1. Objectives

The main objectives of the group are to develop research and services in mineralogy (general or applied) and in ore deposits, from the field scale to the laboratory scale, to form students on the above subjects, and prepare teaching tools on the above subjects.

2. Research areas and Scientific in charge

- Mineralogy (Dr Joan Carles Melgarejo, joan.carles.melgarejo.draper@ub.edu)
- Ore deposit models (Dr Joaquin A. Proenza, japroenza@ub.edu)
- Industrial mineralogy and ceramics (Dr Salvador Martinez-Manent; salvadormartinez@ub.edu)
- Geological and Mining Heritage (Dr Josep Maria Mata-Perelló; mata@emrn.upc.edu)
- Gemology (Dr Joaquim Nogués, joaquimnogues@ub.edu)
- Mining waste remediations (Dr Pura Alfonso-Abella, pura@emrn.upc.edu)
- Geoarcheology (Dr Maite García-Vallès, maitegarciavalles@ub.edu)
- Identification and characterization of reactive minerals in geotechnics (Dr Esperança Tauler, esperancatauler@ub.edu)

3. Capacities

- Experience in field trip development; exploration of ore deposits.
- Line of separation of minerals (Hydroseparator of heavy minerals, magnetic separator Frantz, equipment for heavy liquids separation, etc.). More details in http://www.hslab-barcelona.com/
- A huge mineral collection of reference, including more than 18000 hand samples of rocks and minerals, 10.000 thin sections, 3000 polished sections, (representing more than 2700 mineral species).
- Petrography of minerals (optical and transmitted light).
- ATD-TG analyses of minerals.
- Heating-freezing stage for fluid inclusions of minerals.
- Chemical analysis of minerals in the facilities of the CCT of the UB (including 5 XRD, 3 SEM-BSE-EDS, 2 EMP, 3 TEM).
- Stable isotope analyses (C, O, S, N) in the facilities of the CCT of the UB.
- Chemical analyses of rocks by XRF, ICP-MS, AA and others in the facilities of the CCT of the UB.
- Different agreements with other centers to provide analytical support for radiogenic isotopes and traces elements using SHRIMP or LA-ICP-MS.
4. Teaching

- Master on Mineral Resources
- Master in Natural Resources Engineering
- Diploma on Gemology
- Course on exploration of diamonds
- Course on Mineral Exploration in grains
- Course on Mineralogy
- Course on Mineral deposit modeling
- Field Trips on Mineral Deposits
- Field trips on Geological and Mining Heritage
- Creation of Museums of Mineralogy
5. Selected papers


6. Selected competitive projects


7. Selected private contracts


