

**DEPARTMENT OF PHYSICS**

**CURRICULUM VITAE**



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- 3 **Institution** Rajaram College, Kolhapur,  
Near Shivaji University, Old PB road,  
Vidyanagar Kolhapur. 416004
- 4 **Date of Birth** 21/11/1986
- 6 **Category Gen/SC/ST/OBC** General
- 7 **Qualification** M.Sc. Ph.D
- 8 **Work Experience** Post graduation: 1 Years  
Undergraduate: 7 years  
Research : 15 years
- 9 **Ph.D thesis title, Guide's Name, Institute/Organization/University, Year of Award** A thesis on “**Studies on synthesis of  $Co_{1-x}Mn_xFe_2O_4$  nanoparticles for hyperthermia therapy applications**”  
**Supervisor: Prof.(Dr.) S.H. Pawar.**  
Centre For Interdisciplinary Research,  
D.Y. Patil University, KasabaBawada,  
Kolhapur, 416006, Maharashtra,  
INDIA

**Year of Award: 2012**

**11 Award/ Prize/ Certificate, Fellowships:**

Sr. No.	Name of Award	Awarding Agency	Year
1	Junior Research Fellowship	BRNS (BARC, Mumbai)	2009-2011
2	Senior Research Fellowship	BRNS (BARC, Mumbai)	2011-2012
3	International Travel support	DST	2012
4	Gold medal for Excellence in Research	D.Y. Patil University, Kolhapur	2013
5	Dr. D.S. Kothari Postdoctoral fellowship	UGC	Jan-2014-Dec.2016
6	PEIN Fellowship (2 times)	University of Santiago de	1. 2012

		Compostela, SPAIN	2. 2014
7	EUPHRATES Postdoctoral Fellowship	European Union	2015-2016

## 12. Projects

Sr. No.	Title of project	Funding agency	Year
1	“Design of superparamagnetic iron oxide nanoparticles for simple and labelling of stem cells”.	UGC	2014-2016
2	Core Shell Synthesis of MFe <sub>2</sub> O <sub>4</sub> @MFe <sub>2</sub> O <sub>4</sub> Nanoparticles for Magnetic Fluid Hyperthermia	European Union	2015-2016
3	'Efficient cancer cell destruction by shape selective cobalt iron oxide biocompatible nanocrystals'	UGC-DAE-CSR	2021-ongoing

## 13 Recognitions

1	<b>Life member of magnetic society of India (LM559)</b>
2	<b>Life Member of Indian Association of Physics teacher</b>
3	<b>Associate life member of Indian Women Scientists' Association</b>
4	<b>Life member of Indian Biophysical Society</b>
5	Worked as a <b>reviewer</b> for the different international journals <b>applied surface science, Powder technology, Molecular biology, Material science and engineering C, New journal of Chemistry etc</b>
6	Worked as a <b>paper setter and Examiner</b> for Ph.D. and M.Sc. entrance exam for D.Y. Patil University, Kolhapur (For year 2012 and 2013).
7	Worked as <b>Judge of Essay competition</b> on New Energy Sources in Future, It's Technology and applications conducted by Indian women scientist association, Kolhapur branch on occasion of National Science Day Feb. 2012.

## 14. Publication

<b>Link to Google Scholar</b>	<a href="https://scholar.google.co.in/citations?user=p34_NW4AAAAJ&amp;hl=en">https://scholar.google.co.in/citations?user=p34_NW4AAAAJ&amp;hl=en</a>		
	<b>H-index</b>	<b>I-ten Index</b>	<b>Citations</b>
	<b>20</b>	<b>23</b>	<b>1936</b>
<b>Orcid ID</b>	<a href="https://orcid.org/0000-0003-1372-9848">https://orcid.org/0000-0003-1372-9848</a>		

## List of Publications

- **Books and Book Chapters:**

1. Salunkhe, A. B., Londhe, M. V., &Khot, V. M. (2023). Ferrite-and Non-ferrite-Based Superparamagnetic Materials. In *Superparamagnetic Materials for Cancer*

*Medicine* (pp. 57-72). Cham: **Springer International Publishing**.

2. Salunkhe, A. B., Lad, M. S., & Khot, V. M. (2023). Strategies for Synthesis of Superparamagnetic Nanoparticles. In *Superparamagnetic Materials for Cancer Medicine* (pp. 1-21). Cham: **Springer International Publishing**.
3. Salunkhe, A. B., Thorat, N. D., Townley, H., & Khot, V. M. (2021). Nano-pharmacokinetics: industrial transformation future outlook and conclusion. In *Nano-Pharmacokinetics and Theranostics* (pp. 289-300). Academic Press.
4. Salunkhe, A. B., Wasave, S. M., Shirdhankar, M. M., Chaudhari, K. J., Sawant, M. S., Wasave, S. S., ... & Toraskar, D. N. (2020). Adoption of recommended farming practices by shrimp farmers in north Konkan region of Maharashtra, India. *Journal of Pharmacognosy and Phytochemistry*, 9(5S), 133-137.

