



**SPIRE
Pre-Brokerage
event**

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**MICROWAVES AS AN
INNOVATIVE PRODUCTION
TECHNOLOGY**

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UNIVERSITAT POLITÈCNICA DE VALÈNCIA

Microwave Division (DiMaS), ITACA Institute at Universitat Politècnica de València



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

Relevant Experience in EU PROJECTS



UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA

- 79 H2020 projects
- > 32 MEUR financed

Two main areas using microwave technology:

- Microwave heating processes
- Characterization of materials and processes



MICROSHOE



SKILLS

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.

Material characterization

- 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

SPIRE TOPICS CE-SPIRE-02/03-2018

Our main contribution to the topics

CE-SPIRE-02-2018

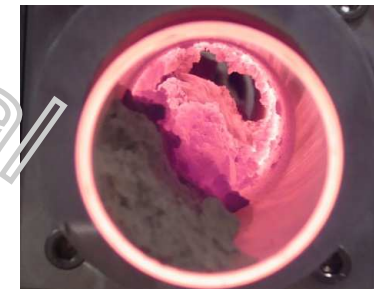
CE-SPIRE-03-2018

- 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



TRL6 - Microwave applicators in industry plants

Portable Flexible Modular



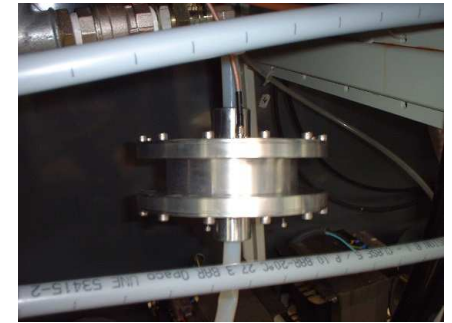
Microwave technology for continuous-flow high-temperature processes

SPIRE TOPIC CE-SPIRE-05-2019

Our main contribution to the topic

CE-SPIRE-05-2019

- Microwave sensors for on line monitoring
 - feedstock composition, moisture, etc.
 - Contamination of components
- to adapt the process and improve efficiency
- Non-invasive, non contact
- For liquid, powder, solid materials
- Successfully installed in industry (chemical, ceramic, polymers)



Microwave applicators and sensors for in-situ and real-time control of the process



Microwave Division (DiMaS)

Close contact with industry (big companies and SMEs)



Join Our Network





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