



DOCTORAL RESEARCH TOPIC:

Theoretical and numerical investigation of biomass pyrolysis in hot liquid medium

RESEARCH FIELD:

Energetics and Power Engineering (T 006)

BRIEF DESCRIPTION OF RESEARCH TOPIC:

Pyrolysis products, such as syn-gases and oil, are used more conveniently, safely and efficiently for energy production than the pyrolysed material itself. Pyrolysis technologies are widely used in the world and in most cases the pyrolysis takes place in a hot gaseous environment. However, the pyrolysis process in gaseous environment takes relatively long time due to low thermal conductivity and low thermal capacity of gases. The pyrolysis process can be accelerated if it is implemented in a hot liquid environment (in salts, oils, metals or other materials suitable for that purpose). Aim of the proposed research is to carry on theoretical and numerical analysis of pyrolysis of organic materials in the environment of a hot liquid in order to determine the optimal conditions for the process in the smallest volume with the most effective yield of pyrolysis products.

SCIENTIFIC SUPERVISOR:

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