NACE CODE M72

OPTICAL SYSTEMS FOR ENVIRONMENTAL DIAGNOSTICS AND MANAGEMENT OF PLANT RESOURCES

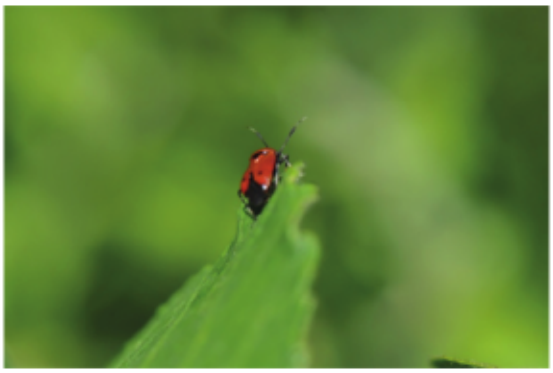
Innovations and Benefits - Assessment of the environmental quality and impact of biotic and abiotic stresses on plant species: analysis and monitoring of the health status of plant organisms through the development of an integrated methodology and protocols of in situ and remote measurements with rapid and non-destructive diagnostic systems.

Use -

Research and development in the field of environmental safety and diagnostics in order to contribute to the study of the interactions between anthropic activities, agro-ecosystems and the aquatic environment and to improve the sustainable management of terrestrial and aquatic plant resources.

Applications and ongoing Activities -

- Eco-physiology studies of herbaceous and arboreal plants subjected to biotic (attack of pathogens) and abiotic (water deficiency, heavy metals) stresses by means of gas exchange measurements and image analysis of the fluorescence emission of chlorophyll.
- Evaluation of the photochemical response of plants exposed to changes of environmental factors.
- Development and implementation of non-destructive investigation methods based on optical and laser spectroscopy for the study and early diagnosis of pathological and / or physiological changes on plant organisms.
- Application of optical and spectroscopic systems for the qualitative analysis of pollutants present in environmental matrices (irrigation water and agricultural soils).
- Identification of measurement protocols and calibration of prototype instrumentation used in the monitoring of water bodies for the analysis and bio-optical characterization of the phytoplankton component.
- Study and evaluation of innovative systems for monitoring toxic algal blooms and for the treatment aimed at removing both the algae and the toxins.



Characteristics:

CUSTOM Thanks to its flexibility, the service can be adjusted to different needs and contexts

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