Dr. Padmakar Gangaram Chavan
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Department of Physics,
School of Physical Sciences,
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PROFESSIONAL POSITION

July 2012 - present — Assistant Professor
Department of Physics,
School of Physical Sciences,
North Maharashtra University,
Jalgaon 425001

AWARDS, FELLOWSHIPS, PROFESSIONAL ACHIEVEIMENTS

1) **2017 -** Recipient of "**Research Award for Publication"** (IF: above 5 for 2016-2017) by Hon'ble Vicechancellor, NMU Jalgaon on 12th Aug 2017.
2) **2014 -Interview on National Television** (DD Sahyadri) on 13th Nov 2014 regarding ScientificResearch.
3) **2014 -** Recipient of **"Research Award for funding"** (for the fund of 40.94 Lakhs) by Hon'ble Vice chancellor, NMU Jalgaon on 15th Aug 2014.
4) **2014 -** Recipient of "**Research Award for Publication"** (IF: above 5 for 2013-2014) by Hon'ble Vicechancellor, NMU Jalgaon on 15th Aug 2014.
5) **2012 -** Recipient of **"D. S. Kothari Post-Doctorate Fellowship"**(DSKPDF), UGC.
6) **2011 -** Recipient of **"Dr. M. R. Bhide"** prize for the paper having potential for industrialization in Raman Memorial Conference, Pune (25-26th Feb 2011).
7) **2010 -** Recipient of **"Dr. R. K. Bhalla award"** (to be given to the "Best Research Student of Dept. of Physics, University of Pune" for the year 2010).
8) **2010 -"Sakal India Foundation Loan Scholarship"** for Pursuing Ph.D.
9) **2008 -** Award of **"Best Poster Presentation"**at the "Workshop on Nanotechnology and smart materials", Defense Institute of Advanced Technology (DIAT), Pune, (INDIA), 11th -13th Nov2008, Pune (INDIA) on "Field emission studies on aligned CdS nanowires array".
10) **2006-**Received an award of **"Rajiv Gandhi National Fellowship (RGNF)"**from University Grantscommission (UGC), Govt. of India for perusing PhD in Physics.

Education Background:

Post Doc Experience:	Indian Institute of Science (IISC), Bangalore under the scheme of D. S. Kothari Post Doc fellowship (bridging Fellowship), UGC.
Ph.D. (Physics):	University of Pune, Pune
M.Sc. (Physics):	Department of Physics, North Maharashtra University, Jalgaon
B.Sc. (Physics):	A. S. C College, Chopda, North Maharashtra University, Jalgaon

TEACHING AND RELATED EXPERIENCE

July 2012 – till date
Post graduate (M.Sc.) teaching experience
Subject taught: Elements of Material Science, Materials synthesis methods, Electronics, Nuclear Physics, Electrodynamics

- Organising secretary of the one day national workshop on "Recent trends in Material synthesis processing" March 2013.
- Coordinator of Alumni, Department of Physics, NMU
- Coordinator of e-suvida, NMU
- Member of University Flying Squad for Examination
- Member of Avishkar 2012
- Life member of Semiconductor Society of India (membership No. 201501666)

RESEARCH BACKGROUND

Research Students (Ph.D.)

1) Vivekanand S. Bagal -- Awarded
2) Miss D. P. Ahirrao -- Registered

List of Projects submitted/implemented:

Sr. No.	Funding Agency	Amount Sanctioned Indian Rupee (Rs.)	Status	Duration (Years)
01	UGC	6,00,000 /-	Completed	2 (2013-2015)
02	North Maharashtra University (VCRMS)	70,000 /-	Completed	2 (2013-2015)
03	DST	40,94,800 /-	Completed	4 (2013-2017)
04	IUC Indore	1,35,000/-	Completed	3 (2018-2021)

Manuscript Reviewer

- Journal of Physical Chemistry
- ACS Applied Materials and Interfaces
- Chinese Physics Letters

