

Correction to Kinetics of Homogeneous Brønsted Acid Catalyzed Fructose Dehydration and 5-Hydroxymethyl Furfural Rehydration: A Combined Experimental and Computational Study

T. Dallas Swift, Christina Bagia, Vinit Choudhary, George Peklaris, Vladimiro Nikolakis,* and Dionisios G. Vlachos*

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The estimated parameters reported in the paper are slightly incorrect due to a typo in the Matlab code. This change has very little effect on the model predictions and does not change the findings and conclusions of the paper. To decrease sensitivity of the model to the values of estimated ΔU and ΔS and their temperature dependence, which is unknown, it is suggested that interested readers use the apparent activation energy and pre-exponential factor of fructose dehydration, instead.

Equation 6 and Tables 3 and 4 should read:

$$R_1 = k_1 \phi_f C_{\text{Fru}} \left(\frac{K_{\text{DH}} C_{\text{H}^+}}{C_{\text{H}_2\text{O}}} \right) = k_1^{\text{app}} \phi_f \left(\frac{C_{\text{Fru}} C_{\text{H}^+}}{C_{\text{H}_2\text{O}}} \right) \quad (6)$$

Table 3. Fitted Parameters p_1 and p_2 with Corresponding Pre-exponential^a

reaction ^b	$p_1 = E_a$, kJ/mol	$p_2 = \ln[k(T = 381 \text{ K})/\text{min}]$	$\log_{10}[A_0/\text{min}]$
1	127 ± 2	1.44 ± 0.04	18.1 ± 0.3
2	133 ± 7	-4.22 ± 0.16	16.4 ± 1.1
3	97 ± 1	-3.25 ± 0.02	11.9 ± 0.2
4	64 ± 8	-5.14 ± 0.21	6.6 ± 1.2
5	129 ± 10	-4.92 ± 0.19	15.5 ± 1.5

^aError margins correspond to 95% confidence interval. ^bSee Scheme 3 for reaction numbers.

Table 4. NRMSE for Each Component

component	NRMSE
fructose	86.8%
HMF	84.5%
LA	70.5%
FA	72.3%

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