## Letters to the Editor

## Comments on "Synthesis and Adsorption of Ni(II) on Ni(II)-Imprinted Polyaniline Supported on Attapulgite Modified with 3-Methacryloxypropyltrimethoxysilane"

Yuh-Shan Ho\* Water Research Centre, Asia University, Taichung 41354, Taiwan.

## Dear Editor,

Recently, Xu *et al.* (2013) published the paper entitled "Synthesis and adsorption of Ni(II) on Ni(II)-imprinted polyaniline supported on attapulgite modified with 3-methacryloxypropyltrimeth oxysilane." In the "Adsorption Kinetics Models" section of the original paper, the authors had mentioned that "The formulas of the two kinetic models (the pseudo-first-order and pseudo-second-order kinetic models) are given as follows:" and cited a secondary material (Radeva *et al.* 2008) as a reference. However, there is nothing about pseudo-first-order and pseudo-second-order kinetic models in the cited reference Radeva *et al.* (2008). This is a quotation error. In addition, the correct volume of the reference Radeva *et al.* (2008) is '26' not '7' as mentioned in the original paper, which is a citation error. It is worth stating that "Citing the original paper not only respects the work of the authors who presented a novel research idea but also discussed this idea in detail in the body of their paper" (Ho 2010). In addition, typical isotherms such as BET (Brunauer *et al.* 1938), Langmuir (1918) and Freundlich (1906) all witnessed increased trends in citations especially in the last two decades (Fu and Ho 2014; Ho and Kahn 2014).

In the case of pseudo-second-order kinetic model, the authors presented a linear form as follows:

$$\frac{t}{q_{t}} = \frac{1}{k_{2}q_{e}^{2}} + \frac{1}{q_{e}}$$
(10)

Equation (10) in the original paper is incorrect. The pseudo-second-order kinetic expression for the adsorption systems of divalent metal ions using sphagnum moss peat has been presented by

Ho in 1995. The pseudo-second-order kinetic model has a non-linear form  $q_t = \frac{q_e^2 kt}{1 + q_e kt}$  and the following four linear forms:

$$\frac{t}{q_t} = \frac{1}{kq_e^2} + \frac{t}{q_e}, \frac{1}{q_t} = \left(\frac{1}{kq_e^2}\right) \frac{1}{t} + \frac{1}{q_e}, q_t = q_e - \left(\frac{1}{kq_e}\right) \frac{q_t}{t}, \text{ and } \frac{q_t}{t} = kq_e^2 - kq_eq_t$$

(Ho 2006b). The model has also been widely used for describing a number of adsorption systems in subsequent years (Ho 2005). Furthermore, an article entitled "Pseudo-second order model for sorption processes" by Ho and McKay (1999) has ranked number one in annual citations in the Web of Science category of 'Chemical Engineering' since 2008 (Ho 2012). A review of second-order models for adsorption systems gave more details (Ho 2006b).

Plagiarism is defined as "Duplication of previously published text or figures in the scientific literature without adequate citation is plagiarism or, in the case of an author's own work, self-plagiarism" (Noé and Batten, 2006). In my view, Xu *et al.* should have cited the original paper for the pseudo-first- and pseudo-second-order kinetic models, which would have provided greater accuracy and additional information about the kinetic expression they used.

<sup>\*</sup>Author to whom all correspondence should be addressed: ysho@asia.edu.tw (Y.-S. Ho).

## REFERENCES

Brunauer, S., Emmett, P.H. and Teller, E. (1938) J. Am. Chem. Soc. 60, 309.

- Freundlich, H.M.F. (1906) Z. Phys. Chem. 57A, 385.
- Fu, H.Z. and Ho, Y.S. (2014) Res. Eval. 23, 12.
- Ho, Y.S. (1995) "Adsorption of Heavy Metals from Waste Streams by Peat," Ph.D. thesis, University of Birmingham, Birmingham, UK.
- Ho, Y.S. (2005) J. Colloid Interface Sci. 283, 274.
- Ho, Y.S. (2006a) Water Res. 40, 119.
- Ho, Y.S. (2006b) J. Hazard. Mater. 136, 681.
- Ho, Y.S. (2010) Adsorpt. Sci. Technol. 28, 465.
- Ho, Y.S. (2012) Chin. J. Chem. Eng. 20, 478.
- Ho, Y.S. and Kahn, M. (2014) J. Assoc. Inf. Sci. Technol. 65, 372.
- Ho, Y.S. and McKay, G. (1999) Process Biochem. 34, 451.
- Langmuir, I. (1918) J. Am. Chem. Soc. 40, 1361.
- Noé, L.F. and Batten, D.J. (2006) Palaeontology 49, 1365.
- Radeva, G., Veleva, S. and Valcheva, E. (2008) Adsorpt. Sci. Technol. 26, 515.
- Xu, H., Tang, J., Tan, L., Wang, W., Lu, H.L. and Guo, D.H. (2013) Adsorpt. Sci. Technol. 31, 521.