

H₂-Reallabor at WACKER – Developing the transformation of the ChemDelta Bavaria

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In order to facilitate the transformation of the chemical industry towards climate neutrality, 35 partners from academia and industry joined in the project “H₂-Reallabor Burghausen” to develop innovative solutions for the ChemDelta Bavaria (Figure 1). This 4-year project obtained 39 Mio € funding from the Federal Ministry of Education and Research (BMBF) to foster research into sustainable production procedures based on the utilization of hydrogen (H₂). WACKER is taking a leading role in this transition process by contributing to three out of the seven work packages, namely AP 2 “Power-to Methanol”, AP 5 “CO₂ Capture on Silica-based Adsorbents” and AP 6 “Direct CO₂ Electrolysis to Green Ethylene”. The aim of the first work package “Power-to-Methanol” is the demonstration and implementation of a CO₂ to Methanol carbon capture and utilization (CCU) process at WACKER’s production site in Burghausen. In AP 5, the research focuses on the development of solid silica-based CO₂-adsorption materials with improved CO₂ purification characteristics in comparison to state-of-the-art processes such as solution-based amine scrubbing. Within the work package “Direct CO₂ Electrolysis to Green Ethylene”, a technology should be developed that converts CO₂ from the cement production to ethylene using a novel, energy efficient electrolysis approach. The research in all three work packages contributes to WACKER’s goal of reaching climate neutrality by 2045, so that the collaborative activities in the “H₂-Reallabor Burghausen” constitute an excellent strategic fit and add to numerous other measures to achieve this goal.

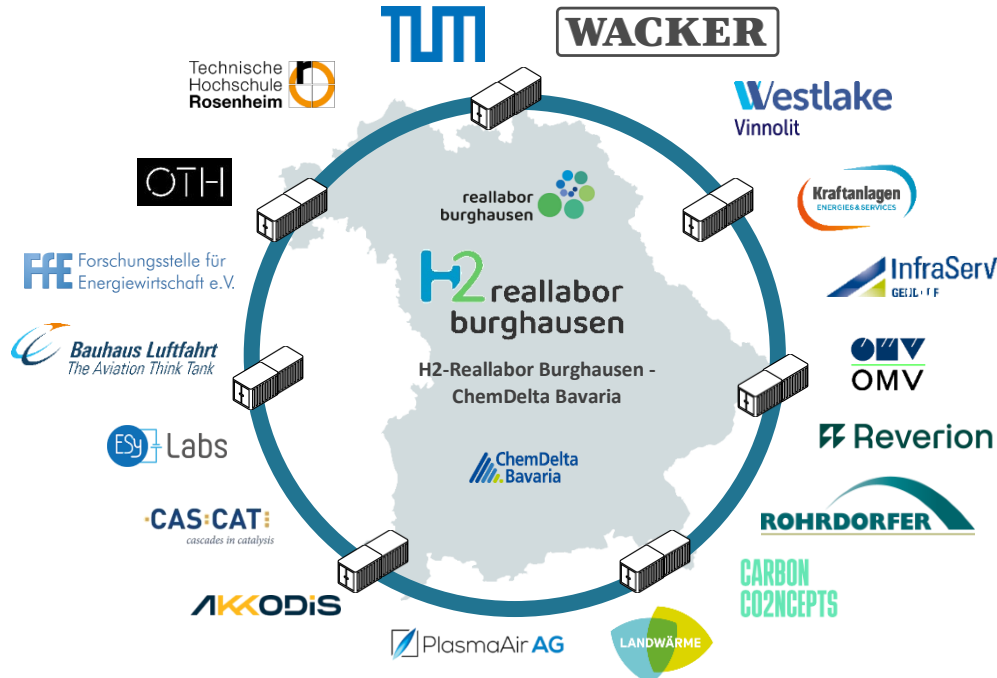


Figure 1. Project partners involved in the H₂-Reallabor Burghausen.