

Electrification of the Chemical Industry: An overview of innovative technologies for the conversion of electricity to chemicals

Runeel Daliah[†]

Lux Research

(Runeel.Daliah@luxresearchinc.com[†])

The emergence of global initiatives to curb rampant CO₂ emissions has led to a boom in innovation interest in CO₂-related technologies, spearheaded by several consortiums promoting advances in carbon utilization. The industrial sector is responsible for 21% of global CO₂ emissions but lags the power generation and transportation sector when it comes to decarbonization. One promising decarbonization option is the electrification of the industrial sector through either direct or indirect conversion of electricity to chemicals using an array of electrochemical technologies. In this presentation, we will showcase a global overview of innovations occurring in the space with special focus on emerging technology developers in electrochemistry that will potentially revolutionize the chemicals and energy industry.