

Supplementary Information:

Indirect use of CO₂: Synthesis of N-substituted dicarbamates via polyurea intermediates over Zn-based metal azolate framework

Peixue Wang,^{a,b,c} Shimin Liu,^{a,c} Xinjiang Cui,^{a,b,c} Yang Wu,^{a,b,c} Feng Shi^{*a,b,c}

General procedure for the reaction of CO₂ and diamines

The reaction was carried out in a stainless-steel autoclave with an inner volume of 90 mL. The standard procedure was as follows: 10 mmol HDA, 3 mL of NMP and 0.1 g 3-amino-1,2,4-triazole potassium (KATriz) were added into the autoclave, and then the reactor was purged with CO₂ three times. After that, the autoclave was charged with 4 MPa CO₂. The reactor was heated to 170 °C and magnetically stirred constantly during the reaction. After the reaction, the products were washed with deionized water, recovered by filtration, thoroughly dried under vacuum and then weighed to determine the isolated yields.

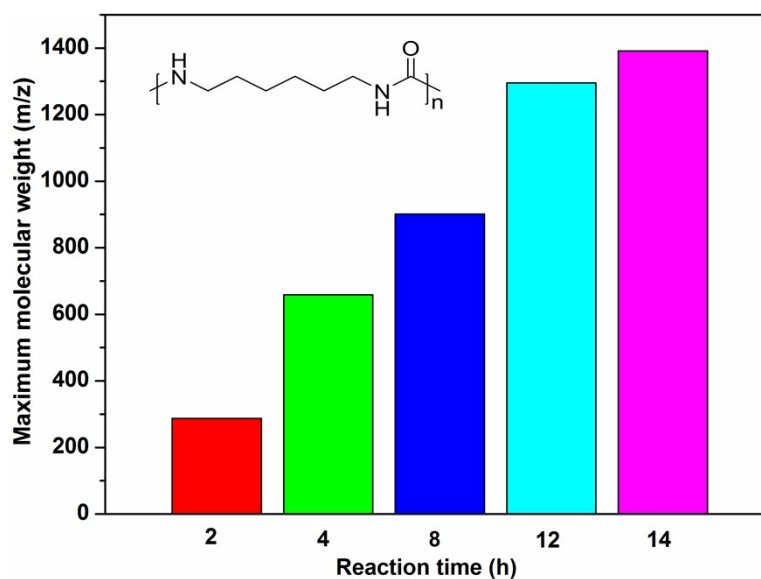
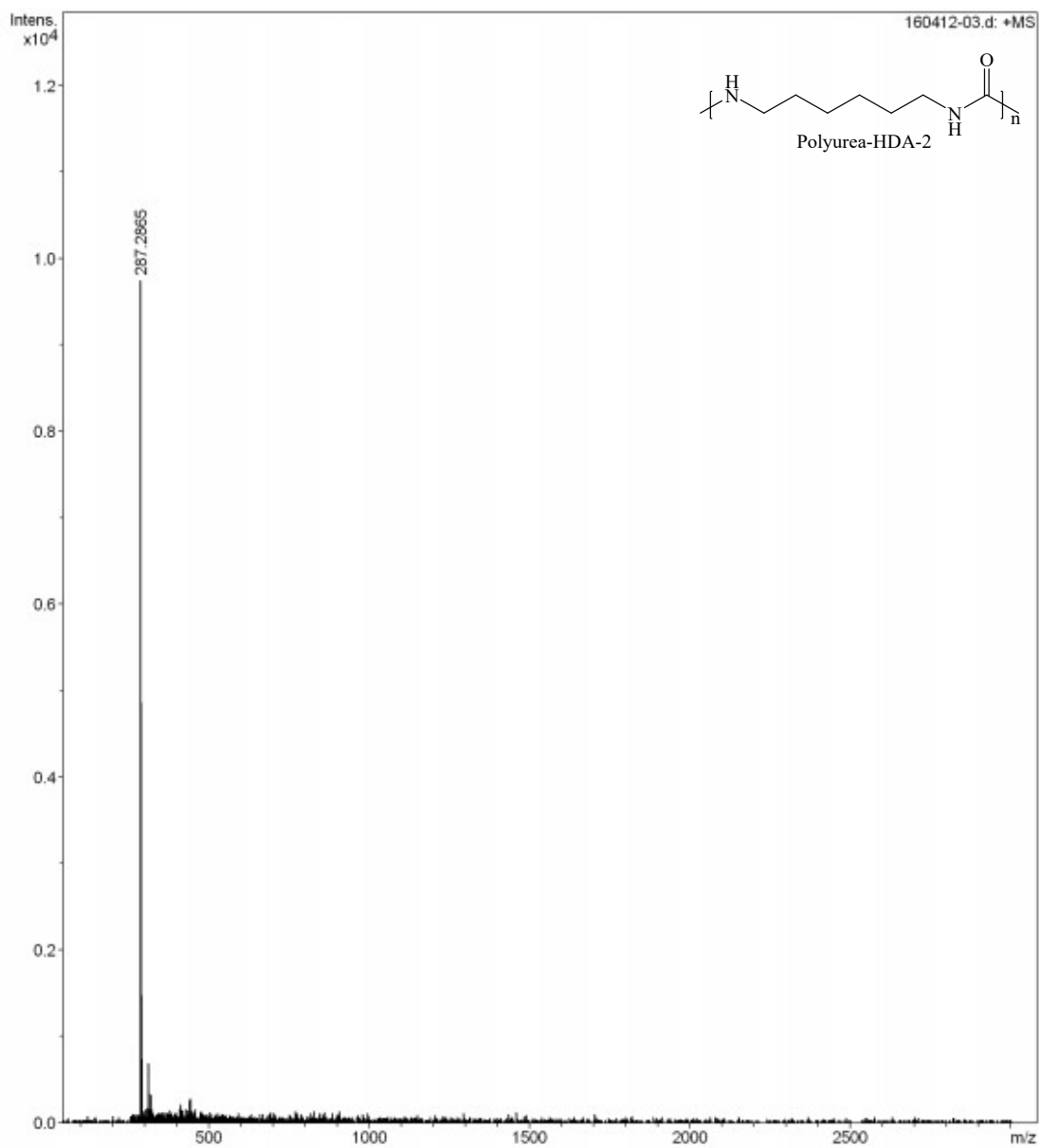
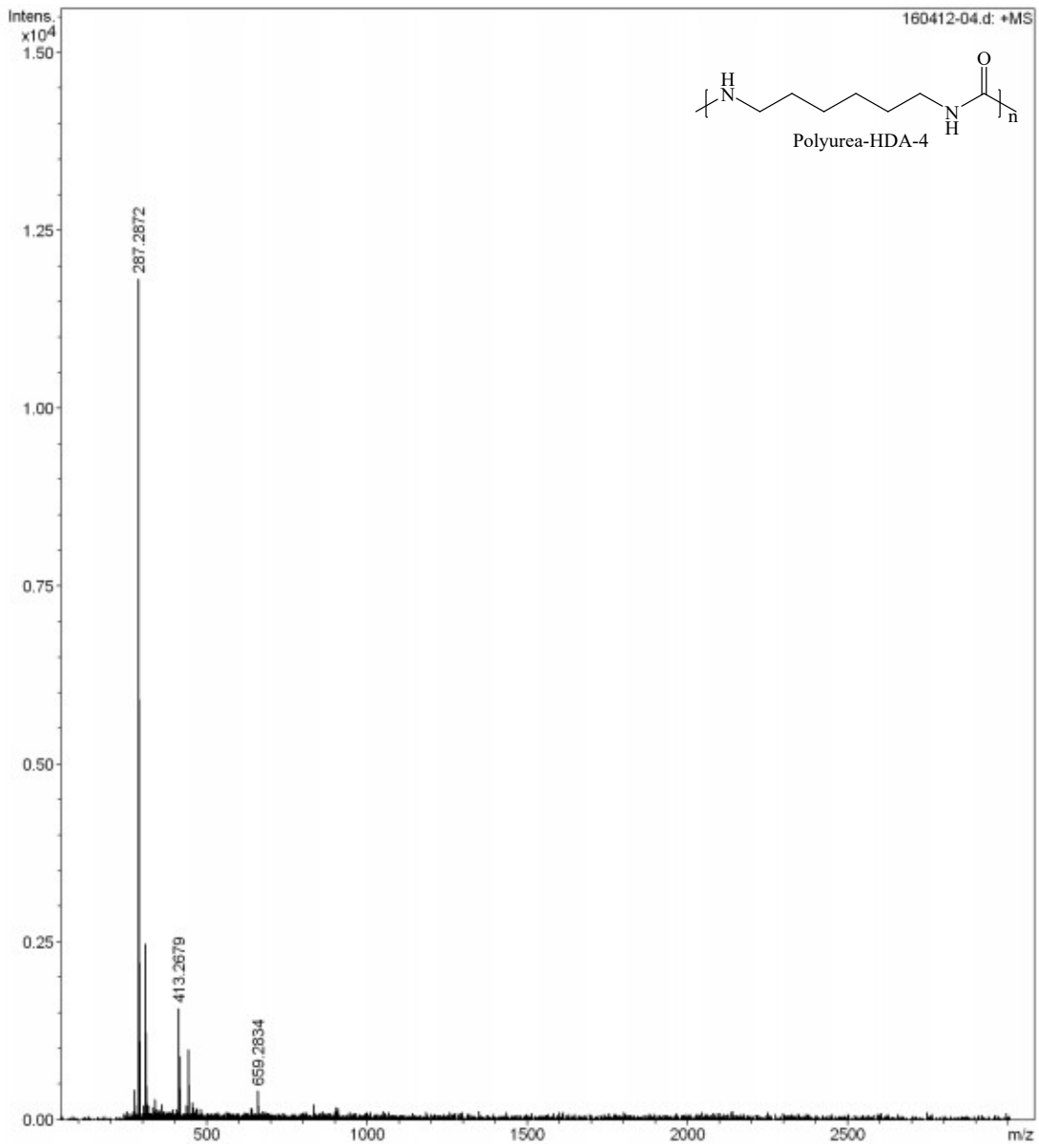
