LADY DOAK COLLEGE, MADURAI

(An Autonomous Institution Affiliated to Madurai Kamaraj University)

Re-accredited with A+ Grade by NAAC(4th cycle)

DEPARTMENT OF CHEMISTRY

cordially invites you to

Prof. Evelyn Rhine Endowment Lecture
and
National Science Day Celebration

NATIONAL SCIENCE DAY THEME
WOMEN IN SCIENCE : CATALYSING VIKSIT BHARAT

23, February 2026

Time: 9.30 a.m. to 12.30 p.m.

Venue: J.X Miller Auditorium

Ms. Evelyn Rhine - A gem in the crown of Lady Doak College

Ms. Evelyn Rhine was the pioneering Head of the Department of Chemistry since 1961. With zeal and determination, she has been instrumental in developing the department from scratch to a reputed center of learning.

A bird's eye view of the department's development under her tenure:

- Department brought under College Science Improvement Programme (COSIP)
- Introduction of B.Sc.,special chemistry programme
- Introduction of chemical analysis at the semimicro level
- Dyeing and printing unit
- Certificate course in clinical chemistry which was later incorporated in the syllabus and offered as a course in diagnostic chemistry
- Introduction of mineral chemistry/ geochemistry in the curriculum
- Rendering special assistance to schools in teaching chemistry under school-college complex programme when 10 +2 school education system was introduced in Tamilnadu
- Taking chemistry to the village (Mobile laboratory), which later became "Taking science to village" and formed the basis for the introduction of Service-Learning component in curriculum

She has rendered her valuable services to the college (1950 - 1980) as

- The Head of the Department of Chemistry
- Vice Principal
- Bursar

PROGRAMME SCHEDULE

Time: 9.30 a.m. - 12.30 p.m.

PRAYER

Dr. D. Rani Rosaline

Assistant Professor, Department of Chemistry

WELCOME ADDRESS

Dr. V. Sridevi

Head & Associate Professor, Department of Chemistry

INTRODUCTORY REMARKS

Dr.R. Beulah Jeyashree

Principal & Secretary, Lady Doak College

INTRODUCING THE GUESTS OF HONOUR

Dr. S. K. Suja

Associate Professor, Department of Chemistry

REMINISCENCES OF MS. EVELYN RHINE

Dr. Geetha Sivasubramanian

Former Head, Department of Chemistry

Lady Doak College

TRIBUTES TO MS. EVELYN RHINE – VIDEO PRESENTATION

ENDOWMENT LECTURE

ENGINEERING NANOMATERIALS FOR A SUSTAINABLE FUTURE

Dr. A. Gomathi (Alumna 1999 Batch)

Assistant Professor, Department of Chemistry

Mahindra University Hyderabad

VOTE OF THANKS

Dr. S. Julie Ranee

Associate Professor, Department of Chemistry

NATIONAL SCIENCE DAY ENDOWMENT LECTURE

Engineering Nanomaterials for a Sustainable Future: Advancing Water Splitting for Hydrogen Production

Dr. A. Gomathi
Assistant Professor, Department of Chemistry
Mahindra University Hyderabad
Email: gomathi.anandhanatarajan@mahindrauniversity.edu.in

The transition towards a sustainable energy future demands efficient, scalable, and earth-abundant solutions for clean fuel generation. Among emerging technologies, electrochemical water splitting offers a promising pathway for green hydrogen production. However, the oxygen evolution reaction (OER) remains a major kinetic bottleneck due to its sluggish multi-electron transfer mechanism. This talk will present recent advances in the design and synthesis of nanostructured layered hydroxide materials for enhanced OER performance. My research focuses on engineering two-dimensional layered hydroxides as next-generation OER catalysts through controlled intercalation of functional anions and transition metal species. In their native form, layered hydroxides suffer from limited electrical conductivity, restricted ion diffusion, and structural instability under prolonged operation. By introducing redox-active and electronically modulating species into the interlayer galleries, we tailor the electronic structure, expand interlayer spacing, and enhance charge transport pathways within the material. This interlayer engineering strategy creates highly accessible catalytic architectures with improved active site utilization and structural robustness. Through rational materials design and nanoscale control, these systems address key limitations of conventional hydroxide catalysts, including poor conductivity, slow kinetics, and durability challenges. The work illustrates how deliberate structural modulation at the atomic and nanoscale can transform abundant, low-cost materials into high-performance electrocatalysts, advancing scalable and sustainable hydrogen technologies.