

1. Name and Address

Dr. Gangam Phaomei
Assistant Professor
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2. Areas of interest:

Nanomaterials

3. Qualification:

Ph.D.

4. Work Experience:

(1) Assistant Professor, Department of Chemistry, Berhampur University since Aug., 2012 to as on date

(2) Research Associate in DST project-2011 at Department of Chemistry, Manipur University, Imphal

5. M.Phil./Ph.D. Scholars:

(i) Ph.D. Scholars guided – 2

(a) Synthesis of lanthanide ions ($\text{Ln}^{3+} = \text{Dy}^{3+}, \text{Eu}^{3+}, \text{Sm}^{3+}, \text{Tb}^{3+}$) doped metal oxides nano materials and studies of their structural and photoluminescence properties.

(b) Synthesis and characterization of some lanthanide ions doped nanostructures and their functionalization with some inclusion complex of triazole derivative with β -cyclodextrin.

(ii) Ph. D. Scholars continuing - 3

(i) M.Phil. Scholars guided – 5

(iv) M.Sc. Dissertation guided - 20

6. Publications

1. A new configuration of fiber optic sensor based on evanescent field absorption utilizing the emission properties of $\text{Fe}_3\text{O}_4 @ \text{BaMoO}_4: \text{Eu}$ nanocomposite probe.

Sangita K. Swain, **G. Phaomei**, Sukanta K. Swain, N.K. Sahoo, S.K. Tripathy,
Optics Communications 471 (2020) 125842.

2. Synthesis of Li^+ co-activated $\text{Ba}_5(\text{PO}_4)_3\text{Cl}:\text{Eu}^{3+}$ Nanoparticles by Ethylene Glycol Route: A Photoluminescence Study.
Prabhathi Kumari Mahapatro, **G. Phaoime**, Sagarika Pattnaik, Rajkumari Bindiya Devi, Ningombam Yaiphaba,
Asian J. Res. Chem. 2018, 2, 11.
3. Effect Of Li^+ , Mn^{2+} , Mg^{2+} , And Bi^{3+} Co-Doping On Photoluminescence Properties Of $\text{BaMoO}_4:\text{Dy}^{3+}$ Nanoparticles.
G. Phaoime, P. Kumari Mahapatra, N. Yaiphaba, L. Behera, T. David, L. Rout,
J. Appl. Spect., 2018,85,531-537.
4. Green Synthesized Zinc Oxide (ZnO) Nanoparticles Induce Oxidative Stress and DNA Damage in *Lathyrus sativus* L. Root Bioassay System.
Kamal K. Panda, Dambaru Golari, A. Venugopal, V. Mohan M. Achary, **G. Phaoime**, Narasimham L. Parinandi, Hrushik K. Sahu, and Brahma B. Panda,
Antioxidants, 2017, 6, 35.
5. Polyvinyl polypyrrolidone attenuates genotoxicity of silvernanoparticles synthesized via green route, tested in *Lathyrus sativus* L. root bioassay.
Kamal K. Panda, V. Mohan M. Achary, **G. Phaoime**, Hrushik K. Sahu, Narasimham L. Parinandi, Brahma B. Panda,
Mutation Research, 806, 11–23. (2016).
6. Ce^{3+} sensitize RE^{3+} ($\text{RE}=\text{Dy}$, Tb , Eu , Sm) doped LaPO_4 nanophosphor with white emission tenability.
G. Phaoime and N. Yaiphaba,
Adv. Nano. Res., 3, 2, 55-66, 2015.
7. Luminescence behavior of $\text{YVO}_4:\text{Dy}^{3+}$ phosphors with enhanced photoluminescence on co-doping Bi^{3+} ions.
Ch. Victory Devi, **G. Phaoime**, N. Yaiphaba, N. Rajmuhon Singh,
Journal of Alloys and Compounds, 583 (2014) 259–266
8. Effect of solvent on luminescence properties of re-dispersible $\text{LaF}_3:\text{Ln}^{3+}$ ($\text{Ln}^{3+}=\text{Eu}^{3+}$, Dy^{3+} , Sm^{3+} and Tb^{3+}) nanoparticles.
G. Phaoime, W. Rameshwor Singh
Journal of Rare Earths, 31 (2013) 347-355.
9. Blue and green emission from Ce^{3+} and Tb^{3+} co-doped Y_2O_3 nanoparticles.
Romeo Singh Loitongbam, W. Rameshwor Singh, **G. Phaoime**, N. Shanta Singh,
Journal of Luminescence 140 (2013) 95–102.
10. Water driven enhanced photoluminescence of Ln ($=\text{Dy}^{3+}$, Sm^{3+}) doped LaVO_4 nanoparticles and effect of Ba^{2+} co-doping.
Reena Okram, **G. Phaoime**, N. Rajmuhon Singh
Materials Science and Engineering: B, 178, (2013) 409-416.

