanced photocatalytic activity,	(1), 9-17, 2017 ISSN: 1432-8488 (Print) 1433-0768 (Online) IF : 2.316
25	Virendrakumar G Deonikar, Santosh S Patil, Mohaseen S Tamboli, Jalindar D Ambekar, Milind V Kulkarni, Rajendra P Panmand, Govind G Umarji , Manish D Shinde, Sunit B Rane, Nagegownivari R Munirathnam, Deepak R Patil, Bharat B Kale,	Growth study of hierarchical Ag₃PO₄/LaCO₃OH heterostructures and their efficient photocatalytic activity for RhB degradation,	Physical Chemistry Chemical Physics 19 (31), 20541-20550 IF : 4.123
26	GD Shirke, GG Umarji, AR Tarale, VL Mathe, UP Mulik, SB Rane	Effect of firing temperature on microstructure and dielectric properties of chromium oxide based glass composite thick films on stainless steel substrate	Journal of Materials Science: Materials in Electronics 29 (12), 9871-9878 (2018) IF 2.195
27	PV Pimpliskar, SC Motekar, GG Umarji, W Lee, SS Arbuj	Synthesis of silver-loaded ZnO nanorods and their enhanced photocatalytic activity and photoconductivity study	Photochemical & Photobiological Sciences 18 (6), 1503-1511 (2019) IF : 2.902
28	Shubhangi R Damkale, Sudhir S Arbuj, Govind G Umarji, Rajendra P Panmand, Supriya K Khore, Ravindra S Sonawane, Sunit B Rane, Bharat B Kale	Two-dimensional hexagonal SnS₂ nanostructures for photocatalytic hydrogen generation and dye degradation	Sustainable Energy & Fuels 3 (12), 3406-3414 (2019) IF: 5.503
29	AD Ugale, GG Umarji, SH Jung, NG Deshpande, W Lee, HK Cho, JB Yoo	ZnO decorated flexible and strong graphene fibers for sensing NO₂ and H₂S at room temperature	Sensors and Actuators B: Chemical 308, 127690 (2020) IF : 7.100
30	T Mun, JY Koo, J Lee, SJ Kim, G Umarji, D Amalnerkar, W Lee	Resistive-type lanthanum ferrite oxygen sensor based on nanoparticle-assimilated nanofiber architecture	Sensors and Actuators B: Chemical 324, 128712 (2020) IF : 7.100

