

⇒ Hydrogen Production by Dry Thermo-Catalytic Methane Splitting had been developed under FP5 for CAPTURED by-product CARBON Use in special materials (composites) and forming gas supply of Hydrogen in “Factories of the Future”. The Prototype plant has reached continuous production capability and scale-up scenarios were performed by the Vienna University of Technology for larger feedstock gas volumes and bio-gas typical compositions. Particularly the energy efficiency of ~55%/mol H₂ compared to SMR intrigued for future integration of the process into Bio-Refineries for using the original material technology process’s co-deliverables HYDROGEN & CARBON as downstream refining intermediaries. Breaking residue derived gaseous hydro-carbons by this Dry Thermo-Catalytic Splitting into the two basic elements HYDROGEN & CARBON the recycling rate of atmospheric Carbon Stock from waste into fossil commodities’ substitute products can be leveraged.