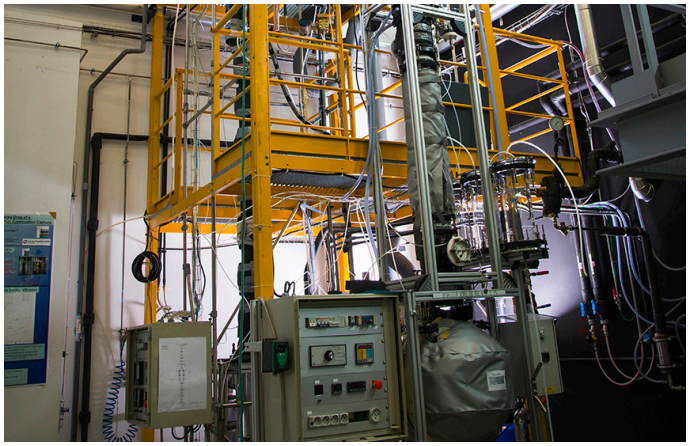
INP Toulouse / LGC

Institut National Polytechnique de Toulouse /
Laboratoire de Génie Chimique
Toulouse, France



ABOUT

INP Toulouse is a top ranked French university that provides high-level undergraduate and postgraduate education across a wide range of engineering disciplines. Its research and tertiary education programs spread over 7 campuses, of which 6 are located in Toulouse itself, in the South-West part of France. It is home to 7000 engineering students, of which a quarter is international. Research at INP Toulouse is carried out by no less than 19 research laboratories.

Within PROMETIA, INP Toulouse is represented primarily by the Laboratoire de Génie Chimique, whose expertise and facilities are reported in the following paragraphs. LGC is a leading French research laboratory in Chemical and Process Engineering, with over 160 permanent scientists and engineers, and 150 PhD students and post-doctoral fellows. It is a joint research laboratory between the French National Centre for Scientific Research (CNRS) and two universities, the Institut National Polytechnique de Toulouse (INP Toulouse) and the Université Paul Sabatier (UPS).

EXPERTISE

LGC pursues industry-driven research across all scales necessary for development of state-of-the-art and innovative industrial processes, from the smallest molecular or particulate scale right through to industrial scale systems. The organisational structure comprises six research departments, which provide the LGC with the ability to address the widest spectrum of activities in the field of chemical and process engineering.

Closest to the core activities of the PROMETIA network and the metallurgical field, the LGC has renowned scientific expertise and ongoing research activities in:

- Liquid-liquid extraction, with major contributions to the development of processes currently used to process nuclear fuel through extraction columns design
- Multiphase reaction engineering for development of complex advanced extraction processes
- Molten salt processes, for uranium extraction, industrial and rare metals separation and extraction processes
- Process intensification for efficient and innovative continuous process design
- Physical and physico-chemical beneficiation processes for mineral ores and wastes (size reduction, classification, gravity separation, dewatering, …), texture and liberation analysis, sampling system design and analysis
- Solid-liquid separation, with design of advanced membrane separation technology
- Thermodynamic modelling of multiphase geochemical systems

FACILITIES & SERVICES

Research and development programs carried out at the LGC rely upon a strong capacity for experimentation, analysis and modelling. Experimental facilities most relevant to the PROMETIA network activities include:

- A 250 m^2 process analysis platform with the latest analytical equipment, dedicated to characterisation of solids, liquids and gases.
- Technical laboratories dedicated to lab-scale research on physical and chemical separation and extraction processes relevant to research and development in extractive metallurgy, hydrometallurgy and pyrometallurgy, including a biotechnology development facility.
- Technical platforms designed for large pilot-scale testing, supported by a mechanical workshop and engineering design team. Examples of pilot scale equipment relevant to the hydrometallurgical field include distillation columns and fluidised bed reactors several meters in height, and full scale classifiers and gravity separators.
- The latest simulation and modelling tools and software for process modelling and simulation.

MORE INFORMATION

Website: www.inp-toulouse.fr/en/index.html

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