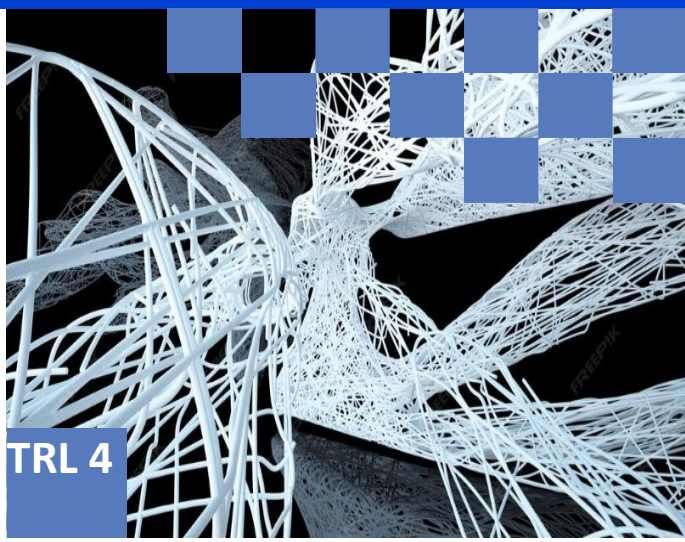
Uniwersytet Gdański
Centrum Transferu Technologii

chemistry

Sorbent based on metal-organic frameworks (MOFs) modified with ionic liquids for CO2 sorption and method for its preparation



About the invention

The subject of the invention is a sorbent based on metal-organic frameworks (MOFs) for CO2 sorption. The invention relates to new materials for separating CO2 from the gas phase in the form of powder or granules composed of MOFs (metal-organic frameworks), modified with various types of ionic liquids (ILs) in order to increase the sorption capacity with respect to CO_2, and at the same time to obtain a material that can be easily used in sorption columns. The invention also covers a method for obtaining this sorbent.

The invention can be used in gas purification technologies, CO_2 emission reduction and industrial carbon dioxide capture and storage installations. Therefore, the aim of the research was to create a new type of MOF composite sorbents modified with ionic liquids, characterised by increased CO_2 selective sorption capacity and structural and thermal stability.

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IP protection

The invention is protected by patent application at the Polish Patent Office: **P.452638**

Implementation progress

TRL 4 –Technology validated in laboratory conditions

Possible cooperation

- Licensing agreement
- Transfer of ownership
- Partnership in order to further research or commercialization

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Technological Offer No. 193/2025