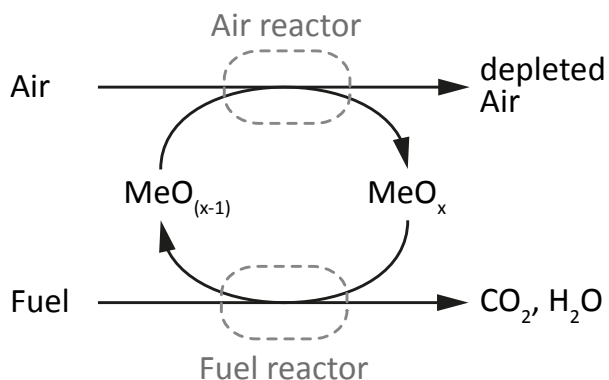


CHEMICAL LOOPING COMBUSTION

Chemical-looping combustion (CLC) has unique potential for reducing energy and cost penalty for CO₂ capture, as it avoids the costly gas separation of other CO₂ capture technologies. This is achieved by separating the combustion process into two steps, so that air and fuel are never mixed. A metal oxide, the oxygen carrier, transport the oxygen from air to fuel. SUCCESS aim at making the CLC technology ready for demonstration at the next scale (10 MW_{th} fuel power).



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Scale-Up of oxygen Carrier for Chemical-looping combustion using Environmentally Sustainable materials



SUCCESS

The main goal of the SUCCESS project is to make the last missing step towards demonstration of the chemical looping technology at the next scale (10 MW_{th} fuel power input). This includes scale-up of several aspects of the technology as well as demonstration at 1 MW_{th} fuel power. This main goal can be divided into three key objectives of the project:

- Scale-up of material production making oxygen carrier materials available at large quantities for the use in demonstration plants.
- Scale-up of CLC system design to 1 MW_{th} fuel power including comprehensive testing campaigns with the new materials in different pilot plants up to 150 kW_{th} fuel power.
- Assessment of the overall potential of the technology based on the figures from results of the project compared to alternative technologies in several aspects (Health & Safety, techno-economic potential)

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PROJECT ORGANISATION

