



GREEN CHEMISTRY AND PROCESSES

Set up of processes and materials
in respect for the environment



The innovative research of the Chimie Balard Cirimat Carnot Institute in Green Chemistry and Processes is based on the exploitation of renewable resources, the use of environmentally friendly substances and the intensification as well as the greening of processes.



RESEARCH SKILLS AND AREAS

- ▶ Green Chemistry: substitutes for dangerous chemicals and metals; alternative solvents; mecanochemistry
- ▶ Process intensification
- ▶ Bio-based molecules, polymers and composite materials
- ▶ Biomass conversion, recycling of waste and co-products from syntheses and processes
- ▶ Treatment of wastewater and effluents
- ▶ Depollution of gas streams
- ▶ Eco-extraction processes
- ▶ New membrane materials and processes
- ▶ New catalysts and improved synthetic methodology

TARGETED INDUSTRIES

Automotive industry
Aeronautics
Coatings
Construction
Health
Biotechnology
Detergents
Cosmetics
Energy
Environment
Water treatment



SERVICES WE OFFER

Patents/Licenses • Studies and
Engineering • Technology Platforms •
Advising • Technical Services



INDUSTRIAL INNOVATIONS AND PROJECTS

- ▶ Development of green detergents
- ▶ Synthesis of biosourced epoxy composites for joint prostheses
- ▶ Replacement of bisphenol A by a biosourced monomer
- ▶ Green synthesis of tamoxifene
- ▶ Microporous PECVD for purification of H_2 at high temperature on industrial supports

OUR PARTNERS

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