

**Name** : Dr. R. Dilip  
**Designation** : Assistant Professor  
**Department** : Physics  
**Qualification** : M.Sc., Ph. D.,  
**Experience** : Teaching: 5 Year 7 Month; Research: 9 Years



**Area of Specialization(s):** Nano Technology, Magnetic materials and Photovoltaic Cells

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### Academic Qualifications

Degree	Branch	Institution / University Name	Year of Graduation
Ph. D.	Physics – Nano Technology	Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore	2021
M. Sc.	Physics	Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore	2014
B. Sc.	Physics	Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore	2012

### Additional Qualifications

Diploma / Vocational / Certification	Area of Specialization	Institution / University / Agency Name	Year
UGC-NRC	Nano Technology	University of Hyderabad	2017
Online Certificate	Selection of Nanomaterials for Energy Harvesting and Storage Application	NPTEL	2019

### Project Details

Project Title	Agency	Amount	Duration
Fabrication of rGO based portable water purifier synthesized from dead	The Management of Dr. N.G.P. Arts and Science College, Coimbatore	1, 05, 000	1 Year

leaves of plants: A waste to wealth initiative Role: Co-Principal Investigator Status : Ongoing			
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### Research Publications (Indexed)

#### *International:*

- 1) Anitha M, Ramalingam A, **Dilip R**, Dinesh Kumar M (2025), “Enhance the efficiency of solar still by using aloxide nanoparticle upturn the productivity rate of distilled water”, Journal of Environmental Nanotechnology, **Accepted**.
- 2) M. Dinesh Kumar, R. Ravikumar, **R. Dilip**, R. Mahenthiran (2025), “Environmentally begin synthesis of copper oxide nanoparticles using grevillea robusta leaf extract: Characterization and Photocatalytic Property, IAPQR Transactions, ISSN: 0970-0102, IF: 6.718, 50(01), 144-151.
- 3) Anitha M, Ramalingam A, **Dilip R**, Venkatraj A, Ravikumar N (2022), “Various modes of phase changing material (PCM) enrich the still outcome productivity of distilled water. Internation journal of energy research, <https://doi.org/10.1002/er.8646>.
- 4) **Dilip, R.**, Ravikumar, K., Chandekar, K. V., Shkir, M., Krishnan, V. G., Shinde, K. S., & Ashraf, I. M. (2022). Enhancement of magnetic and dielectrics performance of BaFe<sub>2</sub>O<sub>4</sub> nanoparticles influenced by tri-sodium citrate as surfactant. Journal of Materials Science: Materials in Electronics, 33(30), 23841-23850.
- 5) **Dilip, R.**, & Jayaprakash, R. (2021). Supremacy of Magnetic Behaviour in n-Heptane Based M Doped Barium Ferrite (BaFe<sub>2</sub>O<sub>4</sub>) Nanoparticles (M: Co, Ni and Mn). *Journal of Inorganic and Organometallic Polymers and Materials*, 31(7), 3154-3163.
- 6) **Dilip, R.**, & Jayaprakash, R. (2020). Requisite of Surfactant (CTAB, n-Heptane, and Tri-sodium Citrate) Levels on Enhancement of Magnetic Property and Morphology Changes of Barium Ferrite (BaFe<sub>2</sub>O<sub>4</sub>) Nanoparticles. *Journal of Superconductivity and Novel Magnetism*, 33(12), 3799-3808.
- 7) Ravikumar, N., **Dilip, R.**, & Elango, P. (2020). Gas sensing nature and characterization of Zr doped TiO<sub>2</sub> films prepared by automated nebulizer spray pyrolysis technique. *Optik*, 206, 164347.

- 8) Somasundaram, G., Rajan, J., Sangaiya, P., & **Dilip, R.** (2019). Phytochemicals and morphological influence of aloe barbadensis miller extract capped biosynthesis of CdO nanosticks. *Journal of Inorganic and Organometallic Polymers and Materials*, 29(6), 1862-1873.
- 9) **Dilip, R.**, & Jayaprakash, R. (2018). Effect of barium on morphological transition and magnetic and dielectric properties in ferrite nanoparticles. *Journal of Superconductivity and Novel Magnetism*, 31(6), 1741-1750.
- 10) Mohanraj, V., Jayaprakash, R., Sangaiya, P., Gopi, S., **Dilip, R.**, & Suresh, R. (2017). Study of photocatalytic activity and inherent property of surfactant (PVA) on CdS nanoparticles by ultrasonic wave irradiation method. *International Journal of Hydrogen Energy*, 42(47), 28266-28277.

