MMAMA
Microwave Microscopy for Advanced and Efficient Materials Analysis and Production

General description
The MMAMA project aims to enable advanced material analysis and boost its quality and production efficiency thanks to the GHz measurement and modelling platform in a wide community.

MMAMA Objectives

Technological
- Improvement of SMM technology
- Nanoscale characterization platform for EU manufacturers of coatings, photovoltaic cells, and semi-conductor circuits

Economical
- Acceleration of the development of high efficiency cells
- Performances prediction at early stages

Sustainability
- Open innovation environment
- Standard Operating Procedures
- Electromagnetic 3D models

MMAMA Ambition
Beyond R&D and demonstration of SMM interest at production scale, MMAMA will notably allow standardization of practices and:
- allow off-line & lab characterization to generate data and application Database
- monitor and compare in-line pilot with application Database to optimize material

Main Outputs
MMAMA project results will first be exploited through dissemination to a selected community in the field to improve the application database. It will be the basis of new business opportunities for European industries in photovoltaic and composites sector.

Countries involved: Austria, Belgium, France, Greece, Poland, Switzerland.
Duration: 01/11/2017 to 30/10/2020
Budget/EU Grant: 3 992 176.25€
MMAMA Value Chain

Current QWED activities

Adaptation of the dielectric resonator technology from laboratory environment to S2S inline industrial application.

Developments for a new scanner for 2D imaging of material properties – 10 GHz technology selected as a compromise between lateral resolution and max thickness.

New small portable 10 GHz Microwave Q-Meter with enhanced EMC characteristics.

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