Press release

EU invests 5 Mio EUR to enhance Raman spectroscopy and generate a FAIR data repository for future academic and industrial research

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The newly EU-funded project CHARISMA aims to harmonise and standardise Raman spectroscopy, an extremely versatile non-destructive method for materials characterization widely applied in research and industry. The scope of CHARISMA includes hardware, measurement protocols, and in-silico methods enabling Raman users to share digital spectral data across domains and across the entire life cycle of diverse products. It will support data and models sharing under FAIR principles by defining ontologies for data curation. CHARISMA will generate interoperable Raman data from instruments of different configurations, while also developing a web-based platform and user interface.

The project will demonstrate the feasibility of its concept in three industry cases. In the long term, it aims to give Raman spectroscopy yet another boost to become a standard within the Industry Commons concept.

The CHARISMA Partners aim to standarise and harmonise Raman spectroscopy for the nanotechnology, Advanced Materials, Biotechnology, and Advanced Manufacturing and Processing communities, and generate a FAIR Raman data repository. The consortium includes institutions of cutting-edge basic and applied research as well as industries from all over Europe, covering fields from catalysis over materials science to software development.

Prof. Dr. Miguel A. Bañares, Research Professor and Group Leader of Instituto de Catalisis - Spectroscopy and Industrial Catalysis group and project coordinator, explains the expected impact of CHARISMA: “The combination of harmonised Raman spectra with a ready-to-use software and cloud interoperable database will pave the advent of a new Raman era. Specifically, CHARISMA will improve and create standards, protocols, models, harmonisation algorithms, ontology and FAIR database to compare and link data. CHARISMA will thus enable demonstrators of standardised characterisation protocols for materials, processes and final NM product performance.”

The project brings together 14 partners from 9 European countries and receives funding from the European Union’s HORIZON 2020 research and innovation programme.

CHARISMA is currently looking for interested Raman manufacturers and users to join the project as associated partners. For more information about the project and how to get involved email info@h2020charisma.eu or see www.h2020charisma.eu

Contact for Press: Judith Friesl and Besa Maliqi Syla, Yordas Group
j.friesl@yordasgroup.com / b.maliqisyla@yordasgroup.com

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