- **Award winning oral/poster presentations in Conferences/Symposia**

1. **"Photoimageable conductor composition for high density electronic packaging of smart devices & allied sub-systems"**, Govind G. Umarji, Supriya A. Ketkar, R. Marimuthu, G. J. Phatak, T. Seth, D. P. Amalnerkar & U. P. Mulik, Poster presented in the Annual General Meeting of MRSI (15th) conference held in BHU, Banaras, during Feb. 9-11, 2004. **"BEST POSTER AWARD"** at the conference.
2. **"Lead-Free Photoimageable Silver Conductor Paste Formulation for High Density Electronic Packaging"**, Supriya Ketkar, G. G. Umarji, G. J. Phatak, J. D. Ambekar, I. C. Rao, U. P. Mulik & D. P. Amalnerkar. Poster presented in the 3rd International Conference on Materials for Advanced Technologies-2005 and 9th International Conference on Advanced Materials-2005 (ICMAT & IUMRS-ICAM 2005) held during the 3rd-8th of July 2005 at Singapore (organized by The International Union of Materials Research Society). **BEST POSTER AWARD** at the conference.
3. **"Photoimaging: A novel 'down-scale' approach from macro to micro photoconductor fabrication"**, Govind G. Umarji, Suresh W. Gosavi, Uttam P. Mulik & D. P. Amalnerkar, Paper presented at National Conference on 13th National seminar on Physics and Technology of Sensors, held at University of Pune during 35 March 2008. **(2nd Prize BEST ORAL PRESENTATION)**
4. **"Photopatternable Technique For Micro Sensor Fabrication of Photoconductor: Advanced Approach"**, Govind G. Umarji, Suresh W. Gosavi, Uttam P. Mulik & D. P. Amalnerkar, Paper presented in Raman Memorial Conference held at Dept. of Physics, University of Pune during Feb.-26,27 2009, **(BEST RESEARCH POSTER PRESENTATION AWARD)**
5. **"Facile Recipe for Synthesis of Molybdenum Sulfide based nanocomposite"**, Nilam Qureshi, Manish Shinde, Govind G. Umarji, Uttam P. Mulik & D. P. Amalnerkar, Paper presented in Indo-Japan Conference on Frontier Nanomaterials for Energy (FNE-2012) during Jan 9-11, 2012. **(3rd Prize for BEST POSTER PRESENTATION)**
6. **"Vivid Studies pertaining to Synthesis of Nanostructures of Molybdenum Oxide"**, Nilam Qureshi, Manish Shinde, Govind G. Umarji, Uttam P. Mulik & D. P. Amalnerkar, Poster presented in the Annual General Meeting of MRSI (23rd) conference held in Patiala, during Feb 15, 2012. **"BEST POSTER AWARD"** at the conference.
7. **"Formulation and effects of firing temperature on Al₂O₃-Ferric oxide based Thick Film Glass Composite for Steel Substrate"** Ghanasham D. Shirke, Govind G. Umarji, Arjun R. Tarale, Vikas L. Mathe, Uttam P. Mulik, and Sunit B. Rane **2nd Best Oral Presentation Award** at 8th National Power Electronics Conference (NPEC) 2017 is scheduled during Dec 18- 20 Dec. 2017 at College of Engineering, Pune

- **National and International Conferences**

1. **Physico-chemical studies of one dimensional copper doped cadmium sulphide**, Sudhir S. Arbuji, Sagar R. Bhalerao, Govind G. Umarji, Sunit B. Rane, Uttamrao P. Mulik and Dinesh P. Amalnerkar, **NanoSciTech 2012**, Punjab University, 15-18 February, 2012.

2. **Synthesis, characterization and photocatalytic activity of copper doped Cadmium sulphide** , Sudhir S. Arbuj, S. R. Bhalerao, G. G. Umarji, S. B. Rane, U. P. Mulik, D. P. Amalnerkar, [2nd International Conference on Advanced Nanomaterials and Nanotechnology \(ICANN2011\)](#), IIT Guwahati, 8-10 December, 2011.
3. **Synthesis of multi-utility NiCo₂O₄ nanocomposite for sensor applications**, Swapna Sadekar, Manish Shinde, Nilam Qureshi, Govind Umarji, Sunit Rane, Lalita Rane and Uttam Mulik, [Raman Memorial Conference \(2012\)](#), Pune University, 3-5 March, 2012.
4. **Microwave assisted 'green' synthesis of ZnS:Cu nanoparticles for exploring photo-conductor application**, Sonali Sabale, Govind Umarji, Manish Shinde, Nilam Qureshi, Rajendra Panmad, Sunit Rane, Lalita Rane and Uttam Mulik, [Raman Memorial Conference \(2012\)](#), Pune University, 3-5 March, 2012.
5. **In-situ fabrication of cobalt oxide / sulphide mixed phase nanoparticles in Polyphenylene Sulphide matrix**, Narendra Rumale, Sudhir Arbuj, Govind Umarji, Manish Shinde, Uttamrao Mulik, Anuj Pokle, Shital Shinde, Dinesh Amalnerkar, [NANOCON – 2012](#), organized by Bharathi Vidyapeeth, Pune during 18-19th Oct. 2012.
6. **Photopatternable Thick Films: An Adroit Technology for Fabrication of Next Generation Miniaturized Thermistor**, Snehal B. Dige, Animesh B. Roy, Pradnya D. Pujari, Govind G. Umarji, Manish D. Shinde, Sunit B. Rane, Uttam P. Mulik and Dinesh P. Amalnerkar, [IUSWNM-2013](#), 08-11th March 2013 at Thrissur
7. **Synthesis of Zinc Sulphide quantum dots by green solid-solid technique**, Narendra Rumale, Sudhir Arbuj, Govind Umarji, Manish Shinde, Uttamrao Mulik, Anuj Pokle, Dinesh Amalnerkar, [IUSWNM-2013](#), 08-11th March 2013 at Thrissur
8. **Photopatterned Photoconductor from Cu doped CdS Nanoparticles synthesized using Co-Precipitation method**, Staphina Edwin, Vivin D'souza, Ketki Patil, Govind Umarji, Manish Shinde, Tanushree Bhattacharjee, Sunit Rane, Uttam Malik, Dinesh Amalnerkar, [IUSWNM-2013](#), 08-11th March 2013 at Thrissur
9. **Synthesis of Cu doped CdS Nanostructures via Co-precipitation Route for Photosensor Application** , Shlesha Gupta, Snehal Dige, Animesh Roy, Pradnya Pujari, Tuhina Paul, Manish Shinde, Govind Umarji, Sunit Rane, Uttam Mulik, Dinesh Amalnerkar, [National Conference on Energy and Environment \(NC2E-2014\)](#), School of Energy Studies and Department of Environmental Sciences, University of Pune, February 20-22, 2014.
10. **Synthesis of Hybrid Hierarchical Nanostructures for Photo-Sensor Application**
V. Lekhya subhashini, Govind Umarji, Manish D. Shinde, Sunit B. Rane, Uttam Mulik, Dinesh Amalnerkar (Oral Presentation)
[5TH International Conference on Innovative Trends in Mechanical, Material, Manufacturing, Automobile, Aeronautical Engineering and Applied Physics \(ITMAEAP-2014\)](#), Jawaharlal Nehru Technical University (JNTU), New Delhi, August 23-24, 2014.

