Searching for a consortium to join under the research topic:

**Anaerobic digestion of wastes and by-products of the food industry as a source of gaseous biofuels**

*Key words:* bio-hydrogen, bio-methane, anaerobic digestion, dark fermentation, scaling-up processes, microbial interactions and metabolic pathways

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About the Institute

- The Institute of Biochemistry and Biophysics of the Polish Academy of Sciences (IBB PAS) in Warsaw is one of the leading scientific institutes in Poland.
- It conducts basic research in the life sciences: biology, biophysics, biochemistry and genetics.
- For the Institute, it is important to put the results of basic research into practice and use them in the creation of modern technologies in cooperation with industrial partners.

Laboratory of White Biotechnology (IBB PAS) field of expertise

- Research on the anaerobic digestion of wastes and by-products of the sugar beet industry as a source of gaseous biofuels.
- The works include basic, development and implementation works into the technology of bio-hydrogen and bio-methane production as a result of anaerobic digestion and the use of the bio-gases for energy.
Our experience – Basic Research

Biochemical and molecular analysis of anaerobic digestion microbial communities

Microorganisms are the key players in biological hydrogen and methane production

What we can bring to join consortium – expertise on:

- the interactions in microbial communities determining bioreactors performance: competition, cross-feeding and synergy
- non-biological factors relevant for bio-hydrogen production via dark fermentation

Main Papers:
9. PLOS ONE, 2015, DOI: 10.1371/journal.pone.0128008
Our experience – R&D

Development and the know-how of innovative technology for the production of bio-hydrogen and bio-methane by two-stage anaerobic digestion of the sugar beet industry by-products.

What we can bring to join consortium – expertise on: scaling-up of the bioprocesses in cooperation with an industrial partner.

Projects: PBS 1/B9/9/2012 and BIOSTRATEG2/297310/13/NCBiR/2016 supported by The National Centre for Research & Development.

In this case the Industrial Partner was Krajowa Grupa Spożywcza S.A.
Activities with an industrial partner aimed at:

- reducing the emission of greenhouse gases into the atmosphere and increasing the contribution of renewable energy in the total energy pool
- development of zero-carbon and circular economy

Project
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