MICROWAVES AS AN INNOVATIVE PRODUCTION TECHNOLOGY

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+ 100 Employees
Annual Budget > 5 M€
External funding > 2M€
2 Spin-off

Relevant Experience in EU PROJECTS

- 79 H2020 projects
- > 32 MEUR financed

MICROSHOE
Microwaves as an Innovative Production Technology

Industrial Microwave Heating

• Design and manufacturing
• From Lab (TRL4) to Pre-industrial scale (TRL6-7)
• Including in-situ and real-time control.
• Optimization of process efficiency and product quality.

Materials’ characterisation

• Determination of the material interaction with the microwave fields
• Advanced in-situ characterization up to more than 1000°C

Complete engineering support for the development of microwave demo units

Advanced equipment for in situ monitoring of ultra-fast microwave heating processes
Microwaves as an Innovative Production Technology

Facilities

• One of the best independent microwave design and test facilities in Spain, including an excellent starting-up hardware and software equipment.

• Unique advanced in-situ characterisation equipment up to more than 1000°C

• Combination of mw with other techniques such as Raman spectroscopy.

• Integration with theoretical research and electromagnetic modelling.

Our Outcomes

• Successfully installed in industry (chemical, ceramic, polymers)

• From Lab (TRL4) to industry (TRL6)

• Patents covering the entire spectrum of heating applications solutions.

• Strong industrial partners network and contacts with relevant stakeholders
Available technology

- Innovative production technology (microwave) allowing flexibility:
  - Compact equipment that can be containerised
  - Portable pilot plants for small productions
- Developed at TRL6 in several sectors: ceramic, polymers, metals, etc.
- Demonstrated energy savings and increased efficiency
Available Technology

- Microwave sensors for lab and on line monitoring
  - Feedstock composition, moisture, etc.
  - Contamination of components
- Non-invasive, non contact
- For liquid, powder, solid materials, nanomaterials, etc.
- Successfully installed in industry (chemical, ceramic, polymers)
Microwave Division (DiMaS) Partners

More than 20 years addressing industry heating processes

Join Our Network

WWW.SPIRE2030.EU
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