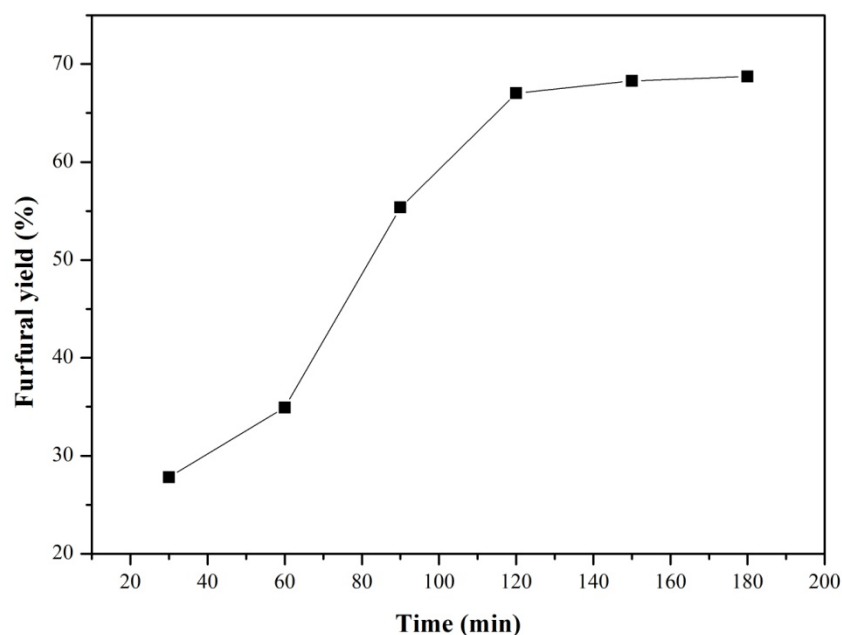


## Supplementary Materials: SO<sub>4</sub><sup>2-</sup>/Sn-MMT Solid Acid Catalyst for Xylose and Xylan Conversion into Furfural in the Biphasic system

### 1. Procedure for the transformation of xylose to furfural used Sn-MMT catalyst

0.2 g xylose and 0.1 g Sn-MMT catalyst were mixed in a hydrothermal reactor, and 8 mL 2-MTHF was added as the organic layer and 10 mL saturated sodium chloride solution as the aqueous layer. The hydrothermal reactor was put in an oven and heated at 160 °C, 120 min. In the reaction analyses, zero time was taken to be when the temperature reached to the desired temperature. After the reaction, the reactor was cooled quickly to room temperature with flowing water. The aqueous phase and the organic phase were separated with a separatory funnel. All the samples were filtered with 0.22 µm syringe filter prior to analysis.

2. Figure S1 Catalytic behavior of SO<sub>4</sub><sup>2-</sup>/Sn-MMT at different reaction time in the absence of NaCl. Reaction condition: 20g/L of xylose, 0.5 g/g substrate of catalyst, volume ratio (organic:aqueous) = 4:5, 160 °C.



3. Table S1 Element analysis of the fresh catalyst and the used catalysts.

Element	Fresh	1	2	3	4	5
S	2.79	2.77	2.73	2.62	2.60	2.51
Sn	11.20	11.17	11.14	11.05	10.83	10.75