Dr. Mrs. Neha Yeshwanta Hebalkar

Scientist 'E'

Centre for Nanomaterials

International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI)

Balapur PO, RCI Road, Hyderabad - 500005

Phone: +91 040 24452365

E-mail: neha@arci.res.in

Vision and Mission

Vision: Contributing nation's development through science and technology

Mission: Translational research in the field of nanomaterials for indigenous technology development in the prospective of nation's needs

Qualification

M.Sc. PhD. (Chemistry)

Professional Experience

Dec 2004 – Dec 2005	PDF	DST- PDF for Nanoscience and Technology, IICT, Hyderabad
Jan 2006 – Sept 2011	Scientist 'C'	International Advanced Research Centre for Powder Metallurgy and New Materials (ARCI) Hyderabad
Oct 2011 – Sept 2015	Scientist 'D'	ARCI, Hyderabad
Oct 2015 – Till date	Scientist 'E'	ARCI, Hyderabad

Summary of work experience

- Development of tailor made Nanomaterials for various applications
- Technology developed based on Nanomaterials:
  - Nano silver for antibacterial applications for textiles, water purification, medical applications,
  - Nano titania based materials for self cleaning textile

- Nanoporous aerogel based applications for thermal insulation in defense applications, aerospace, industrial, architectural, automotive thermal insulation applications

♦ Other research areas
  - Production of aerogels of polymer, carbon, silica, titania, alumina and their composites
  - Nanoporous aerogels for nanoparticulate air filter, Li ion battery, supercapacitor, controlled drug delivery application, water fluoride removal
  - Core@shell nanoparticles (CdS@silica, ZnS@silica, Ag@silica, Au@silica, Cu@silica, Ag,TiO2@silica, TiO2@silica etc)
  - Photocatalysis
  - Biomedical applications of nanomaterials
    - ♦ Highly porous carbon spheres for controlled drug delivery
    - ♦ Immune-protective coating on stem cells
    - ♦ Saliva glucose level testing using SPR

Expertise

- Chemical methods of nanomaterials synthesis and their characterization
- Design of supercritical drying unit, its operation and safety
- Up-scaling of lab scale preparation processes, equipment and production line
- Hands on experience on x-ray photoelectron spectroscopy, transmission electron microscopy (TEM-EDAX-EELS), thermal property measurements, UV-visible-IR spectroscopy, BET measurements, x-ray diffraction, SEM-EDAX
- Experience in full life cycle of technology development from lab scale to commercial scale
- Techno commercial discussions with industry partners
- Costing of technologies, products developed
- Patent writing, international patenting, white space analysis, Freedom-To-Operate (FTO) report analysis

Major Accomplishments

Significant Contributions to technology development and transfer to industry

- **Silica aerogel based thermal insulation for Industrial Applications**
  (Lead role from concept to commercialization)

  Indian patent granted

  "Large impact" technology contributing to energy conservation has been developed, transferred to Indian industry partner, aligning to the **"Make In India"** national initiative. The development of silica aerogel based flexible sheet product has been envisioned to compete globally in the international market. This superior product has potential applications in the power generation plants, refineries, oil & gas, automotive, transportation, aerospace & defence industries. The manufacturing plant is being rolled out by the technology receiver.

Technology Demonstration

Silica aerogel sheet based thermal protection system in one of the ambitious Defence aerospace program

- **Titania microspheres for self-cleaning textiles**
  (Major contribution in the product development)
  - **Indian patent applied.**

  Contribution in development of a manufacturing process for novel, multifunctional, nanostructured, titania microspheres tailored by bandgap engineering, its testing, validation of self-cleaning property and other properties on fabric. Technology has been successfully commercialized by the technology receiver. Self cleaning denim jean pants of Splash and Flying Machine brands have been launched with "Sun Wash" tag in India and Dubai.

