

Comments on “Adsorption behavior of heavy metal ions by carbon nanotubes grown on microsized Al₂O₃ particles”

Yuh-Shan Ho

Department of Environmental Sciences, College of Environmental Science and Engineering, Peking University, Beijing 100871, China
(Received 2007-03-26)

Recently, Hsieh and Horng [1] published the paper entitled as above. In section 3—results and discussion, the authors mentioned the first and the second order kinetic models without any quotations. In fact these two kinetic models have been published [2-5]. In order to distinguish a kinetics model based on the adsorption capacity of a solid from the one based on the concentration of a solution, Lagergren's first-order rate equation has been called pseudo-first-order [6-7]. The Lagergren's equation has been widely cited, but there are far more mistakes made in the quotation and in the reference section of papers, including the title, the author's name, journal title, year of publishing, volume, and page number [3]. In addition, the second order kinetic expression for the adsorption systems of divalent metal ions using sphagnum moss peat has been reported by Ho [8]. To distinguish the kinetic model based on the adsorption capacity of a solid from the concentration of the solution, the second-order rate expression has been named pseudo-second-order [4-8]. The pseudo-second-order rate expression has been widely applied to the sorption of metal ions, dyes, herbicides, oil, pesticide, and organic substances from aqueous solutions [5, 9].

Accuracy in referencing is important for the transmission of scientific knowledge. Poor referencing reflects on the article, the authors, and the journal itself. Greater emphasis and responsibility must be placed on authors to check the accuracy of cited references in their submitted manuscripts [10]. Reviewers should also take the responsibility for this section of the manuscript. Finally the journal editors have to insist on reference accuracy in articles accepted for publication [11]. I suggest that Hsieh and Horng cite the original or the most cited papers for both kinetic mod-

els to have more accuracy and information of kinetic expression.

References

- [1] S.H. Hsieh and J.J. Horng, Adsorption behavior of heavy metal ions by carbon nanotubes grown on microsized Al₂O₃ particles, *J. Univ. Sci. Technol. Beijing*, 14(2007), No.1, p.77.
- [2] S. Lagergren, Zur theorie der sogenannten adsorption gelöster stoffe, *Kungliga Svenska Vetenskapsakademiens, Handlingar*, Band24(1898), No.4, p.1.
- [3] Y.S. Ho, Citation review of Lagergren kinetic rate equation on adsorption reactions, *Scientometrics*, 59(2004), No.1, p.171.
- [4] Y.S. Ho and G. McKay, The kinetics of sorption of divalent metal ions onto sphagnum moss peat, *Water Res.*, 34(2000), No.3, p.735.
- [5] Y.S. Ho, Review of second-order models for adsorption systems, *J. Hazard. Mater.*, 136(2006), No.3, p.681.
- [6] Y.S. Ho and G. McKay, Kinetic models for the sorption of dye from aqueous solution by wood, *Process Saf. Environ. Protect.*, 76(1998), No.B2, p.183.
- [7] Y.S. Ho and G. McKay, Sorption of dye from aqueous solution by peat, *Chem. Eng. J.*, 70(1998), No.2, p.115.
- [8] Y.S. Ho, *Adsorption of Heavy Metals from Waste Streams by Peat* [Dissertation], University of Birmingham, UK, 1995.
- [9] Y.S. Ho, Comment on “Arsenic removal using mesoporous alumina prepared via a templating method”, *Environ. Sci. Technol.*, 38(2004), No.11, p.3214.
- [10] R. Siebers, The accuracy of references of three allergy journals, *J. Allergy Clin. Immunol.*, 105(2000), No.4, p.837.
- [11] P.M. George and K. Robbins, Reference accuracy in the dermatological literature, *J. Am. Acad. Dermatol.*, 31(1994), No.1, p.61.