

Project: A new method for detection of herbicides with surface enhancement Raman spectroscopy (SERS)

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Aims & subject of work:

It was aimed to develop a rapid, sensitive and new method for detection of herbicides with surface enhancement Raman spectroscopy (SERS). Reaction center of photosynthetic bacteria was be used as a receptor. Firstly, reaction center from photosynthetic bacteria *Rhodobacter sphaeroides* was be isolated and reaction center-herbicide interactions were be investigated using Raman spectroscopy. In last step of the study, validation of the new method was be analyzed. At now we are studying Raman-herbicide interaction with Raman spectroscopy.

Argumentation of necessity of STSM: As precursor of advanced multidisciplinary research COST has important role as “bridge” towards the scientific communities of emerging countries.

Workplan/timeschedule followed (4 bullets max., Calibri 12):

- At first *Rhodobacter sphaeroides* was be grown in M22 medium
- Bacterial reaction center was be isolated and purified.
- In the end of this study was calculated concentration of bacterial RCs using with UV spectrum absorbance

Main results and outcome:

Reaction center from photosynthetic bacteria *Rhodobacter sphaeroides* was be isolated and reaction center-herbicide interactions were be investigated using Raman spectroscopy..