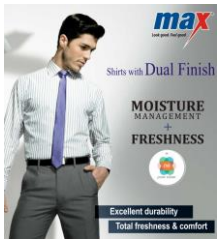
- **Nano silver for antibacterial textile application**

  (Contributed as Team Member)

  Success story- ARCI received prestigious TDB National Award 2016 for successful commercialization of indigenous technology.

  - **UK and Indian patent granted**.

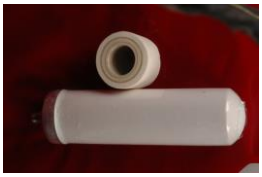
  Contribution in the development of a novel process to make antibacterial, highly stable nano silver aqueous suspension which is compatible to the industrial textile finishing process. Application has been developed for fabric, conducted functionality testing and completed product validation by the technology receiver. Product has been commercialized successfully. Antibacterial textiles with tag **"n9"** are currently available for various brands and apparels in Indian and international market.



- **Nano silver for ceramic candle water filter**

  (Contributed as Team Member)

Contribution in in-depth analysis of nano silver loaded on ceramic filter candle, safety analysis of the process. Product of name "PuriTech" available in Hyderabad and Secunderabad market.



Characterization support

Serve as in-charge of x-ray photoelectron spectroscopy (XPS), BET surface area analyzer, thermal conductivity measurement unit and team member of transmission electron microscopy (TEM). Characterization support was provided to many projects of ARCI and several external organizations to generate knowledge and revenue.

Other non-technical contributions

- Served as safety officer in ARCI's Centre for Nanomaterials
- Active Member-Secretary in ARCI's Internal Complaints Committee (ICC) and Woman Welfare Cell
- Served for Inventory Auditing at ARCI

Summary of Patents / Publications

- Total number of patents granted: 6 (5 Indian, 1 International)
- Total number of patents pending: 12 (2 Indian, 10 International)
- Total number of publications in national / international journals: 50 +
- Book chapters: 3
- H-Index: 22 (Scopus), 24 (Google scholar)

- i10 index: 38 (Google scholar)
- Citations: more than 1800 (Google scholar)

Recognitions

- Recognized Ph.D. guide in Osmania University for Chemistry
- Worked as Member of Board of Studies for graduate studies in Jawaharlal Nehru Technological University, Anantpur
- Guide to Ph.D. student: 1 (ongoing)
- Guide to M.Sc. / M Tech / project students, summer project students : 50+

Patents Granted

1. **282988** Improved method of producing highly stable aqueous nano titania suspension, Neha Yeshwanta Hebalkar and Tata Narasinga Rao

2. **289543** Improved process for the preparation of stable suspension of nano silver particles having antibacterial activity, J. Revathi, Neha Hebalkar, Tata Narasinga Rao

3. **GB2496089** Improved process for the preparation of stable suspension of nano silver particles having antibacterial activity, J. Revathi, Neha Hebalkar, Tata Narasinga Rao

4. **290370** Improved method for producing carbon containing silica aerogel granules Neha Hebalkar

5. **291408** Improved process for the preparation of bi-functional silica particles useful for antibacterial and self cleaning surfaces, Neha Hebalkar, Tata Narasinga Rao,

6. **305898** An improved process for producing silica aerogel thermal insulation product with increased efficiency, Neha Hebalkar

7. **PCT Publication-WO 20012017446** Improved process for the preparation of stable suspension of nano silver particles having antibacterial activity, Revathi Janardhanan, Hebalkar Neha,Narsinga Rao Tata

Patents applied

1. Method of producing multifunctional self-assembled mixed phase titania spheres, Neha Hebalkar, Tata Narasinga Rao
   Indian Patent, Application no. 3777/DEL/2014

2. Improved process for the preparation of stable suspension of nano silver having antibacterial activity
   J. Revathi, Neha Hebalkar, Tata Narasinga Rao
   Indian Patent, Application no 201611027145, 2016

Country	Application No
Russia	2017128112
UAE	P6000095/2018
South Africa	518390733
USA	15/744,011
Malyasia	P1 2018700103
Japan	2018-501855
China	201680041762.3
Mexico	MX/a/2018/000480

