

## **DEPARTMENT OF PHYSICS**

There are three broad areas in which the faculty members of the department are carrying out research. First area is Applied Nuclear Physics, in which the major research has been on environmental radioactivity, radiation dosimetry and health effects of environmental radiation. The department has very successfully completed two minor research projects and three major research projects funded by various agencies including UGC, KSCSET, BARC and DAE. The studies carried out include effect of high background radiation in the area on congenital malformations (mental retardation, cleft lip and palate), ingested radiation dose to the public through food and Chromosome aberration frequency studies in the inhabitants of coastal Kollam. Minor research works include microanalysis of uranium in natural water, radio activity in building materials and the like.

Second branch in which a very high quantum of research has been carried out in the Department is Spectroscopic studies of medically and biologically imported complex molecules. The research activities in this area include Spectroscopic investigations, both experimental and theoretical, of aromatic bioactive molecules, Density Functional Theory computations of some organic compounds, FT-IR, FT-Raman, SERS and quantum chemical calculations of bioactive compounds. The researchers in this area have published numerous articles in high impact journals.

The third area in which active research has been initiated is on Nano materials, their preparation and their properties. The focus on this area ranges from solar cells to thin batteries.

Apart from these, research investigations on the ill effects of microwave communications on human health has also been started and meaningful studies are being carried including simulation studies on the Specific absorption rates of human cells of interest, mainly brain, eye and the like.

# UNIVERSITY OF KERALA

(Abstract)

Department of Physics, FMN College, Kollam – Recognition as approved Research Centre  
of the University of Kerala – Sanctioned - Orders issued.

## ACADEMIC E1.A. SECTION

No. Ac. E1.A3/26224/2011

Dated, Thiruvananthapuram, 03.01.2013.

- Read:-
1. Application received from the Principal, FMN College, Kollam.
  2. Item No. A8 of the minutes of the meeting of the Standing Committee of the Syndicate on Research and Scholarships held on 18.10.2012.
  3. Item No. 14.104 of the minutes of the meeting of the Syndicate held on 03.11.2012.
  4. Item No 59 minutes of the meeting of the Academic Council held on 22<sup>nd</sup> November 2012.

### ORDER

Academic Council (Read 4 above) considered the decision of the Syndicate (Read 3 above) along with the recommendation of the Standing Committee (Read 2 above), the request of the Principal, FMN College, Kollam for the recognition of the Department of Physics as an approved research centre of the University of Kerala and resolved to grant recognition.

Sanction is therefore, accorded by the Vice-Chancellor, to the Department of Physics, FMN College, Kollam being granted recognition as an approved Research Centre of the University of Kerala for the existing guides only..

Orders are issued accordingly.

Sd/-

**SULEKHA S.**  
**DEPUTY REGISTRAR (Acad. III)**  
**for REGISTRAR**

To

1. The Principal, FMN College, Kollam.
2. The P.S. To V.C./P.V.C./Director Research.
3. P.A to Registrar/CE/Finance Officer.
4. Ac.E1.B Section/Ac.E1.II Section.
5. Stock file/File copy/Office copy.

Forwarded/By Order,



**SECTION OFFICER**