



Confidential

Supervisor's Review of USB RIFCH PhD Thesis

Surname of the PhD student: Balakrishnan	Name of supervisor: Prof. RNDr. Petr Spatenka, CSc.
Title of PhD thesis: Degradation of organic pollutants in water by non-thermal plasma based advanced oxidation processes.	

OVERALL COMMENTARY ON THE PhD THESIS

The thesis of Syam Balakrishnan is devoted to investigation of low-pressure atmospheric plasma system for decomposition of organic pollutants (predominately pharmaceutical compounds) from polluted water. He used three different systems – gliding arc, wire-formed DBD and electro-hydrolic spark discharge. He compared his results with classical AOP using an ozonizer.

The results of his theses is contributes to actually investigated problems with removing stable organic pollutants from wastewater. His results were published in two international journals with impact factor 4.3 and 3.6. The third paper is in preparing with the University of Padova, where Syam performed part of his work.

Syam proved very good knowledge of chemistry and he also managed laboratory experiments with plasma sources, which was new for him. He actively solved experimental problems and initiated his own experiments. He also was able to present his results on international meetings which led to his invitation to laboratories at the University of Padova, Italy, and Polish Academy of Sciences.

Syam belongs to my best PhD students and I recommend his theses for defense.

FINAL RECOMMENDATION

- can be recommended for defence of PhD Thesis
- can be recommended with reservations for defence of PhD Thesis
- can not be recommended for defence of PhD Thesis

C.Budejovice, April 28th, 2017

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Date and place

Spatenka

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surname and signature