3. An improved silica aerogel | Brazil Indonesia | BR 11 2018 0007030 P00201800182 | process for producing thermal insulation product with increased efficiency, Neha Hebalkar, International patents

Publications

1. Flexible and free-standing carbon nanofiber matt derived from electrospun polyimide as an effective interlayer for high-performance lithium–sulfur batteries Pakki Tejassvi, Mohan E, Hebalkar Neha Y, Adduru Jyotirmayi, Bulusu Sarada V, Srinivasan Anandan, Krishna Mohan, Tata Narasinga Rao Journal of Materials Science, 54 (12), 2019, 9075–9087

2. High temperature magnetic studies on Bi 1-x Ca x Fe 1−y Ti y O 3-δ nanoparticles: Observation of Hopkinson-like effect above T_N, Mocherla, P.S.V., Prabhu, D., Sahana, M.B., Ramachandra Rao, M.S., Sudakar, Journal of Applied Physics, 124 (7), 073904, 2018

3. Phosphorylated chitin as a chemically modified polymer for ecofriendly corrosion inhibition of copper in aqueous chloride environment Vimal kumar K., Appa Rao BV , Hebalkar N. Y., Research on Chemical Intermediate, 43(10), 2017, 5811-5828

4. Nano-grained $SnO_2/Li_4Ti_5O_{12}$ composite hollow fibers via sol-gel/ electrospinning as anode material for Li- ion batteries Haridas A K, Sharma C S.,Hebalkar N. Y., Rao T N., Materials Today Energy, 4, 2017, 14-24

5. Development of nanoporous aerogel-based thermal insulation products: "Make in India" initiative Neha Hebalkar Special section: Women in Science – New Frontiers of Research, Current Science, 112(7), 2017, 1413-1420

6. Enhanced Electrochemical Performance of Electrospun SiO2 Nanofibers as Binder-Free Anode Tejassvi Pakki, Sudhakara S. Sarma, Neha Y. Hebalkar, Srinivasan Anandan,

Krishna Mohan Mantravadi, and Tata N. Rao
Chemistry Letters, 2017, doi:10.1246/cl.170080

7. Sol–gel derived solar selective coatings on SS 321 substrates for solar thermal applications
K.R.C. Soma Raju, D.S. Reddy, Neha Hebalkar, R. Subasri,G.Padmanabham
Thin Solid Films, 598(1) 2016, 46-53

8. Synthesis of High Temperature Stable Carbon Coated Metal Nanoparticles in $AlPO_4$ Based Matrix in Situ in Oxidative Atmosphere Maharana, R , Bhanu Prasad, V.V., Roy, S., Prasad, D., Kumar, K., Paik, P., Hebalkar, N., Shukla, A., Bal, R.
Journal of the American Ceramic Society , 99 (1) 2016, 64-71

9. Dopant-free anatase titanium dioxide as visible-light catalyst: Facile sol-gel microwave approach
Jaimy, K.B., Vidya, K., Saraswathy, H.U.N., Hebalkar, N.Y., Warrier, K.G.K.
Journal of Environmental Chemical Engineering, 3(2), 2015, 1277-1286

10. Influence of pulsed current on the aqueous corrosion resistance of electrodeposited zinc
Nitin P. Wasekar, A. Jyothirmayi, Neha Hebalkar, G. Sundararajan
Surface and Coatings Technology, 272, 2015, 373-379

11. Fabrication and surface functionalization of electrospun polystyrene submicron fibers with controllable surface roughness
Haridas, A K and Sharma, C S and V, Sritharan and Rao, T N RSC Advances, 4, 2015, 12188-12197

12. Solar hydrogen generation from spinel ZnFe2O4 photocatalyst: Effect of synthesis methods Dom, R., Chary, A.S., Subasri, R., Hebalkar, N.Y, Borse, P.H.
International Journal of Energy Research, 39 (10), 2015, 1378-1390