- ❖ Journal of Optics
- ❖ Applied Surface Science

Publications

Number of paper published in Peer reviewed International Journals:	**53**
h-index:	**17**
Total citations:	**619**
Book written:	**01**

"CdS: Synthesis, Field emission and Photo-enhanced Field emission" by, Padmakar G. Chavan, Satish S. Badadhe, LAP LAMBERT Academic Publishing AG & Co., Germany 2012. ISBN: 978-3-8473-3147-6

Research Publications:

2021:

1) Jadhav, C. D., Rondiya, S. R., Hambire, R. C., Baviskar, D. R., Deore, A. V., Cross, R. W., ... & Chavan, P. G. (2021). Highly efficient field emission properties of vertically aligned 2D CuSe nanosheets: An experimental and theoretical investigation. *Journal of Alloys and Compounds*, *875*, 159987.
2) Deore, A. B., More, M. A., Musmade, B. B., Nerkar, S. D., Chavan, P. G., & Koinkar, P. M. (2021). Photo-enhanced field-emission behavior of CdSSe microflowers. *International Journal of Modern Physics B*, 2140032.
3) Patil, G. P., Rondiya, S. R., Bagal, S., Shivhare, S., Cross, R. W., Dzade, N. Y., & Chavan, P. G. (2021). Field Emission Characteristics of Double Walled TiO2 Nanotubes. *ES Materials & Manufacturing*, *13*, 76-81.
4) Nasane, M. P., Rondiya, S. R., Jadhav, C. D., Rahane, G., Cross, R. W., Jathar, S., ... & Jadkar, S. R. (2021). An Interlinked Computational-Experimental Investigation into SnS Nano-Flakes for Field Emission Application. *New Journal of Chemistry*.

2020:

5) Pandit, B., Jadhav, C. D., Chavan, P. G., Tarkas, H. S., Sali, J. V., Gupta, R. B., & Sankapal, B. R. (2020). Two-dimensional hexagonal SnSe nanosheets as binder-free electrode material for high-performance supercapacitors. *IEEE Transactions on Power Electronics*, *35*(11), 11344-11351.
6) Baviskar, P. K., Rondiya, S. R., Patil, G. P., Sankapal, B. R., Pathan, H. M., Chavan, P. G., & Dzade, N. Y. (2020). ZnO/CuSCN nano-heterostructure as a highly efficient field emitter: A combined experimental and theoretical investigation. *ACS omega*, *5*(12), 6715-6724.
7) Rondiya, S. R., Jadhav, C. D., Chavan, P. G., & Dzade, N. Y. (2020). enhanced field emission properties of Au/SnSe nano-heterostructure: A combined experimental and theoretical investigation. *Scientific reports*, *10*(1), 1-10.
8) Rondiya, S. R., Karbhal, I., Jadhav, C. D., Nasane, M. P., Davies, T. E., Shelke, M. V., ... & Dzade, N. Y. (2020). Uncovering the origin of enhanced field emission properties of rGO–MnO 2 heterostructures: a synergistic experimental and computational investigation. *RSC Advances*, *10*(43), 25988-25998.

2019:

9) Patil, G. P., Raut, S. S., Sankapal, B. R., & Chavan, P. G. (2019). Anchoring of gold nanoparticles into aligned TiO2 nanotube: Improved supercapacitive performance. *Nano-Structures & Nano-Objects*, *20*, 100381.
10) Patil, G. P., Raut, S. S., Sankapal, B. R., & Chavan, P. G. (2019). Anchoring of gold nanoparticles into aligned TiO2 nanotube: Improved supercapacitive performance. *Nano-Structures & Nano-Objects*, *20*, 100381.
11) Bagal, V. S., Patil, G. P., Sharma, M., & Chavan, P. G. (2019). Influence of Process Variables on Morphology and Field Emission Properties of Aligned 2D Cd (OH) 2 Nanosheets. *Journal of Nanoelectronics and Optoelectronics*, *14*(10), 1408-1412.
12) Jadhav, C. D., Karade, S. S., Sankapal, B. R., Patil, G. P., & Chavan, P. G. (2019). Reduced turn-on field through solution processed MoS2 nanoflakes anchored MWCNTs. *Chemical Physics Letters*, *723*, 146-150.
13) Patil, G. P., Baviskar, P. K., & Chavan, P. G. (2019). Ultra low turn-on and photo-sensitive field emission from CdSe nanotubes. *Journal of Nanoelectronics and Optoelectronics*, *14*(4), 470-474.