#### Presentations in Conference

- 1) **Dilip Ravikumar**, Martin Sam Gnanaraj Joshua, Aswathi K, Manu Mathai, Mohammed Roshan, "Identification of paramount ratio of different surfactant (CTAB, n-Heptane and Tri-Sodium citrate) on structural, magnetic and dielectric properties of Co doped BaFe<sub>2</sub>O<sub>4</sub> nanoparticles". DRDO sponsored Two Days National Conference on "Advanced Smart Materials and Sensor Technologies for Biomedical Application" (ASSBA-2024). Sri Ramakrishna Engineering College, Coimbatore, 9-10 January 2025.
- 2) 2<sup>nd</sup> International Conference on Multifunctional Materials and Radiation Measurements (ICMMRM-2024). Light driven Photocatalysis of Reduced Graphene Oxide synthesized from dead leaves of Azadirachta Indica for Agricultural Applications. SSN College of Engineering, Chennai-603 110, 14.03.2024 – 15.03.2024.
- 3) Srivasavi P, **Dilip, R.**, (2023). Green synthesis and characterization of MgO nanoparticles. International Conference on recent advancements in computational nanoscience and energy storage technology (ICCNES-23), NGM College, Pollachi, 13<sup>th</sup> & 14<sup>th</sup> July, 2023.
- 4) **Dilip, R.**, Jayaprakash, R., Sangaiya, P., & Gopi, S. (2020). The magnetic property alterations due to transition from barium ferrite (BaFe<sub>2</sub>O<sub>4</sub>) nano rods to barium carbonate (BaCO<sub>3</sub>) quantum dots. *Results in Materials*, 7, 100121. International Conference on Recent Advances in Materials Science, National college, Tiruchirappalli, 04-Feb-2019 to 06-Feb-2019.

- 5) Somasundaram, G., Rajan, J., Sangaiya, P., & **Dilip, R.** (2019). Hydrothermal synthesis of CdO nanoparticles for photocatalytic and antimicrobial activities. *Results in Materials*, 4, 100044. International Conference on Recent Advances in Materials Science, National college, Tiruchirappalli, 04-Feb-2019 to 06-Feb-2019.
- 6) **Dilip, R.**, & Jayaprakash, R. (2018). Synthesis and characterization of BaFe<sub>2</sub>O<sub>4</sub> nano-ferrites for gas sensor applications. *Energy, Ecology and Environment*, 3(4), 237-241. International Conference on the 11th Asia Pacific Conference on Sustainable Energy and Environmental Technologies, B. R. Ambedkar Bihar University, Bihar, 06-Mar-2017 to 10-Mar-2017.
- 7) SYNTHESIS AND CHARACTERIZATION OF SDS BASED BaFe<sub>2</sub>O<sub>4</sub> NANO FERRITES FOR GAS SENSOR: Dr. R JAYAPRAKASH, International Conference on Renewable Energy and Environment (ICREE-2016), Sri Ramakrishna Mission Vidyalaya College of Arts and Science, Coimbatore, 15-Dec-2016 to 16-Dec-2016.

### Participation in Conference

#### *International:*

- 1) International Virtual Conference on Advances in Nanomaterials and It's Recent Applications (ANMRA – 2020), Dr. N.G.P. Arts and Science College, Coimbatore, 15-17 July, 2020.
- 2) International Conference on Arid Land-III, B.R. Ambedkar University, Puducherry, 12-Mar-2018 to 16-Mar-2018.
- 3) International Conference on Latest developments in the applications of laser technology, PSGR Krishnammal College for Women, Coimbatore, 07-Dec-2015.

#### *National:*

- 1) Two days technical symposia on contribution of “STEM” to Nuclear Research and Technological Innovation “COST-N-RAT 2K23”, Department of Physics, Erode Sengunthar Engineering College held on 14.12.2023 to 15.12.2023.

### Participation in Seminars

- 1) One day National Seminar on “Novel Materials for Sustainable Energy Development and Radiation Measurements”, Dr. N.G.P. Arts and Science College Coimbatore, 29.02.23.
- 2) National Seminar on X-ray Crystallography, Madurai Kamaraj University, Madurai, 29-Sep-2014 to 01-Oct-2014.

### Participation in Workshop

- 1) Phase Identification of Polycrystalline Materials using XRD data in Soft wares organized by Department of Physics, Dr. NGP Arts and Science College, Coimbatore-641 048, 25<sup>th</sup>

September, 2021.