13. X-ray photoelectron spectroscopy depth-profiling analysis of surface films formed on Cu–Ni (90/10) alloy in seawater in the absence and presence of 1,2,3-benzotriazole,
B.V. Appa Rao, K. Chaitanya Kumar, Neha Hebalkar
Thin Solid Films, 556, 2014, 337-344

14. Stabilizing effect in nano-titania functionalized CdS photoanode for sustained hydrogen generation
Alka Pareek, Rahul Purbia, Pradip Paik, Neha Hebalkar, Hyun Gyu Kim, Pramod H. Borse,
International Journal of Hydrogen Energy, 39(9),2014, 4170-4180

15. Preparation and characterization of Cu-doped TiO_2 materials for electrochemical, photoelectrochemical, and photocatalytic applications, Ibram Ganesh, Polkampally P. Kumar, Ibram Annapoorna, Jordan M. Sumliner, Mantripragada Ramakrishna, Neha Hebalkar, Gade Padmanabham, Govindan Sundararajan
Applied Surface Science, 293, 2014, 229-247

16. Controlled band energetics in Pb-Fe-Nb-O metal oxide composite system to fabricate efficient visible light
photocatalyst Vijayasankar, K., Hebalkar, N.Y., Kim, H.G., Borse, P.H. Journal of Ceramic Processing Research, 14 (4), 2013, 557-562

17. Influence of triethanolamine on physico-chemical properties of cadmium sulphide Arbuj, S.S., Bhalerao, S.R., Rane, S.B., Hebalkar, N.Y., Mulik, U.P., Amalnerkar, D.P. Nanoscience and Nanotechnology Letters, 5(12), 2013, 1245-1250

18. Fabrication of a highly efficient and stable nano-modified photoanode for solar H_2 generation
Pareek, A., Hebalkar, N.Y., Borse, P.H.
RSC Advances, 3(43), 2013, 19905-19908

19. Eco-friendly ferrite nanocomposite photoelectrode for improved solar hydrogen generation Do
m, R., Kumar, G.S., Hebalkar, N.Y., Joshi, S.V., Borse, P.H.
RSC Advances, 3(35), 2013, 15217-15224

20. Shape evolution of perovskite LaFeO3 nanostructures: A systematic investigation of growth mechanism, properties and morphology dependent photocatalytic activities Thirumalairajan, S., Girija, K., Hebalkar, N.Y., Mangalaraj, D., Viswanathan, C., Ponpandian, N.
RSC Advances, 3(20), 2013, 7549-7561

21. Synthesis of a hydrogen producing nanocrystalline ZnFe2O 4 visible light photocatalyst using a rapid microwave irradiation

method Dom, R., Subasri, R., Hebalkar, N.Y., Chary, A.S., Borse, P.H. RSC Advances, 2(33), 2012, 12782-12791

22. Feasibility of polymer based cell encapsulation using electrostatic layer by layer assembly Garg, P., Debnath, T., Chelluri, L.K., Hebalkar, N. Journal of Biomaterials and Tissue Engineering, 2(3), 2012, 215-219

23. Synthesis and characterization of CuO-hybrid silica nanocomposite coatings on SS 304 Subasri, R. , Malathi, R., Jyothirmayi, A., Hebalkar, N.Y. Ceramics International, 38(7), 2012, 5731-5740

24. Investigations on the mechanical properties of hybrid nanocomposite hard coatings on polycarbonate Sownt harya, L., Lavanya, S., Chandra, G.R., Hebalkar, N.Y., Subasri, R. Ceramics International, 38 (5), 2012, 4221-4228

25. Synthesis and characterization of nano silicon and titanium nitride powders using atmospheric microwave plasma technique Kumar, S.M., Murugan, K., Chandrasekhar, S.B., Hebalkar, N., Krishna, M., Satyanarayana, B.S., Madras, G. Journal of Chemical Sciences, 124(3), 2012, 557-563