2018:

14) "Anodic Stripping Voltammetry studies of Electrochemically Engineered Silver Nanoparticles over Single Polypyrrole Nanowire Device for tracing of Arsenic (III): An Environmental Perspective", Accepted in Nanotechnology for Environmental Engineering, Springer (2018).
15) "Sulfonated chitosan encapsulated HAp@Fe3O4: An efficient and recyclable magnetic nanocatalyst for rapid ecofriendly synthesis of 2-amino-4-substituted-1,4-dihydrobenzo[4,5] imidazo[1,2-a]pyrimidine-3-carbonitriles", Vilas Mahire Girish Patil Amol Deore harishchandra Jirimali Padmakar Chavan , Pramod Mahulikar, Accepted in Research on Chemical Intermediates, Springer (2018).
16) "2D porous ZnO nanosheets: One pot synthesis with low turn-on field" Prashant K. Baviskar, Girish P. Patil, Vivekanand S. Bagal, Babasaheb R. Sankapal, Padmakar G. Chavan Accepted in Journal of Nanostructures (2018).
17) "Field electron extraction from surface modified Cd (OH)2 nanowires" Vivekanand S. Bagal, Girish P. Patil, Chandradip Jadhav, Malvika Sharma, Sugam Shivhare, and Padmakar G. Chavan, AIP Conference Proceedings 1942, 050032 (2018).

2017:

18) "Tapered V2O5 Nanofibers for Field Emission Application", Girish P Patil, Vivekanand S Bagal, Mahendra A More, DS Joag, NS Gajbhiye, KhemchandDewangan, Padmakar G Chavan, Journal of Nanoelectronics and Optoelectronics, 12, (2017), 286.
19) "Enhanced field emission properties from surface-modified 2D Cd (OH)2 nanocoins", Vivekanand S Bagal, Girish P Patil, Amol B Deore, Prashant K Baviskar, Dhammanand J Shirale, Padmakar G Chavan, Applied Physics A, 123, (2017), 125.
20) Electrodeposition of gold nanoparticles decorated single polypyrrole nanowire for arsenic detection in potable water: a chemiresistive sensor device, RS Salunke, CK Kasar, MA Bangar, PG Chavan, DJ Shirale, Journal of Materials Science: Materials in Electronics, Springer, 1-6, DOI: 10.1007/s10854-017-7332-5(2017).
21) TiO2 nanotubes decorated by silver nanocubes: Extraction of high field emission current density GP Patil, VS Bagal, AB Deore, MA More, PG Chavan, AIP Conference Proceedings 1832 (1), 050004, (2017).

2016:

