



The **CREA**tion of the Department of Physical Chemistry of Biological Sys**TE**ms [CREATE]

666295 — CREATE — H2020-WIDESPREAD-2014-2015/H2020-WIDESPREAD-2014-2

## MEETING REPORT

### TOPIC AND DATES

MEETING TOPIC	MEETING DATE	REPORT DATE	PREPARED BY
Presentation of the Department of Photochemistry and Spectroscopy (PCHS)	29/11/2016	12/12/2016	Maciej Nowakowski

### MEETING PARTICIPANTS

#### CREATE GROUP

Prof. Maciej Wojtkowski  
Dr. Dawid Borycki  
Dr. Maciej Nowakowski  
Dr. Patrycjusz Stremplewski  
Michał Hamkała, M.Sc.

#### GUEST GROUP: DEPARTMENT OF PHOTOCHEMISTRY AND SPECTROSCOPY (PCHS)

Dr. Yuriy Stepanenko

### MEETING SUMMARY

Dr. Yuriy Stepanenko has introduced the Department of Photochemistry and Spectroscopy (PCHS), which is a part of the Laser Centre of the Institute of Physical Chemistry of the Polish Academy of Sciences. Dr. Stepanenko discussed in detail all ongoing projects: Femtosecond up-conversion spectrometer in which a fluorescence emitted by molecules excited by an ultra-short pulse can be investigated; Femtosecond stimulated Raman spectroscopy in which the unique broadly tunable system for the time resolved Raman spectroscopy was constructed. This system utilizes stimulated Raman process to probe the chemical system; Multi tera-watt optical parametric chirped-pulse amplification (OPCPA). The aim for this project is to extend recently developed OPCPA system and



This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 666295



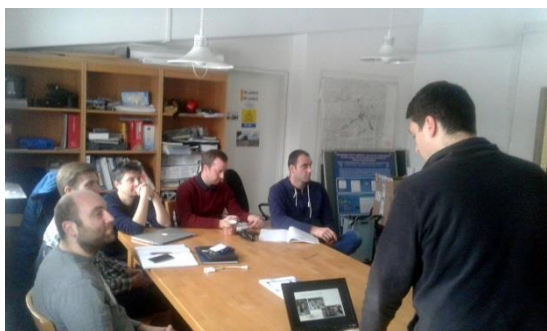
*The **CRE**ation of the Department of Physical Chemistry of Biological Sys**TE**ms [CREATE]*

**666295 — CREATE — H2020-WIDESPREAD-2014-2015/H2020-WIDESPREAD-2014-2**

reach 10 TW with high hopes for even greater powers. The possibility of the use of unique fiber laser, designed and produced in the PCHS, was also discussed with Dr. Stepanenko. The second half of the meeting was devoted to a Laser Center lab-tour and current problems discussion. The issues were related to: laser amplifier dispersion controlling unit, problems with chirped-mirrors dedicated for a high-power laser beams, laser amplifying process in vacuum.

### CONCLUSIONS AND FUTURE PLANS

The future cooperation was planned in the area of robust fiber lasers (of around 1 micron wavelength). Such high efficient sources of laser light can be tested in various imaging schemes devices within the Physical Optics and Biophotonics Group.



Pictures taken during meeting with Dr. Stepanenko.



**This project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 666295**