26. Photocatalytic activity enhancement in doped titanium dioxide by crystal defects Jaimy, K.B., Safeena, V.P., Ghosh, S., Hebalkar, N.Y., Warrier, K.G.K. Dalton Transactions, 41(16), 2012 , 4824-4832

27. Deposition of nanostructured photocatalytic zinc ferrite films using solution precursor plasma spraying Rekha Dom, G. Sivakumar, Neha Hebalkar , Shrikant V. Joshi, Pramod H. Borse Materials Research Bulletin, 47(3), 2012, 562-570

28. Preparation of bi-functional silica particles for antibacterial and self cleaning surfaces Neha Y. Hebalkar, Snigdhatanu Acharya, Tata N. Rao, Journal of Colloid and Interface Science, 364, 2011, 24–30

29. Effect of SiO_2 additives on the PEM fuel cell electrode performance
V. Senthil Velan, G. Velayutham, Neha Hebalkar, K.S. Dattathreyan,
Int. J. Hydrogen Energy, 36, 2011, 14815–14822

30. Silica – silver core shell particles for antibacterial textile application
K. Nischala, Tata. N. Rao and Neha Hebalkar
Colloids and Interfaces – B : Biointerfaces, 82, 2011, 203–208

31. Highly Stabilized and Finely Dispersed Cu2O/TiO2: A Promising Visible Sensitive Photocatalyst for Continuous Production of Hydrogen from Glycerol:Water Mixtures
Kannekanti Lalitha; Gullapelli Sadanandam, Valluri Durga Kumari, Machiraju Subrahmanyam, Bojja Sreedhar, Neha Y. Hebalkar
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32. Phase formation during mechanically activated annealing of nanocrystalline Cr–60at.%Al
M.S. Archana, Neha Hebalkar, K. Radha, J. Joardar
Journal of Alloys and Compounds 501, 2010, 18–24

33. Effect of plasma surface treatment on mechanical and corrosion protection properties of UV-curable sol-gel based GPTS-ZrO2 coatings on mild steel
P. Kiruthika, R. Subasri, A. Jyothirmayi, K. Sarvani, N.Y. Hebalkar
Surface & Coatings Technology 204, 2010, 1270–1276

34. Synthesis and characterization of polyaniline: nanospheres, nanorods, and nanotubes—catalytic application for sulfoxidationreactions
B. Sreedhara, P. Radhikaa, B. Neelimaa, Neha Hebalkar and M. V. Basaveswara Rao
Polym. Adv. Technol., 20(12), 2009, 950–958

35. Synthesis and surface chemistry of nano silver particles Revathi Janardhanan, Murugan Karuppaiah, Neha Hebalkar, Tata Narsinga Rao
Polyhedron 28, 2009, 2522–2530

36. Selective oxidation of sulfides with H_2O_2 catalyzed by silica–tungstate core–shell nanoparticles
B. Sreedhar, P. Radhika, B. Neelima, Neha Hebalkar, A.K. Mishra
Catalysis Communications 10, 2008, 39–44

37. Synthesis and characterization of silica-copper core shell nanoparticles – application for conjugate addition reactions
    B. Sreedhar, P. Radhika, B. Neelima, Neha Hebalkar
    J. Chem. – An Asian Journal, 3, 2008, 1163 – 1169

38. Palladium nanowire from precursor nanowire : crystal-to-crystal transformation via in situ reduction by polymer matrix
    S. Porel, N. Hebalkar, B. Sreedhar and T. P. Radhakrishnan
    Adv. Funct. Mater, 17(14), 2007, 2550-2556

39. Formation and growth of molecular nanocrystals probed by their optical properties
    A. Patra, N. Hebalkar, B. Sreedhar and T. P. Radhakrishnan
    J. Phys. Chem. C, 2007, 111(44), 16184-16191

