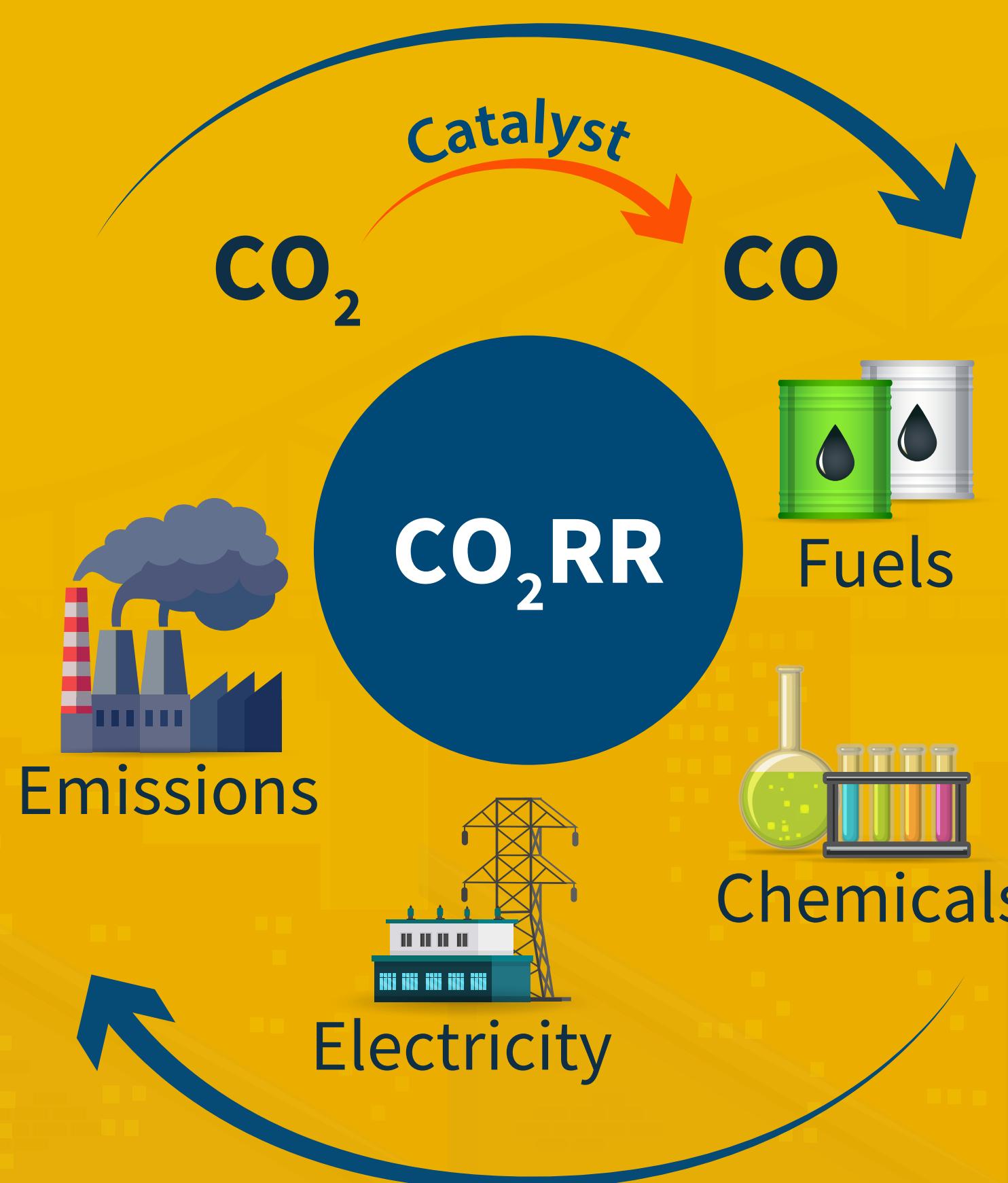


# Novel Quasi-Square-Shaped Cadmium Hydroxide Nanocatalyst to Improve Electrochemical Reduction of Carbon Dioxide to Carbon Monoxide