22) "Vertically aligned TiO2 nanotubes: Highly stable electrochemical supercapacitor", Shrikant S Raut, Girish P Patil, Padmakar G Chavan, Babasaheb R Sankapal, Journal of Electroanalytical Chemistry, 780, (2016), 197.
23) "Simple Way to Deposit CdO Nanowires for Field Emission Application", Vivekanand S Bagal, Girish P Patil, Prashant Baviskar, Sachin R Suryawanshi, Mahendra A More, Padmakar G Chavan, Journal of Nanoelectronics and Optoelectronics,11, (2016), 484.
24) "Aligned 2D CuSCN nanosheets: a high performance field emitter", Babasaheb and Padmakar Girish, Prashant, Vivekanand, Ravindra, Amol, Mahendra, RSC Advances, 6, (2016), 71958.
25) "Observation of enhanced field emission properties of Au/TiO2 nanocomposite", Padmakar G. Chavan Girish P. Patil, Vivekanand S. Bagal, Sachin R. Suryawanshi, Dattatray J. Late, Mahendra A. More, Appl. Phys. A: Mater Sci &Proce, 122, (2016), 1.
26) "Vapour–liquid–solid-assisted growth of cadmium telluride nanowires and their field emission properties", Vivekanand S Bagal, Girish P Patil, Sachin R Suryawanshi, Mahendra A More, Padmakar G Chavan, Micro & Nano Letters, 11, (2016), 160.
27) "Observation of low turn-on field emission from nanocomposites of GO/TiO2 and RGO/TiO2, Girish P Patil, Vivekanand S Bagal, Chetan R Mahajan, Vijay R Chaudhari, Sachin R Suryawanshi, Mahendra A More, Padmakar G Chavan,Vacuum, 123, (2016), 167.
28) "Low turn-on field and high field emission current density from Ag/TiO2 nanocomposite", Padmakar G. Chavan Girish P. Patil, Amol B. Deore, Vivekanand S. Bagal, b, Dattatray J. Late, Mahendra A. More, Chemical Physics Letters, 657, (2016), 167.
29) "Surface modification of aligned CdO nanosheets and their enhanced field emission properties", Vivekanand S Bagal, Girish P Patil, Amol B Deore, Sachin R Suryawanshi, Dattatray J Late, Mahendra A More, Padmakar G Chavan, RSC Advances, 6, (2016), 41261.
30) "High current density and low turn-on field from aligned Cd(OH)2nanosheets", Vivekanand S. Bagal, Girish P. Patil, Amol B. Deore, Prashant K. Baviskar,Sachin R. Suryawanshi, Mahendra A. More, Padmakar G. Chavan, Chemical Physics Letters, 650, (2016), 7.

2015:

31) "Enhanced field emission study of SnS/TiO2 nanocomposite", Girish P. Patil, Vivekanand S. Bagal, Sachin R. Suryawanshi, Mahendra A. More, Padmakar G. havan, IEEE 978-1-46739357-7/15, DOI: 10.1109/IVNC.2015.7225553(2015).

2014:

32) "V2O5 Precursor-Templated Synthesis of Textured Nanoparticles Based VN Nanofibers and their Exploration as Efficient Field Emitter" KhemchandDewangan, Girish P. Patil, Ranjit V. Kashid, V. S. Bagal,M. A. More, D. S. Joag, N. S. Gajbhiye, Padmakar G. Chavan, Vacuum 109, (2014),223.
33) 20) "CdS nanowires: Ultra-long growth and enhanced field emission properties" Padmakar G. Chavan, Satish S. Badadhe, Imtiaz S. Mulla, Mahendra A. More and Dilip S. Joag, Vacuum 101, (2014),38.
34) "Photo-enhanced field emission studies of tapered CdS nanobelts" Padmakar G. Chavan,Mahendra A. More, D. S. Joag,Satish S. Badadhe, Imtiaz S. Mulla, IEEE, ISBN: 978-14799-5306-6 DOI:10.1109/IVNC.2014.6894770(2014).
35) "Enhancement in the field emission behavior of graphene in N2/O2 high vacuum ambience"S.R. Suryawanshi, P.S Kolhe,. D. S. Gavhane, S. S. Patil, P. G.Chavan, M. A. More, D.J. Late, IEEE ISBN: 978-1-4799-5306-6, DOI:10.1109/IVNC.2014.6894791(2014).

2013:

36) "Photo-assisted field emission and current noise analysis from single submicron CdS wire" P. G. Chavan, RV Kashid, MA More, DS Joag, SS Bhadade, IS Mulla, DOI: 10.1109/IVNC.2013.6624709(2013).
37) "Controlled Ti Seed Layer Assisted Growth and Field EmissionProperties of Pb(Zr0.52Ti0.48)O3 Nanowire Arrays" AnujaDatta, Devajyoti Mukherjee, Mahesh Hordagoda, SarathWitanachchi, Pritish Mukherjee, Ranjit V. Kashid, Mahendra A. More, Dilip S. Joag, and Padmakar G. Chavan ACS Applied Mate.& interfaces 5, 6261 (2013).