40. Highly photostable dye entrapped core–shell particles
    Anita S. Ethiraj, Sharmin Kharrazi, Neha Hebalkar, J. Urban, S.R. Sainkar, S.K. Kulkarni
    Materials Letters, 61(25), 2007, 4738-4742

41. Preparation and characterization of HAP/carboxymethyl chitosan nanocomposites
    B. Sreedhar, Y. Aparna, M. Sairam, Neha Hebalkar
    Journal of Applied Polymer Science, 105 (2), 2007, 928-934

42. Nanoengineering of surface modified silica particles to form core-shell and hollow nanospheres of iron oxide
    Neha Hebalkar, P. Radhika, B. Sreedhar, M. Lakshmi Kantam
    J. Nanoscience and Nanotechnology, 7 (10), 2007, 3662-3669

43. Regioselective ring opening of epoxides with aminesusing monodispersed silica nanoparticles in water
    B. Sreedhar, P. Radhika, B. Neelima, Neha Hebalkar
    Journal of Molecular Catalysis A: Chemical, 2007, 272(1-2), 159 – 163

44. Tuning the size and optical properties in molecular nano/microcrystals : manifestation of hierarchical interactions
    A. Patra, N. Hebalkar, B. Sreedhar,M. Sarkar, A. Samantaa and T. P. Radhakrishnan
    Small, 2(5), 2006, 650-659

45. Synthesis and characterization of mercaptoethanol capped zinc oxide nanoparticles capped with organic molecules
    Chimanpure J, Ashtaputre S, Marathe S, Neha Hebalkar, S. K. Kulkarni
    Synthesis and Reactivity in Inorganic Metal- Organic and Nano-Metal Chemistry, 36, 2006, 65

46. Synthesis and characterization of silica-titania core-shell particles
    Suchita Kalele, ravi Dey, Neha Hebalkar, J. Urban, S. W. Gosavi and S. K. Kulkarni
    Pramana - journal of physics, 65(5), 2005, 787-791

47. Study of correlation of structural and surface properties with electrochemical behaviour in carbon aerogels
    Neha Hebalkar, Girish Arabale, S. R. Sainkar, S. D. Pradhan, I. S. Mulla, Pushan Ayyub, K. Vijayamohanan, S. K. Kulkarni
    J. Mater. Sci., 40 (14), 2005 , 3777 -3782

48. Photoluminescence study of Organic dye-doped silica Nanoparticles
    Anita S. Ethiraj, Neha Hebalkar, S. R. Sainkar and S. K. Kulkarni
    J. Luminescence, 114 (1), 2005, 15-23

49. Semiconductor Nanoparticles
    M. Bangal, S. Ashtaputre, S. Marathe, A. Ethiraj, N. Hebalkar, S. W. Gosabvi, J. Urban, S. K. Kulkarni
    Hyperfine Interactions, 160 (1-4), 2005, 81-94

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    S. A. Kalele, S. S. Ashtaputre, N. Y. Hebalkar, S. W. Gosavi, D.N. Deobagkar, D. D. Deobagkar, S. K. Kulkarni
    Chem. Phys. Letts, 404 (1-3), 2005, 136-141

51. Structural and Optical Investigations of SiO_2-CdS Core-Shell on Silica Particles
    Neha Hebalkar, Sharmin Kharazzi, Anita Ethiraj, J. Urban, R. Fink, S. K. Kulkarni
    J. Colloids and Interface Science, 278(1), 2004, 107-114

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    Surface Engineering, 20 (5), 2004, 367-372

53. Enhancement of photoluminescence in Manganese doped ZnS nanoparticles due to a silica shell
    Anita S. Ethiraj, Neha Hebalkar , Renu Pasricha, J. Urban, C. Dem, M. Schmitt, W. Kiefer, L Weinhardt, S. Joshi, R. Fink, C. Heske, C. Kumpf, E. Umbach and S. K. Kulkarni
    Journal of Chemical Physics, 2003, 118(19), 8945-8953