Chemical  
Science

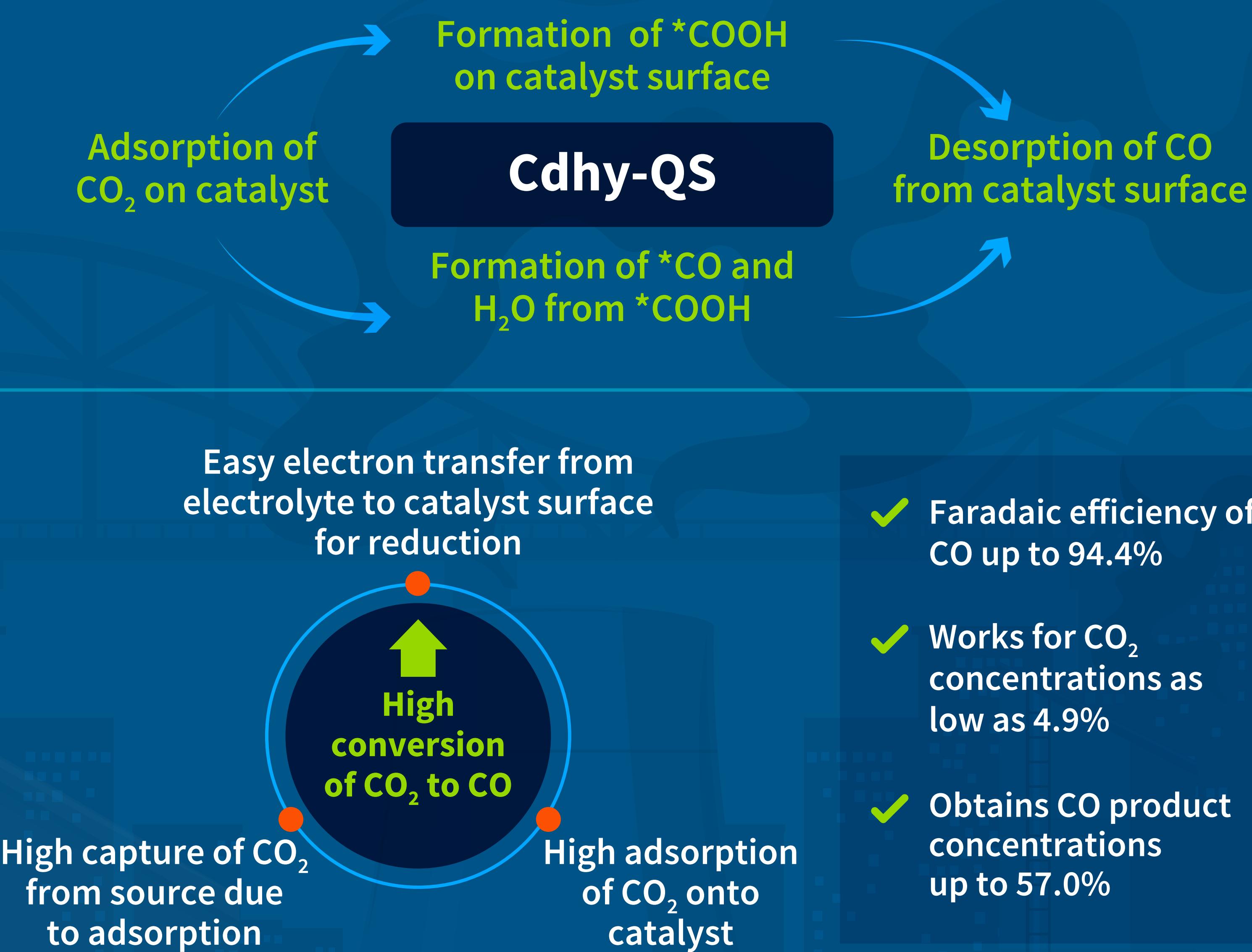
Electrochemical reduction of carbon dioxide ( $\text{CO}_2$ ) using renewable electricity can reduce  $\text{CO}_2$  emission, producing carbon monoxide (CO) for commercialisation as a feedstock for chemicals and fuels



## But it has disadvantages:

- Low capture rate of  $\text{CO}_2$  at source
- Poor catalytic activity and selectivity
- Low conversion to CO

The efficient reduction of  $\text{CO}_2$  to CO is proposed by combining a novel quasi-square-shaped cadmium hydroxide (Cdhy-QS) nanocatalyst with an adsorption-electrolysis device



The combined action of Cdhy-QS nanocatalyst and an adsorption-electrolysis device system can generate high concentrations of CO at low  $\text{CO}_2$  concentrations