Supporting information for

A Novel $Mg(OH)_2$ Binding Layer-based DGT Technique for Measuring Phosphorus in Waters and Sediment

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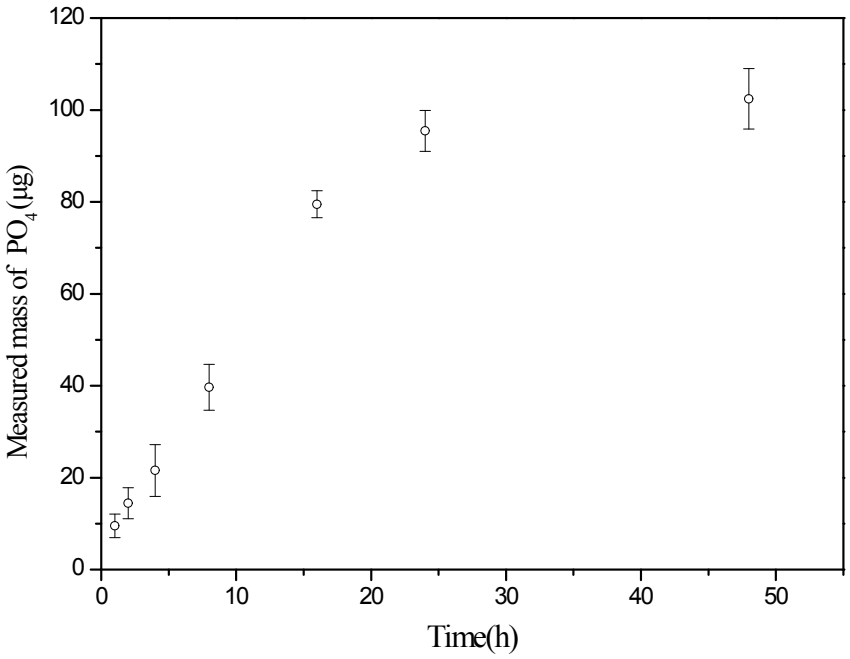
Captions

Fig. S1. Mass of PO_4 accumulated by $Mg(OH)_2$ binding gel with time in well-stirred solution containing 20mg P L^{-1} at pH 7, ionic strength = 0.03 mol L^{-1} and T = 25 °C.

Fig. S2. Mass of PO_4 accumulated by $Mg(OH)_2$ binding gel with pH in well-stirred solution containing 20 mg P L^{-1} at time = 4 h, ionic strength = 0.03 mol L^{-1} and T = 25 °C.

Fig. S3. The ratio of C_{DGT} (i.e. the concentrations of PO_4 determined by the Mg(OH)2-DGT) to C_{soln} (i.e. the concentration of PO_4 measured directly in solution by the molybdenum-blue method) at different pH levels in well-stirred solution containing 2 mgP L^{-1} at time = 4 h, ionic strength = 0.03 mol L^{-1} and T = 25 °C. The vertical axis represents the ratio of DGT-measured concentration of P (C_{DGT}) to P concentration in well-stirred solution (Csoln), with the line showing the value at 1.0.

Fig. S4. The ratio of C_{DGT} (i.e. PO_4 concentration calculated through the results from $Mg(OH)_2$-DGT) to C_{solu} (i.e. PO_4 concentration measured in solution) at different ionic strengths in well-stirred solution containing 2 mg P L^{-1} at time = 4 h, T = 25 °C, pH =7. The vertical axis represents the ratio of DGT-measured concentration of P (C_{DGT}) to P concentration in well-stirred solution (Csoln), with the line showing the value at 1.0.



