

**Department of Geology
Banaras Hindu University
Varanasi**

Introduction

The Department of Geology, Banaras Hindu University, Varanasi, was established in 1920 and is one of the oldest Geology departments of India. It has a sanctioned faculty strength of 30, thereby also making it the largest such department in our country. The Department is nationally and internationally well known for its high quality teaching and research in core areas of geology viz., stratigraphy, paleontology, micropaleontology and oceanography, sedimentology, igneous and metamorphic petrology, structural geology and tectonics, geochemistry, coal geology, hydrogeology, remote sensing and GIS.

In recognition of its researches, the Department has received major funding in recent years as under:

1. UGC-SAP Phase III Assistance: The department received UGC-SAP Phase-III assistance of 0.96 crores for 2004-2009 and thereafter shall propose to UGC for grant of CAS.
2. Project Funding to Individual Researches of the tune of Rs.2.00 crores.
3. DST-FIST Support

Utilizing the FIST grant, the following major equipments have been procured and installed. The equipments are fully functional and detailed as under:

1. **Polarizing Research Microscope (LEICA DMRX model: Fig.1)**: This advanced Petrological Microscope is equipped with a digital photo-micrographic system and image analyzer software along with all the accessory units. It is capable of microscopic study in both transmitted and reflected light and caters to the state of the art applications in igneous, sedimentary, metamorphic, coal and ore petrology.



Fig.1 Polarizing Research Microscope (LEICA DMRX model)

2. **Fluid Inclusion Equipment (LINKAM SYSTEMS; Fig. 2):** This facility includes LEICA fluid inclusion microscope and accessory units. Fluid inclusion studies are being carried out in the areas of metamorphic and igneous petrology and ore geology.



Fig.2 Fluid Inclusion equipment (LINKAM Systems)

3. **Thin section preparation unit (MEYA SEV 2000; Buehler make; Fig.3):**

This facility comprises a set of five equipments: (a) Petrothin (Thin section making machine), (b) Petrocut (Geological cutter), (c) Petropol (Polishing system), (d) Petrobond (Bonding Fixture) and (e) Metaserve 2000 (Grinder /Polisher) that are capable of producing high quality thin sections for microscopic study. Further, the added facility of high quality polishing enables us to prepare polished sections for the EPMA and optical studies in reflected light for ore geology and coal petrology. The machines are also useful for preparing polished wafers for fluid inclusion studies.



Fig.3 Various thin section preparation units.

4. **Laboratory Mortor Grinder (RETSCH GMBH & CO. Fig.4):** This unit is essential for the preparation of rock powder for geochemical analysis. It was procured along with its accessories.



Fig. 4 Laboratory Mortor Grinder.

5. **Thermal Gas Desorption System (Fig. 5)**: This instrument is used for assessing the quality of *in situ* gas in coal fields by the coal and organic petrography research group.



Fig. 5 Thermal gas desorption unit

For further details contact:

Professor Jai Krishna
Head /Coordinator
Department of Geology
Banaras Hindu University
Varanasi-221 005

Email Id: krish_j28@yahoo.co.in

Ph: 0542- 05422369239 (O), 2310103®
Fax: 0542-2368174