

Supporting information for:

**Study on the reaction pathway and mechanism of
urea alcoholysis by the disassociation and conjugation
of groups**

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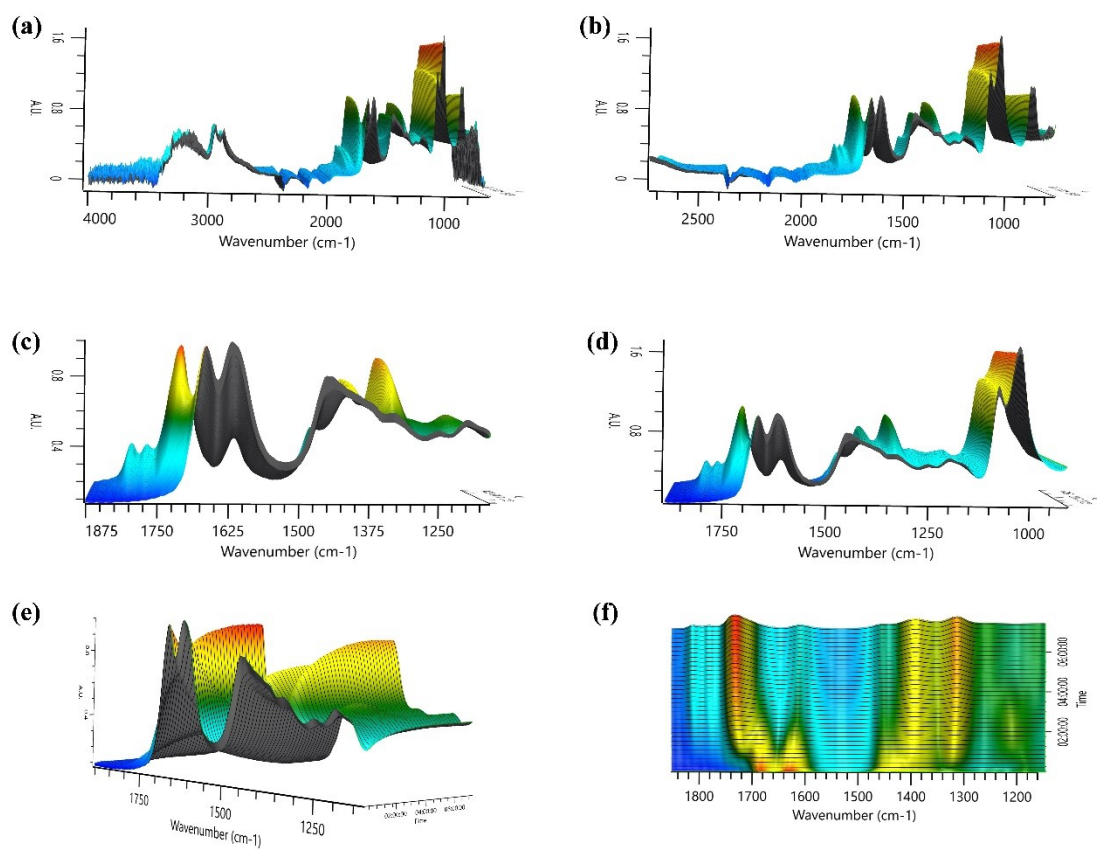


Figure S1 In-situ FT-IR for urea alcoholysis catalyzed by catalyst $[P_{4444}][Br]$.

