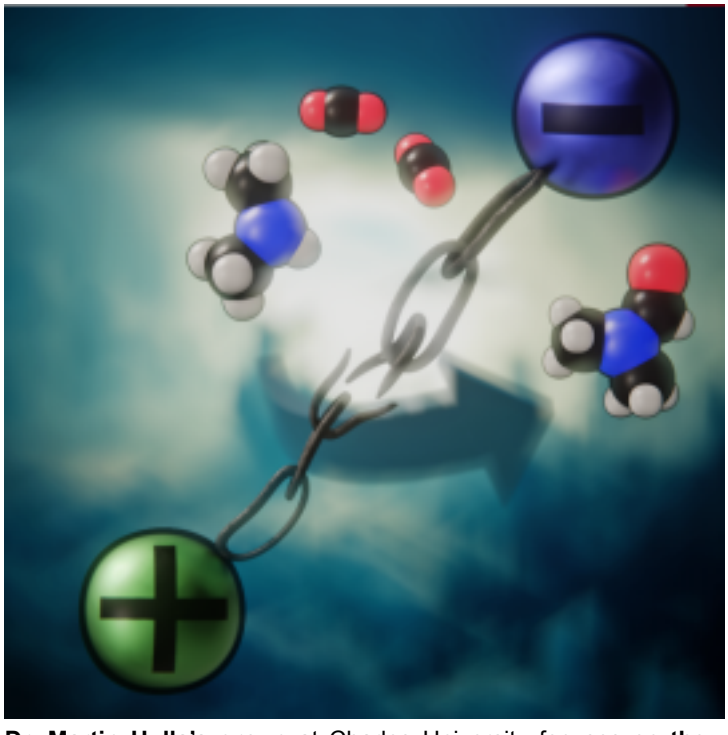
Group of Main-Group Element Chemistry and Catalysis (Dr. Martin Hulla)



Dr. Martin Hulla's group at Charles University focuses on **the use of frustrated Lewis pairs (FLPs) and low-valent compounds** in catalytic reactions. The main goals are **CO? capture and reduction** as well as the reduction of unsaturated functional groups for applications in organic synthesis.

The team develops **water-stable FLPs**, enabling greener synthesis of organic compounds without relying on precious metals. These catalysts can use CO? as a **C1 building block** in the production of pharmaceuticals, agrochemicals, and surfactants, with water as the main byproduct.

Martin Hulla earned his Ph.D. at the **École Polytechnique Fédérale de Lausanne (EPFL)** and his master's degree at **Imperial College London**. Since 2019, he has been an Assistant Professor at the Department of Inorganic Chemistry, Charles University, and he is the principal investigator of the **GAČR Junior Star 2021** project.

The group is a motivated and dynamic team combining **Lewis acid synthesis, FLP preparation, and sustainable CO? catalysis** to develop innovative and environmentally friendly chemical processes.
Learn more: Hulla group