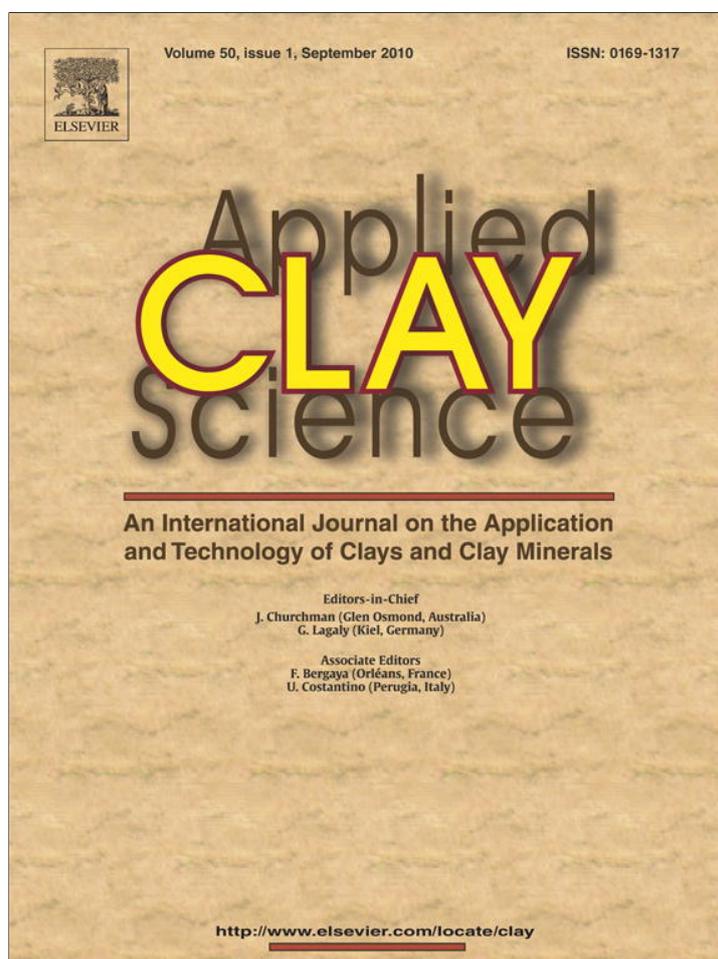


Provided for non-commercial research and education use.
Not for reproduction, distribution or commercial use.



This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier's archiving and manuscript policies are encouraged to visit:

<http://www.elsevier.com/copyright>



Contents lists available at ScienceDirect

Applied Clay Science

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

Comment on “Acid Green 25 removal from wastewater by organo-bentonite from Pacitan” by R. Koswojo, R. P. Utomo, Y.-H. Ju, A. Ayucitra, F. E. Soetaredjo, J. Sunarso, S. Ismadji [Applied Clay Science 48 (2010) 81-86]

Yuh-Shan Ho *

Department of Environmental Sciences, Peking University, Beijing, 100871, People's Republic of China

ARTICLE INFO

Article history:

Received 14 April 2010

Accepted 14 April 2010

Available online 24 April 2010

Recently, Koswojo et al. (2010) published the paper entitled “Acid Green 25 removal from wastewater by organo-bentonite from Pacitan”. In Section 3.3.2. “Adsorption kinetics”, the authors presented the pseudo-first and second-order kinetic models without any citations. The same situation happened in the previous publications of Ismadji et al. (Chandra et al., 2007; Lesmana et al., 2009; Febrianto et al., 2009). Lagergren's kinetics equation has been most widely used for the adsorption of an adsorbate from an aqueous solution, and citation review of Lagergren's kinetic rate equation on adsorption reactions has also been reported (Ho, 2004). The correct reference citing the original Lagergren paper was first presented by Ho and McKay in 1998: “S. Lagergren, zur theorie der sogenannten adsorption gelöster stoffe, Kungliga Svenska Vetenskapsakademiens, Handlingar, Band 24, No. 4, (1898), 1–39.” Its English translation is “S. Lagergren, about the theory of so-called adsorption of soluble substances, Kungliga Svenska Vetenskapsakademiens, Handlingar, Band 24, No. 4, (1898), 1–39” (Ho and McKay, 1998), and the abbreviation style is “S. Lagergren, zur theorie der sogenannten adsorption gelöster stoffe, K. Sven, Vetenskapsakad. Handl., Band 24, No. 4, (1898), 1–39.” In order to distinguish the kinetics equation based on the adsorption capacity of solid from the concentration of solution, Lagergren's first-order rate equation has been called pseudo-first-order since 1998 (Ho and McKay, 1998). In the case of the pseudo-second order model, two most suggested papers for pseudo-second order kinetic model were published in 1984 and 1995 by Blanchard et al. (1984) and Ho (1995, 2006), respectively. Blanchard et al. noted the overall exchange reaction of NH_4^+ ions fixed in zeolite by divalent metallic ions in the solution using a second-order kinetic model. Ho used the pseudo-second order kinetic model to the copper ion/peat adsorption system. The adsorption involved not only cation exchange but also chemical bonding.

Plagiarism is identified when the authors of a scientific publication duplicate previously published idea, text, equations, or figures in the scientific literature without any citations (Noè and Batten, 2006). I suggest that the authors cite the original paper for the pseudo-first and second-order kinetic models to have more accuracy and information about the expression.

References

- Blanchard, G., Maunaye, M., Martin, G., 1984. Removal of heavy metals from waters by means of natural zeolites. *Water Research* 18, 1501–1507.
- Chandra, T.C., Mirna, M.M., Sudaryanto, Y., Ismadji, S., 2007. Adsorption of basic dye onto activated carbon prepared from durian shell: studies of adsorption equilibrium and kinetics. *Chemical Engineering Journal* 127, 121–129.
- Febrianto, J., Kosasih, A.N., Sunarso, J., Ju, Y.H., Indraswati, N., Ismadji, S., 2009. Equilibrium and kinetic studies in adsorption of heavy metals using biosorbent: a summary of recent studies. *Journal of Hazardous Materials* 162, 616–645.
- Ho, Y.S., 1995. Adsorption of heavy metals from waste streams by peat. Ph.D. Thesis, The University of Birmingham, Birmingham, U.K.
- Ho, Y.S., 2004. Citation review of Lagergren kinetic rate equation on adsorption reactions. *Scientometrics* 59, 171–177.
- Ho, Y.S., 2006. Review of second-order models for adsorption systems. *Journal of Hazardous Materials* 136, 681–689.
- Ho, Y.S., McKay, G., 1998. Sorption of dye from aqueous solution by peat. *Chemical Engineering Journal* 70, 115–124.
- Koswojo, R., Utomo, R.P., Ju, Y.H., Ayucitra, A., Soetaredjo, F.E., Sunarso, J., Ismadji, S., 2010. Acid Green 25 removal from wastewater by organo-bentonite from Pacitan. *Applied Clay Science* 48, 81–86.
- Lesmana, S.O., Febriana, N., Soetaredjo, F.E., Sunarso, J., Ismadji, S., 2009. Studies on potential applications of biomass for the separation of heavy metals from water and wastewater. *Biochemical Engineering Journal* 44, 19–41.
- Noè, L.F., Batten, D.J., 2006. ‘Publish or perish’: the pitfalls of duplicate publication. *Palaeontology* 49, 1365–1367.

DOI of original article: [10.1016/j.clay.2009.11.023](https://doi.org/10.1016/j.clay.2009.11.023).

* Tel.: +86 10 62751923; fax: +86 10 62751923.

E-mail address: dr_ysho@hotmail.com.