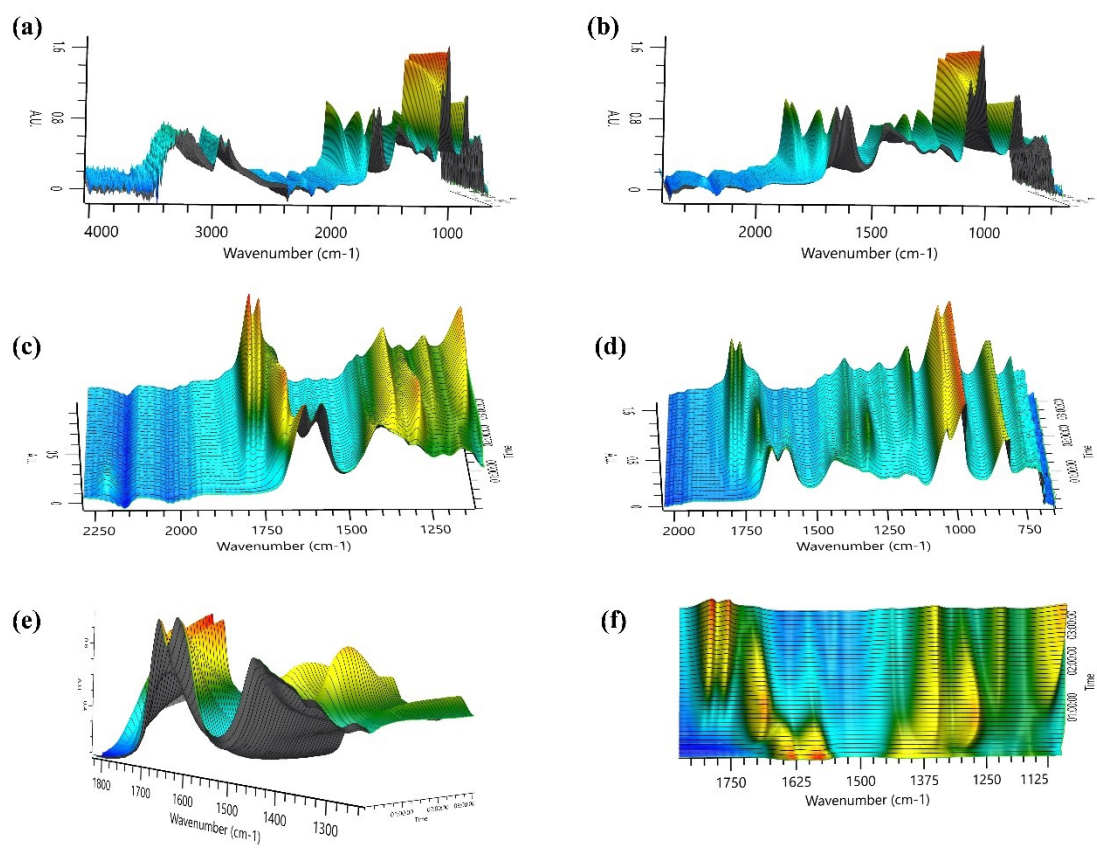


Figure S2 In-situ FT-IR for urea alcoholysis catalyzed by catalyst $ZnBr_2$.