2012:

38) "Synthesis and Characterization of Self-Assembled Nanofiber-Bundles ofV2O5: Their Electrochemical and Field Emission Properties" K. Dewangan, N. N. Sinha, Padmakar G. Chavan, Prashant K. Sharma, Avinash C. Pandey, M. A. More, D. S. Joag, N. Munichandraiah, N. S. Gajbhiye, Nanoscale 4, (2012), 645.
39) "Decoration of CdS nanoparticles on MWCNT's by simple solution chemistry" Prashant Baviskar, Padmakar Chavan, Babasaheb Sankapal, Appl. Surf. Sci.258, 7536 (2012).
40) "Synthesis of hierarchical nanostructures of doped-CdS by microwave assisted solvothermal technique using a household microwave oven and allied field emission and photo-catalytic characteristics" M. Shinde, Padmakar Chavan, Sudhir Arbuj, SunitRane, Mahendra More, Suresh Gosavi, DilipJoag, and Dinesh Amalnerkar, J. Nano. Nanotech. 12, (2012), 3788.
41) "Spectral analysis of current fluctuations in CdS nanocombs and nanowires array" Ranjit V. Kashid, Padmakar G. Chavan, Imtiaz S. Mulla, Dilip S. Joag and Mahendra A. More, IEEE, ISBN: 978-1-4673-0187-9, DOI: 10.1109/IVEC.2012.6262105, (2012).

2011:

42) "Synthesis of single crystalline CdS nanocombs and their application in photo-sensitive field emission switches" Padmakar G. Chavan, Satish S. Badadhe, Imtiaz S. Mulla, Mahendra A. More and Dilip S. Joag, Nanoscale 3, (2011), 1078.
43) 30) "Enhanced Field Emission From SnO2:WO2.72 Nanowire Heterostructure" D. R. Shinde, Padmakar G. Chavan, Shashwati Sen, Dilip S. Joag,Mahendra A. More, S. C. Gadkari, S. K. Gupta, ACS Appl. Mater. & Interfaces 3, (2011) 4730.
44) "Controlled Growth of Well-Aligned GaSNanohornlike Structures andTheir Field Emission Properties" Godhuli Sinha, Subhendu K. Panda, AnujaDatta, Padmakar G. Chavan, Deodatta R. Shinde,Mahendra A. More, D. S. Joag, and Amitava Patra, ACS Appl. Mater. Interfaces 3, (2011), 2130.
45) "Photo-enhanced field emission study of TiO2 nanotubes array" Padmakar G. Chavan, Sugat V. Shende, Dilip S. Joag, Mahendra A. More, Ultramicroscopy 111 (2011), 415.
46) "Field Emission and Photo-Enhanced Field EmissionInvestigations of CdS Nanowires Array" Padmakar G. Chavan, Satish S. Badadhe, Imtiaz S. Mulla, Mahendra A. More andDilip S. Joag,IEEE, ISBN: 978-1-4244-8662-5, DOI 10.1109/IVEC.2011.5746893, (2011).
47) "Extremely stable field emission and photo-sensitivefield emission from single crystalline CdS nanowires" Padmakar G. Chavan, Satish S. Badadhe, Imtiaz S. Mulla, Mahendra A. More andDilip S. Joag,IEEE, ISBN: 978-1-4577-1243-2, (2011).