11. Luminescence properties of Ce³⁺ co-activated LaPO₄:Dy³⁺ nanorods prepared in different solvents and tunable blue to white light emission from Eu³⁺ co-activated LaPO₄:Dy³⁺, Ce³⁺.

G. Phaomei, W. Rameshwor Singh, N. Shant Singh, R. S. Ningthoujam

Journal of Luminescence 134 (2013) 649–656

12. Re-dispersion and film formation of GdVO₄: Ln³⁺ (Ln³⁺ = Dy³⁺, Eu³⁺, Sm³⁺, Tm³⁺) nanoparticles: particle size and luminescence studies.

N. Shanta Singh, R. S. Ningthoujam, **G. Phaomei**, S. Dorendrajit Singh, A. Vinu and R. K. Vatsa

Dalton Transactions, 2012,41, 4404-4412

13. Synthesis of re-dispersible Ce³⁺ co-doped LaPO₄:Tb³⁺ nanorods and effects of concentrations of Ce³⁺ or Tb³⁺ and reaction medium on luminescence properties: luminescence switching behavior through redox reaction and polymer films.

G. Phaomei, R. S. Ningthoujam, W. Rameshwor Singh, Romeo Singh Loitongbam, Naorem Shanta Singh, Ashutosh Rath, R. R. Juluri and R. K. Vatsa

Dalton Trans., 2011,40, 11571-11580.

14. Solvent effect in monoclinic to hexagonal phase transformation in LaPO₄:RE (RE = Dy³⁺, Sm³⁺) nanoparticles: Photoluminescence study.

G. Phaomei, W. Rameshwor Sing, R.S. Ningthoujam,

Journal of Luminescence 131 (2011) 1164–1171.

15. Low temperature synthesis and luminescence properties of re-dispersible Eu³⁺ doped LaPO₄ nanorods by ethylene glycol route.

G. Phaomei, R.S. Ningthoujam, W. Rameshwor Singh, Naorem Shanta Singh, M. Niraj Luwang, R. Tewari, R.K. Vatsa.

Optical Materials 32 (2010) 616- 622.

7. Research funded projects:

1. Principal Investigator, Synthesis of magnetic, Luminescent nanoparticles for drugs delivery application, OURIIP-SEED FUND, Govt. of Odisha, 4.8 Lakhs, 2021-23,

2. Group Member, Nanoscience and Technology for the Development of Sensor, Centre of Excellence, Berhampur University, OHEPEE, Govt. of Odisha, 300 Lakhs, 2019-24.

8. University Administration:

1. Coordinator DEC, Chemistry, 2017-

2. Assistant Superintendent, Ansupa Ladies', Hostel 2018-2020.

3. Superintendent, 6th Boy's Hostel, 2021-2023.

9. Member of Committees in University and outside

1. Member, Board of Studies, Chemistry 2020.
2. Member, Board of Studies, Rayagada College, 2017
2. Member, DRDC, Chemistry 2020.
3. Member, Centre of Excellence, Berhampur University.