11. **Studies on Liquid Crystal Dispersed with Silica nanoparticles**, T. Vindhya Kumari, Govind G. Umarji, D.Sen, S.Mazumder and Mala N. Rao, 60th DAE Solid State Physics Symposium, [DAE SSPS 2015] 21–25 December 2015
12. **Photoconductive UV detection sensors using hydrothermally grown doped ZnO powder**, Yogesh Waghadkar, **Govind Umarji**, Ratna Chauhan, Suresh Gosavi and Sunit Rane, **International Conference on Functional Ecofriendly Smart Emerging Materials** [ICFESEM-2016], organized by PDEA'S Baburaoji Gholap College, Pune, 10-12 March 2016

- **Invited talks**

1. **“Preparation and characterization of photopatternable thick films of conductor and photoconductor compositions”**, Govind Umarji, ‘GC Jain’ Lecture at the 23rd AGM, MRSI, held at Thapar University, Patiala, 13-15 February, 2012
2. **CdS based Photoconductor fabrication using Advanced thick film technology**, Govind Umarji, **Indo Japan Workshop on Nanotechnology: Synthesis and Sensing Applications**, at C-MET, Pune on 16th October, 2014
3. **Introduction to X-ray photoelectron Spectroscopy**, Govind Umarji, **One Day Workshop on "Characterization of Materials by Various Techniques"** on 10th October 2015 at Yashwantrao Chavan Institute of Science, Satara, India.

- **Technical report**

1. **Development of Photoimageable and Photodefinable thick Film Pastes**, Govind Umarji, Uttam Mulik and Dinesh Amalnerkar
For EMDC MeitY , Govt of India
2. **In-house development of photo-conducting paste (using semiconductor nanostructures) for exploration in photopatternable thick film technology for advanced optoelectronic applications** , Govind Umarji, Manish Shinde, Sunit Rane
For EMDC MeitY , Govt of India
3. **Development of “Green” low temperature fireable thick film piezo-resistive composite pastes for strain gauge applications**, Govind Umarji, Sunit Rane
For DRDO, New Delhi
4. **Proof of the Concept Development of Photopatternable Thick Film Thermistor Composite Materials for Temperature Sensor Application**
Govind Umarji, Manish Shinde , R. Marimuthu
For DRDO, New Delhi