2010:

48) "High current density, low threshold field emission from functionalizedcarbon nanotube bucky paper" Bhalchandra A. Kakade, Vijayamohanan K. Pillai, Dattatray J. Late, Padmakar G. Chavan, Farid J. Sheini, Mahendra A. More, and Dilip S. Joag, Appl. Phys. Lett. 97, (2010), 073102. 2009:

49) "Growth, Optical, and Field Emission Properties of Aligned CdSNanowires" AnujaDatta, Padmakar G. Chavan, Farid Jamali Sheini, Mahendra A. More,Dilip S. Joag, and Amitava Patra, Crys. Growth and Des. 9, (2009), 4157.
50) "Self-catalytic growth and field-emissionproperties of Ga2O3nanowires"Godhuli Sinha, Anuja Datta, Subhendu K Panda, Padmakar GChavan, Mahendra A More, Dilip S JoagandAmitava Patra, J. Phys. D: Appl. Phys. 42, (2009),185409.
51) "Field emission studies of Te nanorods grown on Si (111) substrate" Padmakar G. Chavan, Sandip S. Patil, Mahendra A. More, Shashwati Sen, Madhvi Sharma, K.P. Muthe, Umananda M. Bhatta, P.V. Satyam, Dilip S. Joag, Vacuum 83, (2009), 1307.
52) Field emission studies on aligned CdS nanowires array PG Chavan, FJ Sheini, MA More, DS Jaog, A Datta, A Patra, ISBN 978-81-8372-054-0, p. 397-398; V. 54 (2009).

2008:

53) "Synthesis of Well-Crystalline GaS Nanobelts and Their Unique Field Emission Behavior" Subhendu K. Panda, AnujaDatta, Godhuli Sinha, and Subhadra Chaudhuri, Padmakar G. Chavan, Sandip S. Patil, Mahendra A. More, and Dilip S. Joag, J. Phys. Chem. C 112, (2008), 6240.

Conference Presentations (Presenter underlined)

1. "Photo-enhanced field emission study of tapered CdS nanobelts" Padmakar G. Chavan, Satish S. Badadhe, Imtiaz S. Mulla, Mahendra A. More and Dilip S. Joag, Poster presentation, International Vacuum Nanoelectronics Conference (IVNC-2014), **Engelberg (Switzerland),** 06th-10thJuly 2014.

2. "CdS nanoforms: Synthesis Field emission and Photo-sensitive field emission investigations" Padmakar G. Chavan, Satish S. Badadhe, Imtiaz S. Mulla, Mahendra A. More and Dilip S. Joag, Invited talk, Aspects of Field Emission & Vacuum Microelectronics, MTRDC, **Banglore,(INDIA)**, 17th Sept 2011.

3. "Photo-sensitive field emission studies of CdS nanoforms and nanowires array", Padmakar G. Chavan, Satish S. Badadhe, Imtiaz S. Mulla, Mahendra A. More and Dilip S. Joag, Invited talk, NAPRA Conference, Banaras Hindu University (BHU), **Varanasi (INDIA),** 16th -18th March, 2011.

4. "Extremely stable field emission and photo-sensitive field emission from single crystalline CdS nanowires" Padmakar G. Chavan, Satish S. Badadhe, Imtiaz S. Mulla, Mahendra A. More andDilip S. Joag, Poster presentation, International Vacuum Nanoelectronics Conference (IVNC-2011), **Wuppertal, (Germany),** 18th-22nd July 2011.

5. "Field Emission and Photo-Enhanced Field Emission Investigations of CdS Nanowires Array" Padmakar G. Chavan, Satish S. Badadhe, Imtiaz S. Mulla, Mahendra A. More and Dilip S. Joag, Oral presentation, International Vacuum Electronics Conference (IVEC) 2011, held at IISC, **Bangalore, (INDIA),** 21st-24th Jan 2011.

6. "Photo-enhanced field emission study of TiO2 nanotubes array" Padmakar G. Chavan, Sugat V. Shende, Dilip S. Joag, Mahendra A. More, Oral Presentation, International Field Emission Symposium (IFES), **Sydney (Australia),** 5th-8th July 2010.

7. International Conference on Nanoscience and Nanotechnology (ICONSAT), Indian Institute ofTechnology, **Mumbai (INDIA),** Attended, 17th-20th Feb 2010.