7. Conferences/Orientations/Refreshers/short term courses attended

1. β -cyclodextrin functionalise $\text{Fe}_3\text{O}_4@\text{BaMoO}_4:\text{Eu}$ luminescent magnetic nanoparticles for application as a drug carriers, International E-Conference on New frontiers in Science and technology, Research Institute of Science and Technology, Manipur, 9th to 11th July, 2020.
2. Luminescent magnetic nanoparticles of Molybdate substrate for drug carrier, National conference on Organic Synthesis, Berhampur University, 2nd to 3rd March 2020.
3. Fabrication of magnetic $\text{Fe}_3\text{O}_4@\text{BaMoO}_4:\text{Dy}$ hybrid nanophosphor and Cotanine loading: A luminescence study, International Conference on Chemical and Biological Sciences in Drug Discovery, Department of Chemistry, Berhampur University, Odisha, 7th – 9th, March, 2019.
4. Luminescent Magnetic nano particles $\text{Fe}_3\text{O}_4@\text{BaMoO}_4:\text{Dy}$ for biomedical application. 22nd regional conference of Orissa Chemical Society, Kendrapara (Auto) College, odisha, 3rd Nov., 2019.
5. β -cyclodextrin functionalized $\text{Fe}_3\text{O}_4@\text{BaMoO}_4:\text{Eu}$ nano particles, loading and release of triazole derivative. National Seminar on Recent Advances in Functional Nano Matierials, Orissa Chemical Society, National Institute of Science and technology, Berhampur, Odisha, 23-24th Dec. 2018.
6. Recent advances in Nanotechnology, Departmental seminar., Kendrapara Autonomous college, Kendrapara, Odisha, 18/12/2018.
7. Fabrication of Magnetic $\text{Fe}_3\text{O}_4@\text{BaMoO}_4:\text{Dy}$ hybrid nanophosphor and SiO_2 coating: A luminescence study., National Seminar cum workshop in nanoscience Hands on Training on Sophisticated Instrument., North Eastern Hill University, Shillong, 29th to 31 may, 2018.
8. Effect of co-doping metal ions size and charge on the photoluminescence property of $\text{BaMoO}_4:\text{Dy}^{3+}$, International Conference on Recent trends of chemical & Biological science in medicine, nature product and drug discovery, Berhampur University, 3rd – 5th March, 2017.
9. Ce^{3+} sensitization of RE (RE=Dy, Tb, Eu, Sm) doped LaPO_4 luminescence's for white emission, National Seminar on Recent Developments and Applications of Functional Materials,

Orissa Chemical Society, Centurion University of Technology and Management, Odisha, 23rd - 24th Dec., 2017.

10. Photoluminescence property of Bi³⁺ co-doped BaMoO₄:Dy³⁺ nano material: Application to LED, a green and sustainable light, UGC sponsored one day Seminar on Environmental Protection: Concerns and avenues, Aska Science College, Aska, Odisha 28th Feb., 2017.

11. Photoluminescence property of Bi³⁺ co-doped BaMoO₄:Dy³⁺ nano material: Application to LED, a green and sustainable light, National Seminar on Green Environment for sustainable development, T.S.D. Colleg, B.D. Pur , 23-24 July, 2016.

12. Refresher course in Biotechnology and allied Disciplines at Manipur University during 11 June, 2015 to 2 July, 2015.

13. Photoluminescent Nano Particles and its applications., National Conference on Frontiers of Research in Chemical Sciences, D.M. College of Science, Imphal, 13th -14th March, 2015.

14. Tunable luminescence of Li⁺ co-doped Ba₅(PO₄)₃Cl: Eu(2+, 3+) nano-particles, Natinal Seminar on Recent Advancement in Material Science, Department of Chemistry & Production Engineering, Veer Surendra Sai University of Technology, Sambalpur, Odisha, 23-24, August 2014.

15. Orientation Programme at Manipur University, during 25 Nov. to 24 Dec. 2013.

16. Effect of solvent on the photoluminescence properties of LaPO₄ and LaF₃ doped with rare earth ions (Ln³⁺ = Eu³⁺, Dy³⁺, Sm³⁺, Tb³⁺) nano-material, National Symposium on recent trends in Chemical Sciences, Department of Chemistry, Manipur University, Imphal, 22-23, March, 2013.

17. Synthesis of re-dispersible Tb³⁺ ions doped LaPO₄ nanoparticles in ethylene glycol medium and its luminescence study, National Conference on nanomaterials and Co-ordination Chemistry, Department of Chemistry, Manipur University, Imphal, 26-27 March, 2010.

18. Re-dispersible LaPO₄:Ln (Ln = Dy³⁺, Sm³⁺) nanoparticles: Synthesis and luminescence properties., National Conference in Physics (PANE 2010), Department of Physics, Manipur University, Imphal, 5-6, Oct. 2010.

19. Solvent effect in monoclinic to hexagonal phase transformation in LaPO₄:RE (RE = Dy³⁺, Sm³⁺) nanoparticles and white luminescence Ce³⁺ and Eu³⁺ co-activated LaPO₄:Dy :

Photoluminescence study., V-National Conference on Thermodynamics of chemical and biological systems, Department of Chemistry, Manipur University, 18-19, Nov., 2010.

20. Electrodeposition of zinc-cobalt alloys in the presence of cationic surfactant, CTAB and non-ionic surfactant, TritonX-100, International Conference on Soft systems, Indian society for surface science and technology and Department of Chemistry, Jadavpur University, Kolkata, 13-15, Feb.2008.

21. X-ray diffraction and its application, Workshop on X-ray diffraction and its application, Department of Physics, National Institute of Technology, Silchar, Assam, 4th to 6th., Dec. 2008.