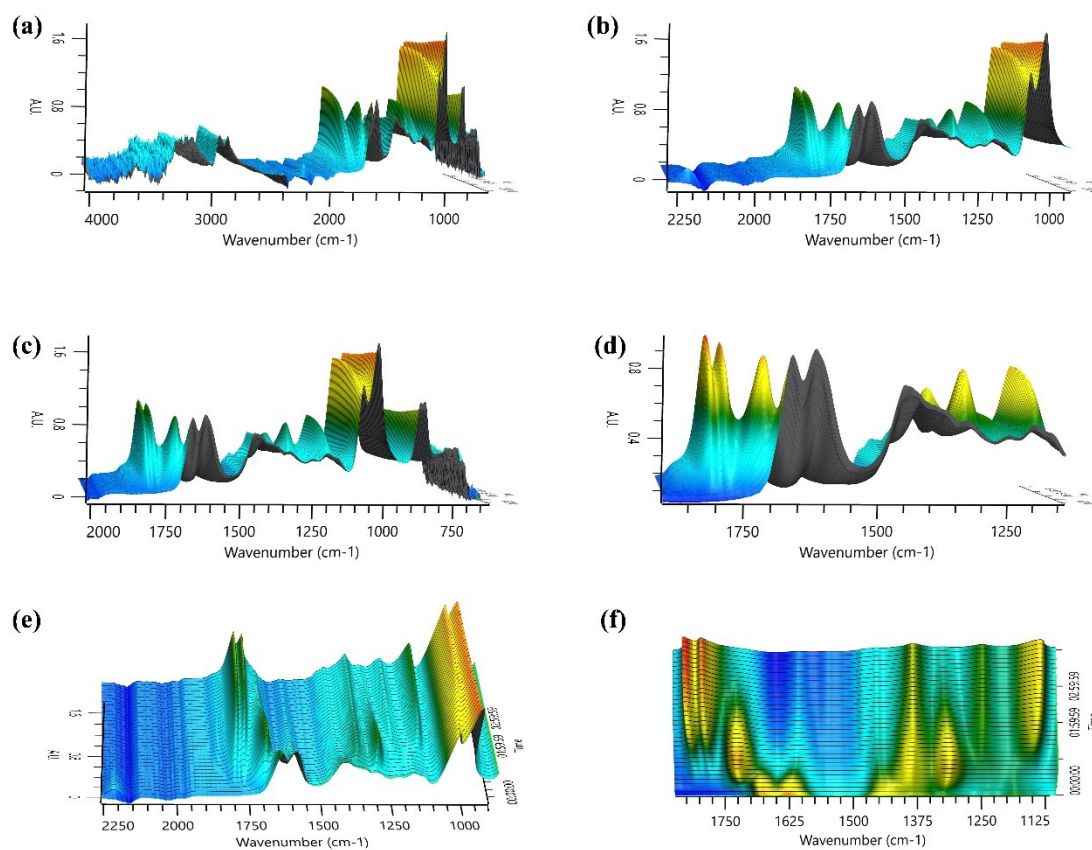


Figure S3 In-situ FT-IR for urea alcoholysis catalyzed by the binary catalyst $[P_{4444}][Br]/ZnBr_2$.

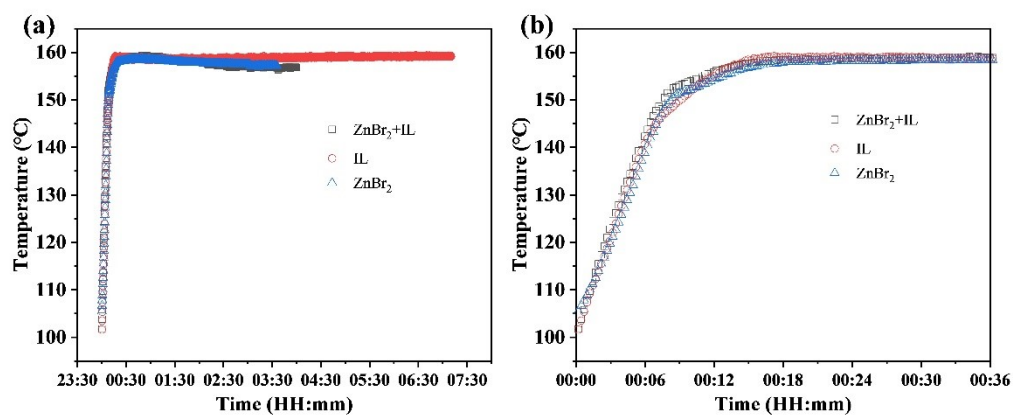


Figure S4 The trend of temperature changes over time during the reaction process.

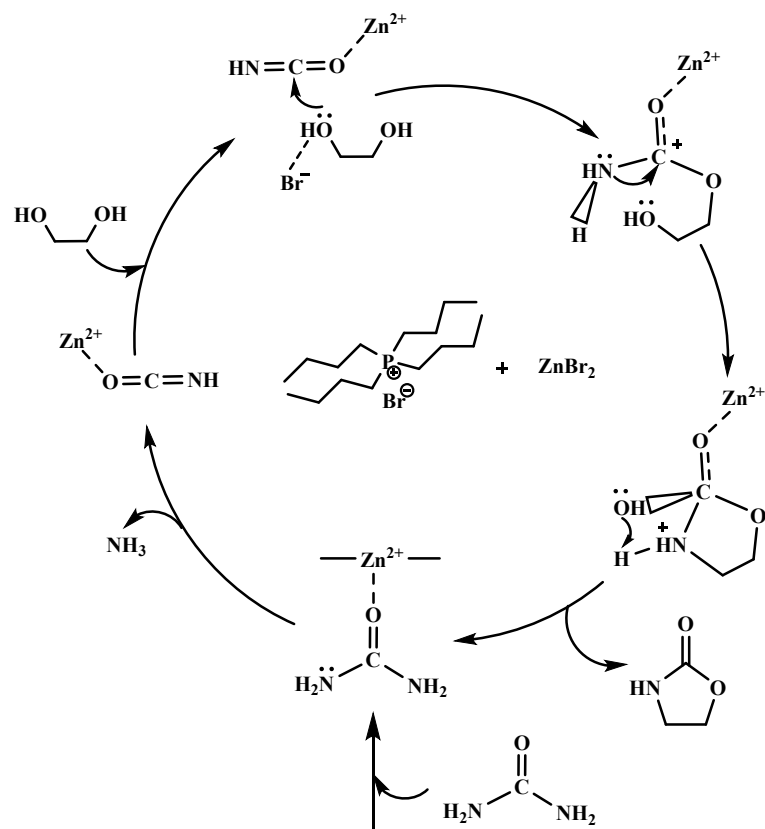


Figure S5 Reaction mechanism for the formation of 2-OX using $[P_{4444}][Br]/ZnBr_2$ as catalyst.