- 2) Two Days International Virtual Workshop on Astrophotography organized by The New College, Chennai-600 014, 24-25<sup>th</sup> September, 2021.
- 3) ADVANCED INSTRUMENTAL METHODS FOR ENGINEERING MATERIALS, Bannari Amman Institute of Technology, Erode, 18-Oct-2014 to 19-Oct-2014.

### **Invited Talk**

- 1) Guest Lecture on "Metal Oxide Nanoparticles at Surfactant Medium and Applications" as a speaker at Department of Physics, Nandha Arts and Science College, Erode (02.02.2024).
- 2) Hands on Training "Basics of Digital Electronics" as a speaker at Department of Computer Technology, Dr. N.G.P. Arts and Science College, Coimbatore (08.10.2024).
- 3) Guest Lecture on "Development of optical instruments, innovation in synthesis technique and commercialized application in materials" as a speaker at Department of Physics, Nandha Arts and Science College, Erode (31.12.2024)

### **Participation in Faculty Development Programme**

- 1) AICTE Training And Learning (ATAL) Academy FDP on " Incorporating sustainable development goals in Bringing out Industry Ready Professionals" from 09/12/2024 to 14/12/2024 at Dr SNS Rajalshkmi College of Arts & Science, Coimbatore.
- 2) AICTE Training And Learning (ATAL) Academy FDP on " Design of Internet of Things (IoT) solutions for Sustainable Environment" from 02/09/2024 to 07/09/2024 at Dr NGP Arts and Science College, Coimbatore.
- 3) Five days National Level FDP on "Physics in Engineering and Technology" from 12.02.2024 to 16.02.2024 at PSG Institute of Technology and Applied Research, Coimbatore.
- 4) AICTE Training And Learning (ATAL) Academy Online Elementary FDP on " Nanoscience for Novel Materials" from 20/09/2021 to 24/09/2021 at Manakula Vinayagar Institute of Technology.
- 5) AICTE Training And Learning (ATAL) Academy Online Elementary FDP on " Novel Materials" from 23/08/2021 to 27/08/2021 at SRM Institute of Management and Technology.
- 6) Online faculty development programme on Research methodology and pedagogy for tertiary education (IQAC), Dr. N.G.P. Arts and Science College, Coimbatore, 15-21 June, 2021.
- 7) One week FDP on "Advanced Materials Research" organized by BIET & Indian Ceramic Society from 15<sup>th</sup> June – 19<sup>th</sup> June, 2020. Organized by BHARAT institute of engineering and technology.
- 8) One week FDP on Quality initiatives in higher education (online, 2020), Dr. N.G.P. Arts and

Science College, Coimbatore, 13-20 April, 2020.

- 9) One week online FDP on Digital teaching techniques (2020) organized by ICT academy from 10-15 Aug 2020.
- 10) One week FDP on NAAC REVISED ACCREDITATION FRAMEWORK & OBE ASSESSMENT METHODOLOGY, Dr. N.G.P. Arts and Science College, Coimbatore, 27-May-19 to 2-Jun-19.
- 11) **NAAC Online Certification Course**, Selection of Nanomaterials for Energy Harvesting and Storage Application, Jul-Aug-19 (4 Week Course).

#### **Participation in Webinar**

- 1) Webinar on “Lasers and Nano-optics”, NITT-OSA & NITT-SPIE student chapters, NIT Trichy, Tamil Nadu on 25.08.2020.
- 2) Webinar on “National education policy 2020”, Session-II, NIT, Andhra Pradesh on 29.09.2020.
- 3) Webinar on “Opportunities in Indo-german bilateral funding programmes”, Session-I, NIT, Andhra Pradesh on 22.07.2020.
- 4) Webinar on “Smart Engineering Materials and Application”, P.T.Lee Chengalvaraya naicker college of engineering and technology on 12.07.2020.
- 5) Webinar on “Innovation, IPR, Entrepreneurship and Start-ups among HEI”, MHRD’s innovation cell on 28.04.2020 to 22.05.2020.
- 6) Webinar on “India firat leadership talk”, MHRD’s innovation cell on 02.05.2020.

#### **Membership in Professional Bodies**

<b>Name of the Professional Body</b>	<b>Nature of membership</b>	<b>Duration</b>
Indian Association for Crystal Growth (IACG)	Life member	Life-time

#### **Awards / Honors**

<b>Awards / Honors</b>	<b>Agency / Institute</b>	<b>Year of Award</b>
Best Mentor award	Dr. NGPASC ACHIEVERS DAY AWARD, Dr. N.G.P. Arts and Science College, Coimbatore.	2020
Best Fund Mobilizer	Dr. NGPASC ACHIEVERS DAY AWARD, Dr. N.G.P. Arts and Science College, Coimbatore.	2024