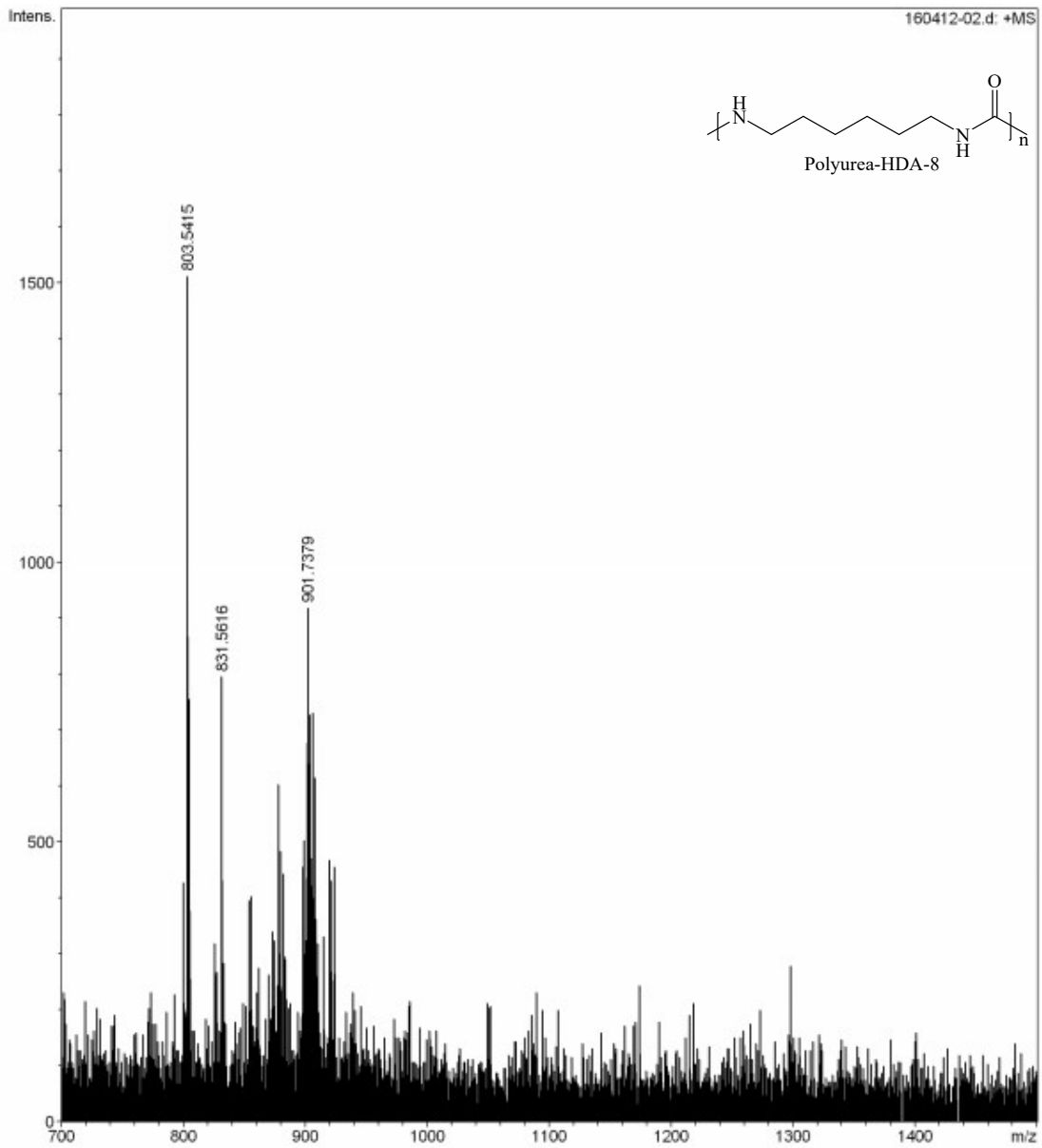
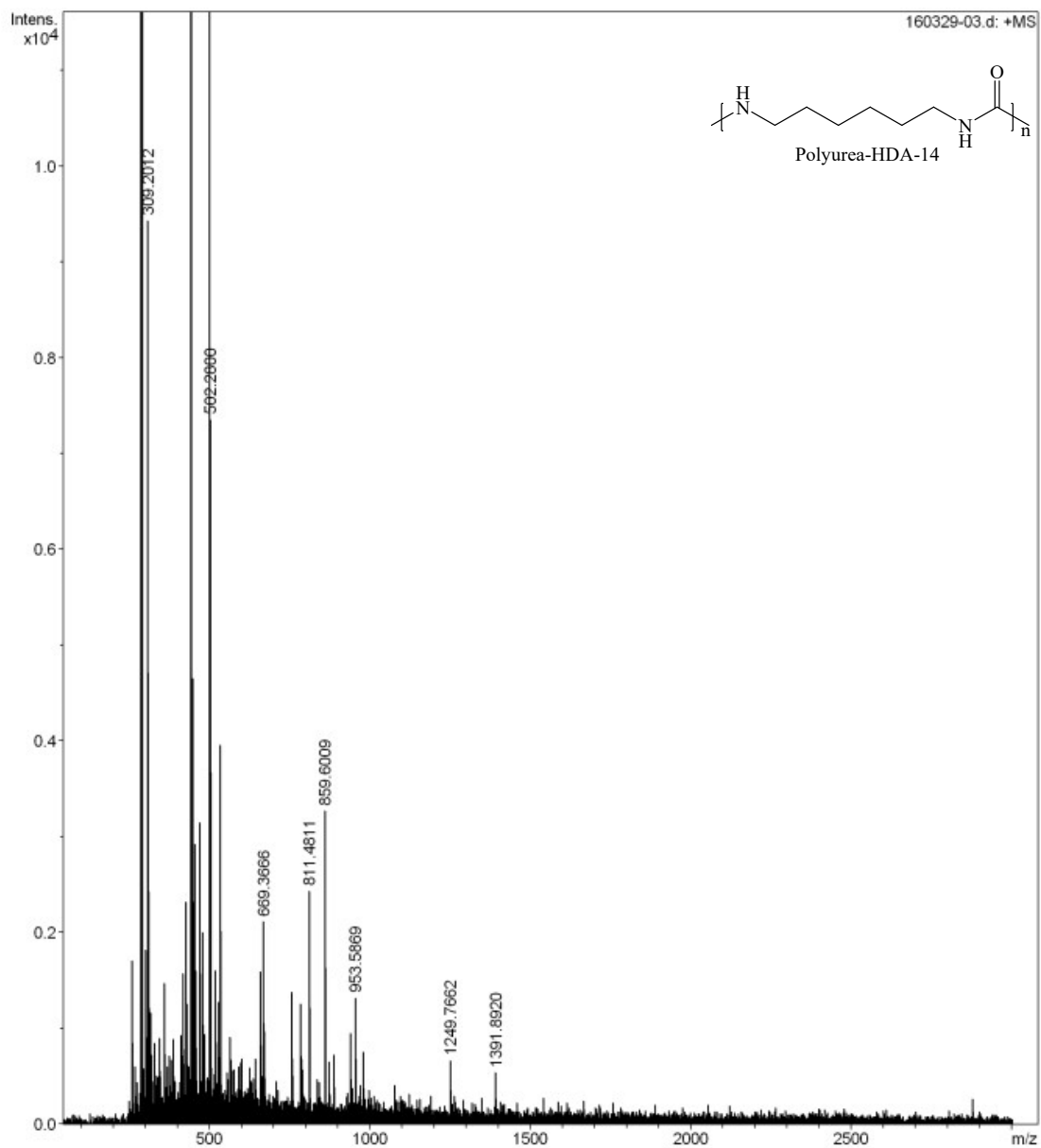


Fig. S1 The relationship of reaction time with the maximum molecular weight.









The HRMS spectra of polyurea-HDA-X (X = 2,4,8,12,16, which represents the reaction time of polyurea-HDA preparation) collected by a Bruker microTOF Q II