- **Review articles:**

5. Salunkhe, A. B., Khot, V. M., & Pawar, S. H. (2014). Magnetic hyperthermia with magnetic nanoparticles: a status review. *Current topics in medicinal chemistry*, 14(5), 572-594.
6. Khot, V. M., Salunkhe, A. B., Pricl, S., Bauer, J., Thorat, N. D., & Townley, H. (2021). Nanomedicine-driven molecular targeting, drug delivery, and therapeutic approaches to cancer chemoresistance. *Drug Discovery Today*, 26(3), 724-739.

- **Original research Articles:**

7. Salunkhe, A. B., Khot, V. M., Phadatare, M. R., & Pawar, S. H. (2012). Combustion synthesis of cobalt ferrite nanoparticles—Influence of fuel to oxidizer ratio. *Journal of alloys and compounds*, 514, 91-96.
8. Salunkhe, A. B., Khot, V. M., Thorat, N. D., Phadatare, M. R., Sathish, C. I., Dhawale, D. S., & Pawar, S. H. (2013). Polyvinyl alcohol functionalized cobalt ferrite nanoparticles for biomedical applications. *Applied surface science*, 264, 598-604.
9. Khot, V. M., Salunkhe, A. B., Thorat, N. D., Ningthoujam, R. S., & Pawar, S. H. (2013). Induction heating studies of dextran coated  $MgFe_2O_4$  nanoparticles for magnetic hyperthermia. *Dalton Transactions*, 42(4), 1249-1258.
10. Salunkhe, A. B., Khot, V. M., Phadatare, M. R., Thorat, N. D., Joshi, R. S., Yadav, H. M., & Pawar, S. H. (2014). Low temperature combustion synthesis and magnetostructural properties of Co–Mn nanoferrites. *Journal of Magnetism and Magnetic Materials*, 352, 91-98.
11. Jadhav, S. V., Nikam, D. S., Khot, V. M., Thorat, N. D., Phadatare, M. R., Ningthoujam, R. S., ... & Pawar, S. H. (2013). Studies on colloidal stability of PVP-coated LSMO nanoparticles for magnetic fluid hyperthermia. *New Journal of Chemistry*, 37(10), 3121-3130.
12. Khot, V. M., Salunkhe, A. B., Phadatare, M. R., & Pawar, S. H. (2012). Formation, microstructure and magnetic properties of nanocrystalline  $MgFe_2O_4$ . *Materials Chemistry and Physics*, 132(2-3), 782-787.
13. Phadatare, M. R., Khot, V. M., Salunkhe, A. B., Thorat, N. D., & Pawar, S. H. (2012). Studies on polyethylene glycol coating on  $NiFe_2O_4$  nanoparticles for biomedical applications. *Journal of Magnetism and Magnetic Materials*, 324(5), 770-772.
14. Khot, V. M., Salunkhe, A. B., Thorat, N. D., Phadatare, M. R., & Pawar, S. H. (2013). Induction heating studies of combustion synthesized  $MgFe_2O_4$  nanoparticles for hyperthermia applications. *Journal of Magnetism and Magnetic Materials*, 332, 48-51.
15. Thorat, N. D., Khot, V. M., Salunkhe, A. B., Ningthoujam, R. S., & Pawar, S. H. (2013). Functionalization of  $La_0.7Sr_0.3MnO_3$  nanoparticles with polymer: Studies on enhanced hyperthermia and biocompatibility properties for biomedical applications. *Colloids and Surfaces B: Biointerfaces*, 104, 40-47.
16. Thorat, N. D., Khot, V. M., Salunkhe, A. B., Ningthoujam, R. S., & Pawar, S. H. (2013). Functionalization of  $La_0.7Sr_0.3MnO_3$  nanoparticles with polymer: Studies on enhanced hyperthermia and biocompatibility properties for biomedical applications. *Colloids and Surfaces B: Biointerfaces*, 104, 40-47.
17. Thorat, N. D., Patil, R. M., Khot, V. M., Salunkhe, A. B., Prasad, A. I., Barick, K. C., ... & Pawar, S. H. (2013). Highly water-dispersible surface-functionalized

