

Plenary Talk

PV XI Wed 9:00 U Audimax

Chemical Energy Storage: a Key Element for a Sustainable Energy Future — •FERDI SCHÜTH — Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr, Germany

Our energy systems are facing fundamental changes, caused by the depletion of fossil fuels and climate change. This requires increased use of renewable energy, which are typically intermittent, such as solar radiation and wind energy. Storage of energy could thus become a key

question in future energy systems, and methods for storage and different time and size scales are necessary. Chemical storage, including electrochemical systems such as batteries, have advantages compared to purely physical methods, since only chemical methods reach the required storage densities. The presentation will address the conditions, which future storage systems will have to meet and discuss different systems and their integration into the energy system. Main development lines and the research needs associated with them will also be addressed.