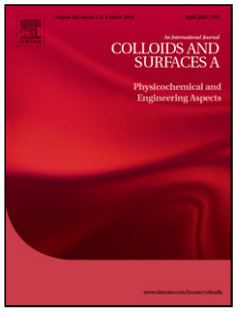

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Author: Annette Okupnik Valeska Contardo-Jara Stephan Pflugmacher

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Potential role of engineered nanoparticles as contaminant carriers in aquatic ecosystems: Estimating sorption processes of the cyanobacterial toxin microcystin-LR by TiO_2 nanoparticles

Annette Okupnik, Valeska Contardo-Jara, Stephan Pflugmacher*

Technische Universität Berlin, Department of Ecotoxicological Impact Research and Ecotoxicology, Ernst-Reuter-Platz 1, 10587 Berlin, Germany

*** Corresponding author**

Prof. Dr. Stephan Pflugmacher
Technische Universität Berlin
Institute of Ecology
Department Ecological Impact Research and Ecotoxicology

+49-30-314-29023 (phone)
+49-30-314-29022 (fax)

stephan.pflugmacher@tu-berlin.de

Keywords: microcystin-LR; titanium dioxide nanoparticle; adsorption; kinetics; adsorbent dosage; particle size

Abbreviations

<xps:span class=deft>C_0</xps:span> <xps:span class=defd>initial concentration of adsorbate (µg/L)</xps:span>

<xps:span class=deft>C_e</xps:span> <xps:span class=defd>equilibrium liquid-phase of adsorbate (µg/L)</xps:span>

<xps:span class=deft>V </xps:span> <xps:span class=defd>solution volume (L)</xps:span>

<xps:span class=deft>m</xps:span> <xps:span class=defd>mass of adsorbent (g)</xps:span>

<xps:span class=deft>q_e </xps:span> <xps:span class=defd>adsorption capacity at equilibrium (µg/g)</xps:span>

<xps:span class=deft>q_t</xps:span> <xps:span class=defd>adsorption capacity at time *t* (µg/g)</xps:span>

<xps:span class=deft>k_1</xps:span> <xps:span class=defd>first-order rate constant of pseudo-first-order equation (h^{-1})</xps:span>

<xps:span class=deft>k_2 </xps:span> <xps:span class=defd>second-order rate constant of pseudo-second-order equation (g/µg h)</xps:span>