

Correction to “Hydrodynamic Modeling of Gas–Solid Bubbling Fluidization Based on Energy-Minimization Multiscale (EMMS) Theory”

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Ind. Eng. Chem. Res. **2014**, *53*, 2800–2810 (DOI: [10.1021/ie4029335](https://doi.org/10.1021/ie4029335))

Page 2805: Equations 15 and 18–21 should read as follows:

$$\beta_e = \frac{\varepsilon^2}{U_{\text{slip}}}(\rho_p - \rho_g)(1 - \varepsilon_e)(1 - f_b)(g + a_p) \quad (15)$$

Bed I ($U_g = 0.2$ m/s)

$$H_d = \begin{cases} 5.51 - 12.20\varepsilon & \varepsilon_{\text{mf}} < \varepsilon \leq 0.45 \\ -0.42 + 2.47\varepsilon - 5.10\varepsilon^2 + 4.02\varepsilon^3 & 0.45 < \varepsilon \leq 0.935 \\ 1.0 & 0.935 < \varepsilon < 1.0 \end{cases} \quad (18)$$

Bed I ($U_g = 0.4$ m/s)

$$H_d = \begin{cases} 5.57 - 12.36\varepsilon & \varepsilon_{\text{mf}} < \varepsilon \leq 0.45 \\ 0.0023 - 0.022\varepsilon + 0.088\varepsilon^2 & 0.45 < \varepsilon \leq 0.975 \\ -0.21\varepsilon^3 + 0.38\varepsilon^4 + 0.20\varepsilon^5 & 0.975 < \varepsilon < 1.0 \\ 1.0 & \end{cases} \quad (19)$$

Bed II ($U_g = 0.38$ m/s)

$$H_d = \begin{cases} 12.75 - 48.93\varepsilon + 48.71\varepsilon^2 & \varepsilon_{\text{mf}} < \varepsilon \leq 0.610 \\ 1.0 & 0.610 < \varepsilon < 1.0 \end{cases} \quad (20)$$

Bed II ($U_g = 0.46$ m/s)

$$H_d = \begin{cases} 10.88 - 40.63\varepsilon + 39.40\varepsilon^2 & \varepsilon_{\text{mf}} < \varepsilon \leq 0.645 \\ 1.0 & 0.645 < \varepsilon < 1.0 \end{cases} \quad (21)$$

The above corrections have negligible effect on the simulation results for Bed I, but give better prediction of radial solid concentration profile in Bed II. Therefore, Figure 11, as printed on page 2808, is modified as follows:

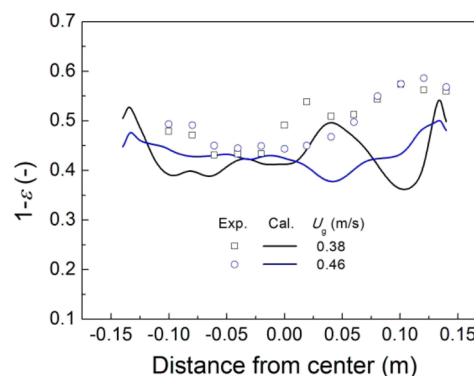


Figure 11. Comparison between the simulation and experimental radial distribution of solid volume fraction at $z = 0.2$ m for bed II.