54. Properties of zinc sulphide nanoparticles stabilized in silica
    Neha Hebalkar, Arun Lobo, R .S. Sainkar, S.D. Pradhan, W. Vogel, J. Urban , S. K. Kulkarni
    Journal of Material Science, 36(18), 2001, 4377-4384

55. Carbon aerogels
    Neha Hebalkar, S. K. Kulkarni
    Physics Education, 2001, 18 (1), 61

Book Chapters

1. "Nanoporous Aerogels for Defense and Aerospace Applications" accepted book chapter in "Handbook of Advanced Ceramics and Composites" by Springer Nature

2. "Nanomanufacturing for Aerospace" S. Anandan, Neha Hebalkar, B. V. Sarada, Tata N Rao, Chapter 5 in Book "Nano for Aerospace Applications" by Springer Nature, 2017, 85-101
3. "Aerogels for Energy Conservation and Saving" A. Yamini, S. Keerthi, Neha Hebalkar, Chapter 38 in Book "Nanotechnology for Energy Sustainability" Publisher Wiley, 2017, 937-966

Conferences Presentations

1. Thermographic studies of aerogel composites, Keerthi Sanghamitra, Neha Hebalkar, 2nd International Conference on New Frontiers in Chemical, Energy and Environmental Engineering (INCEEE -2019), held at NIT – Warangal during 15-16 Feb, 2019
2. "Manufacturing Technology for Self Cleaning and Anti-bacterial Textiles" A. Yamini, S. Anandan, Neha Hebalkar T. N. Rao, Bangalore Nano Conference, 3-4 March 3-4 , 2016

3. "Aerogels: New Generation Thermal Insulation Technology" S. Keerthi, Neha Hebalkar Bangalore Nano Conference, 3-4 March 3-4 , 2016

4. **"**Enhancing the Photocatalytic Activity of Anatase Titania Nanoparticles and a Novel Method to Test Self Cleaning Property" Neha Hebalkar, G Raghavendra, K. Nischala, Tata N Rao**,** International Conference On Nanoscience & Technology, Jan 20-23 2012, Hyderabad

5. "Electron Microscopy studies of bifunctional silica@titania,Ag core-shell particles", International Conference on Electron Nanoscopy, July 6-8 2011, Hyderabad

6. "Synthesis of silica@TiO_2:Ag core-shell particles for self cleaning and antibacterial textile applications" Neha Hebalkar, Snigdhatanu Acharya, T. N. Rao, International Workshop on Nanotechnology and Advanced Functional Materials held on July 9-11, 2009, in NCL, Pune

7. "Tunable Synthesis and Characterization of Porous Carbon Aerogel Nanospheres" Neha Hebalkar, K. Mohanapriya, K. Radha, Tata Narasinga Rao , NanoKorea 2007, Korea, August 29 – 31 2007

8. "Synthesis and Characterization of silica aerogels with transition metals", K. Mohanapriya and Neha Hebalkar International Conference on Recent Trends in Nanostructured, Materials and Their Applications, Hyderabad, December 19-20, 2007

9. "Synthesis and Characterization of Mercaptoethanol Capped Zinc Oxide nanoparticles" , J. Chimanpure, S. Ashtaputre, S. Marathe, N. Hebalkar, S. Kharrazi, Renu Pasricha, S. K. Kulkarni, International Conference on Nanomaterials (Nano 2005) Sivakasi, July 13 – 15, 2005

10. "Synthesis and Investigations of Cadmiun Sulphide and Zinc Sulphide Nanoparticles Attached to Surface Engineered Silica Particles", Neha Hebalkar, Anita Ethiraj, Sharmin Kharezzi, J. Urban, R. Fink, S. K. Kulkarni , " International conference on advances in surface treatment : research and Applications", Hyderabad 3 – 6 Nov. 2003

