ta t a t t 6 . H , t at a a :

1. **CO_2 capture:** C $_2$ a a t / -G t t t . a a a -G a C $_2$ a t . C t t a a a t C $_2$ a a t t t a .

2. **CO_2 reduction:** t t / -G t a C $_2$ t . D t a t ta a ata t a t , C $_2$ a t a a t a a a (HC H), t a (CH_3 H), a . -G t t t tt a t t , a t C $_2$ t .

Examples of speci c reactions and products obtained from CO2 conversion

a. t t F A : C $_2$ + 2 - + 2H+ HC H

. t t t a : C $_2$ + 6 - + 6H+ CH_3 H + H_2

. t t H a : C $_2$ + - + H+ H a (a t a , t , t .)

a t t a t t at a t t C $_2$ / -G t .

Characterization techniques for zno/r-Go composites

X-ray Di raction (XRD): D a a t t t ta t t , a t , a ta t / -G t . B a a t ff a t att , t ta a a t ta t a t 7 .

Scanning electron microscopy (SEM) and transmission electron microscopy (TEM): E a E a t at a t t , , a t t a a t a -G t t t . t a a t t a t a t a -G , t t t t t a a a t.

Fourier transform infrared spectroscopy (FTIR): F I a a t t at t a a t a t / -G t . It a t a t a t a a a t a t a t t a -G .

X-ray photoelectron spectroscopy (XPS): t t a a t ta t , a tat , a a t / -G t . It at a t t at tat t t , t t , a t t a at t a t t .

Performance evaluation methods for co$_2$ capture and conversion

Photocatalytic activity measurement: t t a a t at a t a t a t a t a