



UNIVERSITAT POLITÈCNICA
DE CATALUNYA
BARCELONATECH

Waste and Mineral Processing Laboratory

09/02/2023





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SSR-UPC - Smart Sustainable Resources (TECNIO)

RIIS - Research Group on Intelligent and Sustainable
Resources and Industries

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What do we do?

Concentration and/or Separation of Minerals and Wastes.

What technologies do we use?

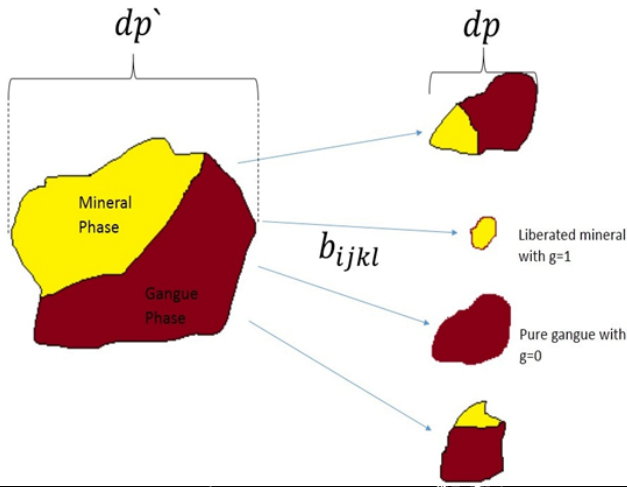
Processes based on different properties of minerals and materials (size, shape, density, magnetism, conductivity, surface properties, etc.).

How do we do that?

Crushers and millings: particle liberation;
Sizing: screening, hydrocyclones, etc.;
Processing: gravity concentration, magnetic separation, froth flotation, etc.



New technologies and markets need more CRM.
Smaller deposits and lower ore grades smaller.
Necessity to develop new technologies to recover economically low grade ores and small deposits.
Recovery CRM from mining and urban wastes.



What do we do with CRM?

Development of processing circuits to recover CRM:

- Particle liberation through comminution.
- Pre-concentration of low grade minerals (ore and wastes).
- Generation of a final concentrate.



- Recovery of metals from mining and urban wastes (old batteries).
- Separation and concentration of material from Construction and Demolition Waste (CDW), for recycling.

- Recovery of metals (copper, bismuth, etc.) from copper smelting waste.



- Recovery of CRM from minerals, electronic and electric wastes.

- Recycling of fluor from chemical industry waste.
- Recycling Construction and Demolition Waste (CDW).
- Concentration and separation of quartz and feldspar from sand deposits.

ACCIÓ

 **Generalitat de Catalunya**
Government of Catalonia



Thank you