- LSMO nanoparticles for magnetic fluid hyperthermia application. *New Journal of Chemistry*, 37(9), 2733-2742.
18. Phadatare, M. R., Salunkhe, A. B., Khot, V. M., Sathish, C. I., Dhawale, D. S., & Pawar, S. H. (2013). Thermodynamic, structural and magnetic studies of NiFe<sub>2</sub>O<sub>4</sub> nanoparticles prepared by combustion method: Effect of fuel. *Journal of Alloys and Compounds*, 546, 314-319.
  19. Salunkhe, A. B., Khot, V. M., Ruso, J. M., & Patil, S. I. (2016). Water dispersible superparamagnetic Cobalt iron oxide nanoparticles for magnetic fluid hyperthermia. *Journal of magnetism and magnetic materials*, 419, 533-542.
  20. Thorat, N. D., Otari, S. V., Bohara, R. A., Yadav, H. M., Khot, V. M., Salunkhe, A. B., ... & Pawar, S. H. (2014). Structured superparamagnetic nanoparticles for high performance mediator of magnetic fluid hyperthermia: synthesis, colloidal stability and biocompatibility evaluation. *Materials Science and Engineering: C*, 42, 637-646.
  21. Khot, V. M., Salunkhe, A. B., Phadatare, M. R., Thorat, N. D., & Pawar, S. H. (2012). Low-temperature synthesis of Mn<sub>x</sub>Mg<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub> (x= 0–1) nanoparticles: cation distribution, structural and magnetic properties. *Journal of Physics D: Applied Physics*, 46(5), 055303.
  22. Khot, V. M., Salunkhe, A. B., Ruso, J. M., & Pawar, S. H. (2015). Improved magnetic induction heating of nanoferrites for hyperthermia applications: Correlation with colloidal stability and magneto-structural properties. *Journal of Magnetism and Magnetic Materials*, 384, 335-343.
  23. Salunkhe, A. B., Khot, V. M., Ruso, J. M., & Patil, S. I. (2015). Synthesis and magnetostructural studies of amine functionalized superparamagnetic iron oxide nanoparticles. *RSC advances*, 5(24), 18420-18428.
  24. Salunkhe, A., Khot, V., Patil, S. I., Tofail, S. A., Bauer, J., & Thorat, N. D. (2020). MRI guided magneto-chemotherapy with high-magnetic-moment iron oxide nanoparticles for cancer theranostics. *ACS Applied Bio Materials*, 3(4), 2305-2313.
  25. Dusane, P. R., Thombare, B. R., Bankar, P. K., Lole, G., Gavhane, D., Khedkar, C. V., ... & Patil, S. I. (2019). Vertically aligned ultrathin MoSe<sub>2</sub> nanoflakes grown on carbon cloth and its field emission behaviour. *Materials Research Bulletin*, 116, 67-71.
  26. Ghutepatil, P. R., Salunkhe, A. B., Khot, V. M., & Pawar, S. H. (2019). APTES (3-aminopropyltriethoxy silane) functionalized MnFe<sub>2</sub>O<sub>4</sub> nanoparticles: A potential material for magnetic fluid hyperthermia. *Chemical Papers*, 73, 2189-2197.
  27. Ghutepatil, P., Khot, V. M., & Salunkhe, A. B. (2022). Design of monodispersed PVP functionalized biocompatible manganese ferrite nanoparticles for hyperthermia application. *Materials Today: Proceedings*, 62, 5341-5346.
  28. Thombare, B., Dusane, P., Kekade, S., Salunkhe, A., Choudhary, R. J., Phase, D. M., ... & Patil, S. I. (2019). Influence of nano-dimensionality on magnetotransport, magnetic and electrical properties of Nd<sub>1-x</sub>Sr<sub>x</sub>MnO<sub>3-δ</sub> (0.3 ≤ x ≤ 0.7). *Journal of Alloys and Compounds*, 770, 257-266.
  29. Khot, V. M., Salunkhe, A. B., Phadatare, M. R., Thorat, N. D., & Pawar, S. H. (2012). Low-temperature synthesis of Mn<sub>x</sub>Mg<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub> (x= 0–1) nanoparticles: cation distribution, structural and magnetic properties. *Journal of Physics D: Applied Physics*, 46(5), 055303.
  30. Thombare, B. R., Salunkhe, A., Dusane, P., Kekade, S., Patil, S. I., Devan, R., ... & Phase, D. M. (2016). Study the structural, morphological and magnetic properties of Nd<sub>0.5</sub>Sr<sub>0.5</sub>MnO<sub>3</sub> nanoparticles. In *Proceedings of the international conference on functional oxides and nanomaterials: abstract book*.