

Project acronym: **GreenSyngas**

Project title: **Advanced Cleaning Devices for Production of Green Syngas**

Project Summary

The transport sector represents a growing share of the total fossil fuel usage in the world. In order to fulfil the commitment to the Kyoto Protocol, the world usage of fossil oil in transport sectors must be reduced. One important approach to achieving this goal is to increase the share of renewable sources as feedstocks in conversion routes. These biomass conversion routes involve a number of difficulties that should be attended to first by a suitable process configuration to avoid catalyst poisoning in production of syngas. Second, a major problem in the production of syngas derived fuel from renewable sources is the presence of contaminants in the product gas from a biomass gasifier. These impurities that cause catalytic poisoning should be completely removed prior to the entry in catalytic systems that utilize in upgrading steps. With the evolution of these advanced uses of biomass derived syngas, it becomes necessary to develop progressively more stringent gas cleaning systems. Therefore, the project's key goal is development of a novel gas cleanup in order to reduce impurities from gasifier's product gas to limits required for upgrading to syngas using as a feedstock in production of vehicle fuels. To accomplish this target that biomass conversion should preserve high energy efficiency in the subsequent synthesis steps and preventing catalytic poisoning, an alternative product route and more efficient gas cleaning systems are required. Nevertheless, biomass conversion processes offer many economical and environmental benefits, but it is clear that conversion technology should be able to compete with other conversion routes, for example via methane. Therefore, this RTD programme combines European expertise in the field of gasification, different proficiencies in cleaning technologies, high ranking catalyst expertise, Catalyst Company, and one research companies with R&D activities in the fields to expedite the development and commercialization of research outcomes.



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA



Forschungszentrum Jülich
in der Johannes-Gemeinschaft



Johnson Matthey



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