8. "Field emission studies of aligned CdS nanorods" Padmakar G. Chavan, Anuja Datta, Farid Jamali Sheini, Mahendra A. More, Dilip S. Joag, and Amitava Patra, Poster presentation, SecondInternational conference on frontiers in Nano Science and Nanotechnology (Cochin nano), Department of Physics, Cochin University of Science and Technology, **Cochin, Kerala, (INDIA),**3rd-6th Jan 2009.

9. "Field emission and photo-sensitive field emission studies of CdS nanocombs" Padmakar G. Chavan, Satish S. Badadhe, Imtiaz S. Mulla, Mahendra A. More and Dilip S. Joag, D. S. Joag, Oral Presentation, Raman memorial conference (RMC), Centre for Advanced studies in Material Science and Condensed matter physics, Department of Physics, **University of Pune, (INDIA),**25th-26th Feb. 2009.

10. "Field emission studies of aligned ZnO nanorods gown by V-S mechanism" Padmakar G. Chavan, Sandip S. Patil, Jai Singh, M. A. More, O. N. Shrevastava. D. S. Joag, Poster presentation, Second International Symposium on Advanced Materials and Polymers for Aerospace and Defense Applications, National Chemical Laboratory (NCL), **Pune, (INDIA),** 8th - 12 Dec 2008.

11. "Aligned CdS nanorods: stable field emitter" Padmakar G. Chavan, Anuja Datta, Farid Jamali Sheini, Mahendra A. More, Dilip S. Joag, and Amitava Patra, Poster presentation, Workshop on Nanotechnology and smart materials, Defense Institute of Advanced Technology (DIAT), **Pune,(INDIA),** 11th-13th Nov 2008.

12. "In-SnO2 field emitter arrays on patterned Si substrate" A. B. Bhise, Padmakar G. Chavan, D. J. Late, M. A. More, I. S. Mulla, V. K. Pillai and D. S. Joag, Poster presentation, DAE Solid State Physics Symposium (SSPS), Department of Physics, Mysore University, **Mysore, Karnataka(INDIA**), 27th-31 Dec 2007.

13. "Field emission studies of a single RuO2 doped SnO2 micron sized wire" A. B. Bhise, Padmakar G. Chavan, D. J. Late, M. A. More, I. S. Mulla, V. K. Pillai and D. S. Joag, Poster presentation, National Conference on Devices, Intelligent Systems and Communications (MITDISC) 2007, Department of Electronics and Communication Engineering, Manipal Institute of Advanced Technology, **Manipal (INDIA),** 7th-8th Dec 2007.

Research Laboratory 01:

