

7<sup>th</sup> International Congress on

# BIOFUELS AND BIOENERGY

October 02-04, 2017 Toronto, Canada

## Ecological management of fast growing trees plantations and biorefinery of added value products from biomass

Vosatka Miroslav, Tomas Frantik, Christopher Schmidt, Petr Kastanek, Olga Solcova, Jana Hajslova, Eva Svecova and Mrnka Libor  
University of Chemistry and Technology, Czech Republic

During the last 10 years an intensive research activities regarding cultivation of the fast growing trees (poplar, willow and paulownia) and refinery of added value products have been accomplished within the Centre of Competence Biorefinery project held among several Institutions and private companies in the Czech Republic. Preceding that a 5 years study was conducted to find out whether poplar and willow plantations can be established as an apart from biofuel production the plantations had an added value in increased capability of cover crop to decontaminate polluted soil. Then a 5 years study was conducted to establish the best cultivation practice including fertilizing with sewage sludge and wood ash or bio fertilizing with mycorrhizas and endophytic fungi or PGPB. Manuals for the best cultivation practice were developed for poplar, willow and paulownia plantations. An added value product from plantations was designed (e.g. patented game repellent product from poplar buds, use of edges of tree plantations for production of nutraceutical plants etc.). Sustainability and economic feasibility of biofuel plantations on marginal land can be significantly increased by assignment of other expected ecosystem services such as decontamination of pollutants or by designing the co-products with higher added value that can be produced alongside on biofuel plantations.



### Biography

Vosatka Miroslav has his expertise in soil microbiology, plant ecology and in the practical applications of biofertilizers in plant production. He has been working at the Institute of Botany, CAS for the last 30 years he is also an External Lecturer at Charles University and Masaryk University. For several years he has been a fellow at the International Institute of Biotechnology and Kent Science Park in the UK. He has a long term experience in collaborations in organic agriculture and biofuel plantations worldwide.

miroslav.vosatka@ibot.cas.cz

### Notes: