Journal of Catalysis 273 (2010) 82

Contents lists available at ScienceDirect

Journal of Catalysis

journal homepage: www.elsevier.com/locate/jcat

Corrigendum

Corrigendum to "Applying spatially resolved concentration and temperature measurements in a catalytic plate reactor for the kinetic study of CO methanation" [J. Catal. 271 (2010) 262–279]

Jan Kopyscinski, Tilman J. Schildhauer *, Frédéric Vogel, Serge M.A. Biollaz, Alexander Wokaun

General Energy Research Department, Paul Scherrer Institute, CH-5232 Villigen PSI, Switzerland

The authors have detected some errors in this article that should be corrected. The errors detected are described below:

1. Due to a typing error, the square root of the CO partial pressure in the adsorption term of the Langmuir–Hinshelwood rate expressions is missing in Eqs. (25) and (26). In Table 5, the corresponding exponent (e) for model 12 is correctly given as 0.5.

   The corrected equations are shown below:

$$r_1 = \frac{k_1 \cdot K_C \cdot p_{CO}^{0.5} \cdot p_{H_2}^{0.5}}{\left(1 + K_C \cdot p_{CO}^{0.5} + K_{OH} \cdot p_{H_2O} \cdot p_{H_2}^{-0.5}\right)^2} \tag{25}$$

$$r_2 = \frac{k_2 \cdot \left(K_\alpha \cdot p_{CO} \cdot p_{H_2O} - \frac{p_{CO_2} \cdot p_{H_2}}{K_{eq}}\right)}{p_{H_2}^{0.5} \cdot \left(1 + K_C \cdot p_{CO}^{0.5} + K_{OH} \cdot p_{H_2O} \cdot p_{H_2}^{-0.5}\right)^2} \tag{26}$$

2. The unit for the correlation of the Knudsen diffusion coefficient in Eq. (43) is given in cm^2/s. In Eq. (43), the pore diameter d_{pore} is defined in cm, the molar weight M_i is defined in g/mol, and the temperature T_{cat} is defined in K. Thus, the units in the Nomenclature (m^2/s for the Knudsen diffusion coefficient and m for the pore diameter) need to be changed accordingly.

DOI of original article: 10.1016/j.jcat.2010.02.008
* Corresponding author.
E-mail address: tilman.schildhauer@psi.ch (T.J. Schildhauer).

0021-9517/$ - see front matter
doi:10.1016/j.jcat.2010.05.001