

# LaTEP LABORATORY FOR THERMICS, ENERGY AND PROCESSES

LaTEP/ EA 1932

Fields of application  
Energy  
The environment  
Biomass, biofuel  
Chemical and petroleum industries  
Energy production and transformation  
The refrigeration and air-conditioning  
industry  
Engines, cogeneration

Research themes and know-how

EXPERIMENTATION, MODELING AND SIMULATION IN:

- Thermodynamics of multiphase reactive systems
  - Thermodynamics of energy systems
  - Multiphase transfers (heat and matter)
    - Flow in reactive systems
  - Transfer intensification and process coupling
- Energy storage, transportation and distribution (natural gas, geothermics, phase-change materials, distribution networks, etc.)
- Analysis and intensification of energy systems and processes (solar refrigeration, external combustion engine, two-phase loop, etc.)
  - Treatment of air and gaseous effluents
  - Waste and biomass valorization

## Main equipment

High-pressure/high-temperature reactors and equilibrium cells, metrology and associated analyses

Heat analyses, PVT and transport properties of salt systems

Mechanical dehydration tools (electro-dehydration, band-pass filter, filter press, filtration-compression cells, etc.)

Unit operation pilots: crystallizers, reactive absorption, reactive distillation, etc.

Thermal energy storage pilots

External combustion engines

Heat transfer benches

## Partnerships

Industrial partnerships: AIR LIQUIDE, ALSTOM, ARAMCO, AREVA, ARKEMA, CIAT, CRISTOPIA, EADS, EDF, EUROPLASMA, FRANCE TELECOM, ENGIE, GERG, PROSIM, THERMYA, TEREGA, TOTAL, VEOLIA

Institutional partnerships: ADEME, ANR, BRGM, IRSTEA, IFPEN, Nouvelle-Aquitaine region

## Spearheaded by



## LaTEP in figures

20

PhD students and  
post-doctoral  
researchers

24

researchers  
and lecturers-  
researchers

## Contacts:

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