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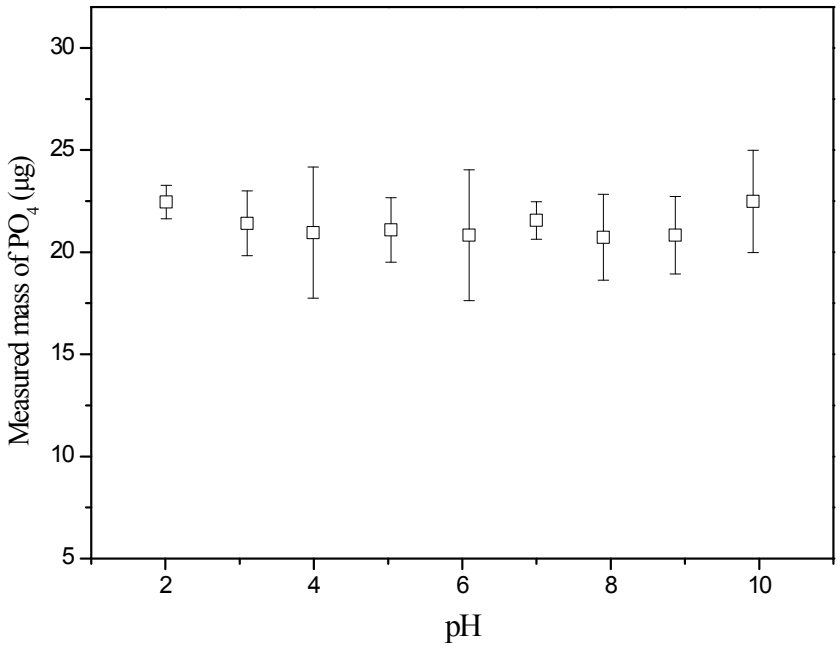
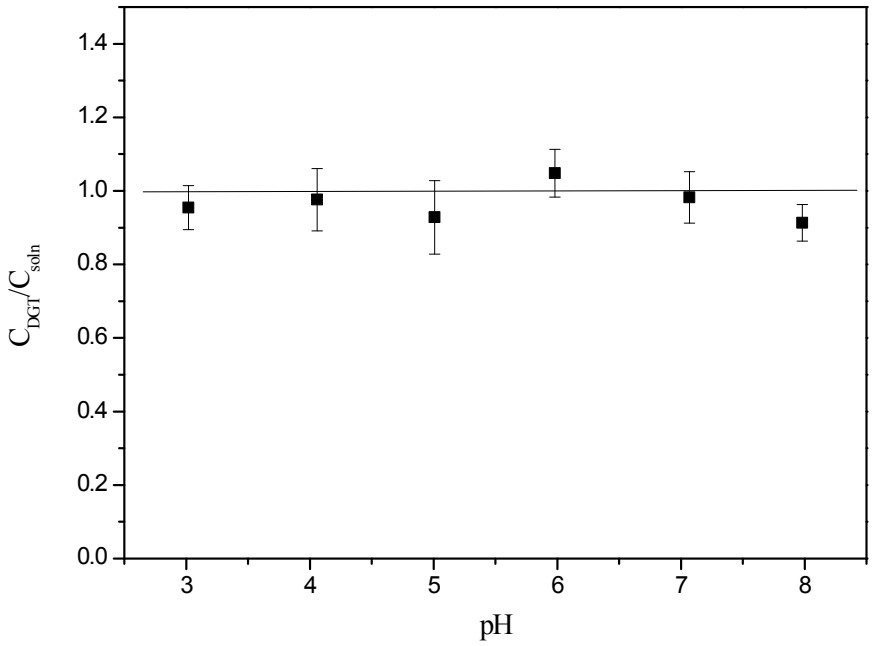


Fig. S2. Mass of PO_4 accumulated by $Mg(OH)_2$ binding gel with pH in well-stirred solution containing 20 mg P L^{-1} at time = 4 h, ionic strength = 0.03 mol L^{-1} and T = 25 °C.



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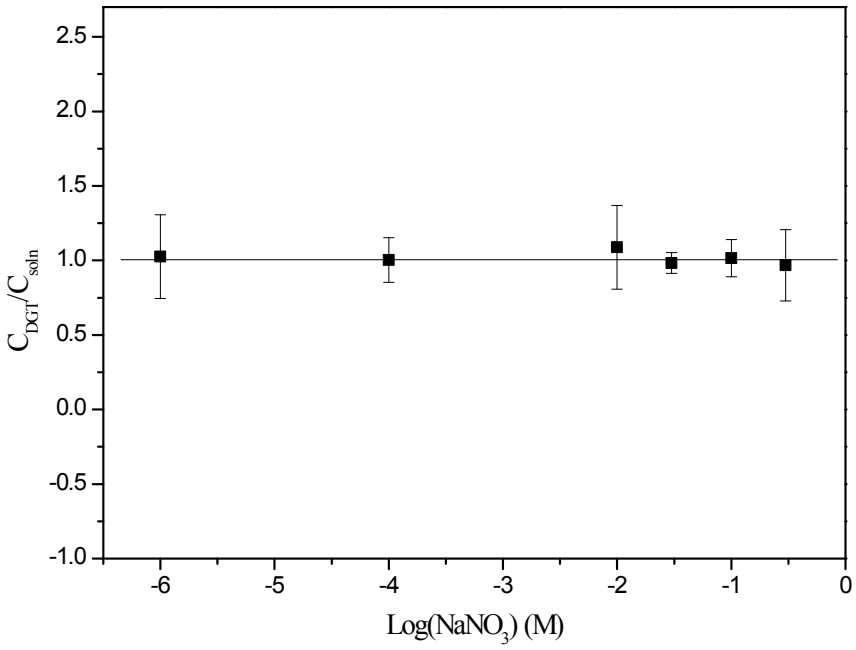

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