

EU Brokerage Event

on Industrial KET* in Horizon Europe

11th May 2021 • online

**Conference &
Bilateral/B2B Meetings**

**Calls
2021 - 2022**

**Project idea/ Field of
expertise:**

Carbon-Borane porous material/Material
Chemistry and Physics

Organisation Name:

Kastamonu University/TURKEY

Addressed topic(s):

pyrolysis of biomass and plastics with borane
minerals & miscellaneous characterization:
porosity and surface energy

Kastamonu University

- Kastamonu University has many departments
- The material engineering
- Pyrolysis process of biomass and plastic mixtures to obtain petroleum equivalent tar, carbon based solid materials charlike charcoal and hydrogen rich gaseous materials.
- And some skill of prediction of the products with artificial neural networks such as ANN and DNN
- Turkey has the much of the borane minerals in the World.

Carbon-Borane porous material/Material Chemistry and Physics

- In order to store hydrogen, it is planned to produce carbon-based microporous large surface area material by pyrolysis method using boron catalyst of various biomasses and adsorption of hydrogen.
 - * The fine structure of biomass can be a good starting precursors to obtain microporous material with inherent hydrogen adsorption capacity of carbon and borane elements combined with mechanical strength of borane carbides.
- This high technology materials will need rigorous characterization such as porosity, surface energy and mechanical strength in development state.

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