

# PRESENTATION OF THE BTU/NTUA GROUP

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## *BIORESOURCE TECHNOLOGY UNIT*

- National Technical University of Athens (NTUA), Athens, Greece (1937-)
- School of Chemical Engineering (1917-)
- Division IV: Process & Product Development (1983-)

⇒ *BTU was established in the mid-80's*

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## *BTU Vision*

- The emergence of a new generation of technologies for the large-scale conversion of renewable raw materials of biological origin to various industrial and energy market outlets
  - ⇒ **Research, development, demonstration and diffusion as “levers” for technological change**

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## *BTU Strategy & Approach*

- **Systemic:** Identifying critical questions for in-depth investigation within well-defined frames
  - ⇒ **Integrated energy and material systems**
- **Interdisciplinary:** Combining various relevant scientific and technical elements
  - ⇒ **Engineering; chemical; biological; socio-economic**
- **Networking:** National, European, International

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## *BTU Research Areas*

- Evaluating the Resource Basis
  - ⇒ Studies of bioresource potential; physico-chemical characterisation of crops and residues
- New Resource/End-use Interfaces
  - ⇒ Biorefining; Physico-chemical fractionation and pretreatment of lignocellulosic and other biological raw materials

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## *BTU Research Areas (cont'd)*

- Utilisation of Non-wood Fibre Sources
  - ⇒ **New feedstocks for cellulose and fibre industries; environment friendly conversion processes**
- Bioethanol/BioH<sub>2</sub>: Steps to Solar Future
  - ⇒ **Fermentation of lignocellulosics and other unconventional substrates; new bioconversion routes; sustainable biosystems**

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## *BTU Research Areas (cont'd)*

- Bio-Heat and Bio-Electricity Options
  - ⇒ Thermochemical densification; pre-pyrolytic treatment; upgrading lignocellulosic and other unconventional feedstocks
- Integrating Local/Regional Applications
  - ⇒ Local-level bioenergy studies; technology diffusion; policy & decision-making support tools and models