

## Comments on “Collagen-Fiber-Immobilized Tannins and Their Adsorption of Au(III)”

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*Sir:* Recently, Liao et al.<sup>1</sup> published the paper entitled as above. In section 3.5, Adsorption Kinetics of Au(III) on Immobilized Tannins, a pseudo-second-order rate model (eqs 4 and 5) was used to describe sorption of Au(III) by collagen-fiber-immobilized tannins. In fact, the second-order kinetic expression for the adsorption systems of divalent metal ions using sphagnum moss peat has been reported by Ho.<sup>2</sup> To distinguish the kinetic equation based on the adsorption capacity of a solid from the concentration of the solution, Ho's second-order rate expression has been named pseudo-second-order.<sup>2-9</sup> The earlier application of the pseudo-second-order equation to the kinetic studies of competitive heavy-metal adsorption by sphagnum moss peat was undertaken by Ho et al.<sup>3</sup> In addition, a modified pseudo-second-order kinetic expression was reported in 1997<sup>4</sup> and has also been presented in the following years.<sup>5-9</sup> The pseudo-second-order rate expression of Ho has been widely applied to the sorption of metal ions, dyes, herbicides, and oil and organic substances from aqueous solutions.<sup>8,9</sup>

I suggest that Liao et al. cite Ho's original pseudo-second-order kinetic expression paper or relevant works.

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