Nanomaterials synthesis Laboratory

a) Thermal Evaporation system

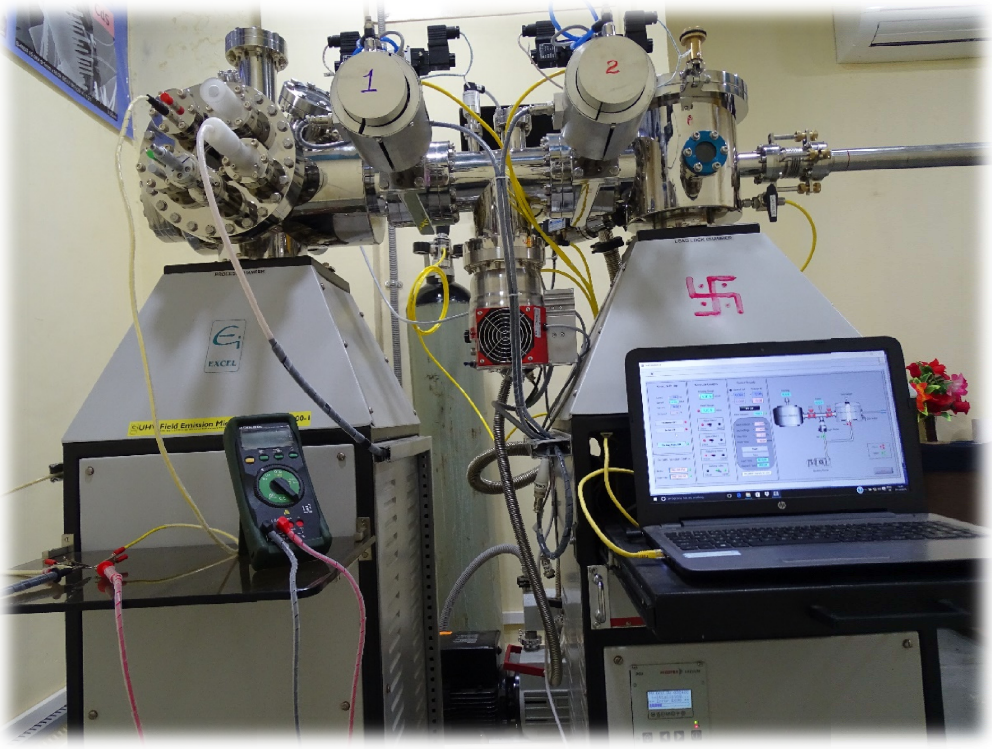
b) Hydrothermal System

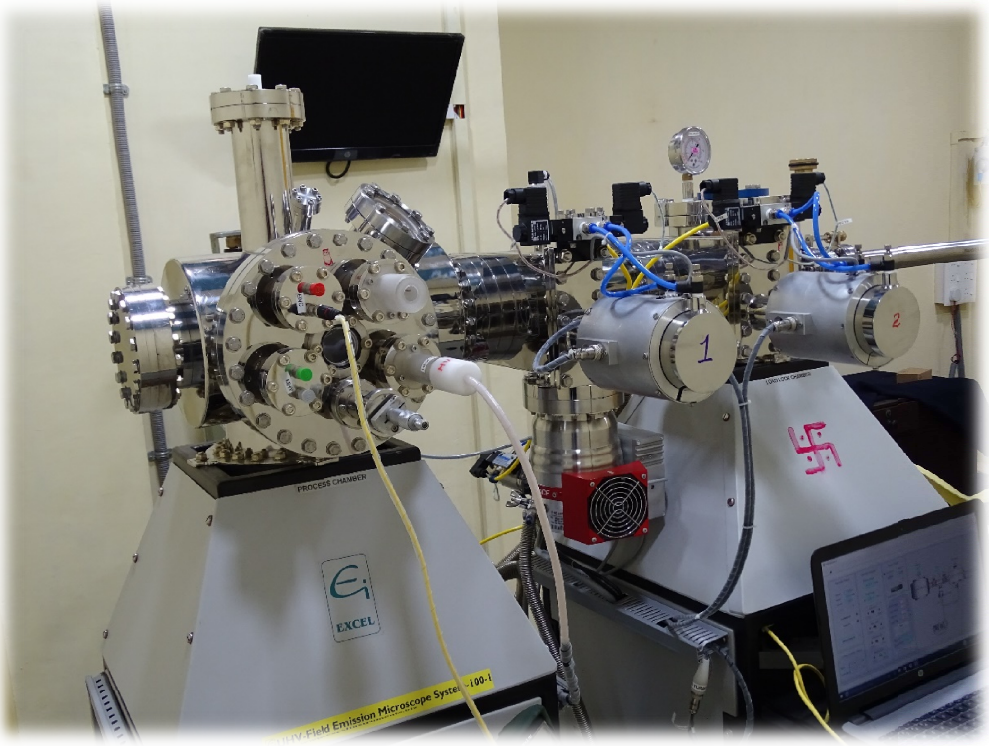
c) Anodization deposition method

d) Glow Box

Research Laboratory 02:
Field Emission Laboratory

a) Ultra-High Vacuum Field Emission Microscope





Future Plan:

1. Patterning by e-beam lithography for field Emission studies
2. Exploration of Low temperature field Emission properties of 2D nanomaterials.
3. Photo-field Emission studies of 2D nanomaterials through LASER triggering.