Reply:

Our article entitled "New Temperature Integral Approximation for Nonisothermal Kinetics"[1] has an error in the expression for Wanjun-Yuwen approximation. I would like to thank Dr. Tang for his pointing out our clerical error and his comments on our article. In his letter, Dr. Tang also gave a shortened Wanjun-Yuwen approximation.

Junmeng Cai and Fang He[2] presented a modification of the Junmeng-Fusheng approximation for the temperature integral. The expressions of modified Junmeng-Fusheng approximation and the corresponding $P(u)$ approximation are given below

$$\int_0^T e^{-(E/RT)}dT = \frac{RT^2}{E}\frac{0.99962E + 0.60642RT}{E + 2.56879RT}e^{-(E/RT)} \quad (1)$$

$$P(u) = \frac{e^{-u}}{u^2}\frac{0.99962u + 0.60642}{u + 2.56879} \quad (2)$$

For a comparison of the accuracy, four approximate formulas as solutions of the temperature integral have been performed. The four approximations are Wanjun-Yuwen approximation[3] and its shortened version,[4] Junmeng-Fusheng approximation and its modification.

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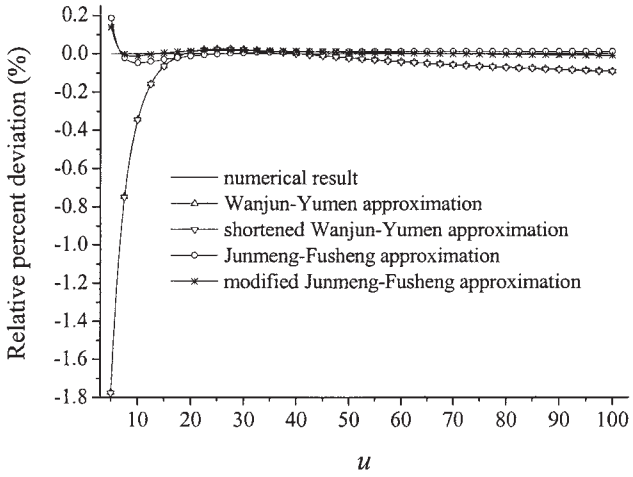

Figure 1. Accuracy of four temperature integral approximations.

The relative percent deviations associated with the use of four approximations as solutions for the temperature integral for a physical realistic domain of u are plotted in Figure 1.

From Figure 1, it is concluded that the accuracy of the modified Junmeng-Fusheng approximation is the highest of the above four approximations in the range of nearly $5 \leq u \leq 100$; the accuracy of Junmeng-Fusheng approximation is the second highest. It is also seen that Wanjun-Yuwen approximation and its shortened version have almost the same precisions as shown in Dr. Tang's letter.

Literature Cited

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4. Wanjun T. Letter to the Editor. *AIChE J*. (in press).

Junmeng Cai
Biomass Energy Engineering Research Center
School of Agriculture and Biology
Shanghai Jiao Tong University
No. 2678 Qixin Road, Shanghai 201101, P.R. China
E-mail: caijunmeng7321@163.com

Fang He
School of Light Industry & Agriculture Engineering,
Shandong University of Science and Technology,
No. 12 Zhangzhou Road, Zibo, Shandong Province 255049, China
E-mail: hf@sdut.edu.cn; hefang_sdut@163.com