



ATENA

FUTURE TECHNOLOGY

SCHEMA PROGETTO

Titolo:

New, highly innovative technology for CO2 capture applications based on porous Membranes Impregnated by Liquid carbonatEs

Acronimo:

EOPSIN

Ente Finanziatore:

EU - European Commission

Call:

2016 H2020-LCE-2016-2017

Coordinatore:

POLITECHNIKA WARSZAWSKA Poland

Partner:

FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV Germany, UNIVERSITA DEGLI STUDI DI PERUGIA, TECHNISCHE UNIVERSITEIT DELFT, Hanbat National University (Republic of Korea), CIM-MES PROJEKT SP ZOO Poland, Atena scarl

Durata prevista:

Data inizio:

Data Fine:

Budget:

| | Totale | Atena | Parthenope |
|-----------------|-----------|---------|------------|
| Budget Progetto | 3.645.250 | 442.500 | |
| Agevolazione | | | |

Stato:

Non Finanziato

Obiettivi:

The objective of the proposal is the development of high--potential novel technology for post--combustion CO2 capture.

Research follow new paths leading to highly innovative technologies and materials for CO2 capture applications with the

potential for real breakthroughs. This include systems based on Solid Membranes Impregnated by Liquid carbonates (SMILE). Environmentally benign technology be pursued and their environmental impact addressed in the project also in



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view of future scaling up. Project includes prototype testing under industrially relevant conditions. With a view to promoting international cooperation with South Korea, initiatives for collaboration between the EU project and Korean (Hanbat National University) partner will be based on mutual benefit and reciprocity. Specific budget is allocated in the EU project for pursuing such twinning activities (exchange of information, exchange of researchers). SMILE are based on high-performance materials for optimizing CO₂ capture and require adequate knowledge and experience on nanotechnologies, advanced materials, and advanced manufacturing, as the result of the project will be capitalising on promising material solutions for the next generation CO₂ capture technologies. Goal of EOPSIN is to accelerate, by an innovative way, the development of the technologies of most promising CO₂ capture concepts by successful testing in a separate way at laboratory scale, through a rapid scaling up involving tests in substantially prototype scale. To this aim, taking advantage from these background experiences, EOPSIN will experimentally validate a CCS system exploiting the capability of SMILE of operating as “active” concentrators of CO₂ for a subsequent, final capture by integration of proper separation devices which requirements can be strongly simplified. Such a goal will be pursued through a set of coordinated experimental and prototyping activities that will involve tests on substantially prototype/devices.