

2042

Energy Storage Systems

Central and decentralized energy systems, energy storage needs and framework, overview and analysis of energy storage technologies and applications. Power-to-X, Power - to - Fuel, Power - to - Power, Power - to - Heat. Thermal Energy Storage processes (sensible, latent). Renewable CO₂ capture/sequestration for use in energy storage applications. Thermochemical energy storage for hydrogen, methane, methanol and hydrocarbons production. Biomethane production technologies. Carnot Batteries and Thermal Energy Storage. Energy Storage Applications and Cross-sectoral integration. Teaching will include simulation of presented processes in ASPEN+.