11. "Synthesis of Carbon Aerogels for Supercapacitor Application, Neha Hebalkar, Girish Arabale, S. R. Sainkar, S. D. Pradhan, Pushan Ayyub and S. K. Kulkarni Poster presentation in Sixth International Conference in Nanostructured Materials" Orlando, Florida, USA, 16 – 21 June 2002

12. "Synthesis of Nanoporous RF Aerogels", Neha Hebalkar, S. R. Sainkar, S.D. Pradhan,and S. K. Kulkarni, National conference on science and technology of Nanomaterials and Clusters, Institute of Physics and electronics, Barkatullah University, Bhopal, MP, India., 23 – 25 Nov. 2000

13. "Synthesis of Thermally Stable Zinc Sulphide Nanoparticles by Sol-Gel Method", Neha Hebalkar, Arun Lobo, R .S. Sainkar, S.D. Pradhan, W. Vogel, J. Urban , S. K. Kulkarni,

National Conference on Physics of Nanophase Materials, Department of Physics, University of Pune, India, 18 – 20 Dec. 2000.

Workshops / Trainings attended

1. Program on "Integrated Scientific Project Management for Women Scientists and Technologists" at Centre for Organizational Development (COD), Madhapur, Hyderabad during 7 -11 Jan 2019
2. Training on "Leadership Excellence through Effective Communications", conducted by Prof R L Raina at ARCI, Hyderabad on 21 March 2017
3. International Training Program on Leadership and Career Development for Women Scientist & Technologists , 28 August -1 Sept 2015, Organized by DST and Indo-US forum in Indian Institute of Science Education and Research (IISER), Pune
4. "Imaging using GATAN camera in TEM" conducted in CCMB, Hyderabad by GATAN Company, 20 Aug. 2009
5. Attended "National Conference on Showcasing Cutting Edge Science & Technology by Women : An initiative of the National Task Force for Women in Science" Organized by Ministry of Science & Technology, Govt. of India was held on 8-9 March 2008 at Vigyan Bhavan, New Delhi, on the occasion of International Women's Day.
6. International Summit on Rheology and Nanotechnology, Mumbai, 17th September, 2008

Invited talks

1. Inspirational speech in Marathi for motivating girls opting science as education and career and talk on "Nanotechnology for better life" as a Chief Guest, on the occasion of International Day for Women and Girls in Science, organized by a NGO "Aman Prem" in Mumbai on 6 Feb 2019

2. "Amezing Nanomaterials" and "Nanomaterials for better life", As a mentor in DST Inspire Camp organized by Dayanand Science College, Latur, Maharashtra on 22 Dec 2018

3. "Performing Supercritical Drying in HEL's High Pressure Vessel to Produce Aerogels which are the World's Best Thermal Insulators" in User Conference of HEL, Uk held in Goa during 25 – 26 February 2016.

4. "Surface Engineering of Nanomaterials", National Conference on "Impact of Nanoparticles and Nanomaterials on Health and Environment" June 13th & 14th, 2014, Hyderabad

5. "Amezing Nanomaterials", Ravindra Bharati School, Hyderabad, Feb 14, 2014

6. "Aerogel: the best thermal insulators", National Conference on Nanotechnology's Invisible Threat : Small Science, Big Consequences, Hyderabad 26 September 2013

7. "Aerogels for thermal insulation in automotive applications": Hundai R&D Centre, Hyderabad, June , 2013
8. "Aerogels for thermal insulation", BHEL's vendor meeting, Chennai, Jan 31, 2013
9. "Aerogels for Aerospace Applications": DRDL, 12 Nov 2011
10. "Semiconductor Nanoparticles: Synthesis Methods", Jawaharlal Nehru Technological University, 1 Aug 2009
11. "Aerogel: Synthesis, properties and applications", School of Engineering Sciences and Technology, Central University of Hyderabad, 6 Feb 2009
12. "Development of aerogels for thermal insulations and other applications", DST meeting, ARCI, Jan 13, 2009
13. "Aerogels: Best Thermal Insulators", DRDL, Hyderabad, 1 May 200