

Supplementary information for

Solid-state chemiresistors from two-dimensional MoS₂ nanosheets functionalized with L-cysteine for in-line sensing of part-per-billion Cd²⁺ ions in drinking water

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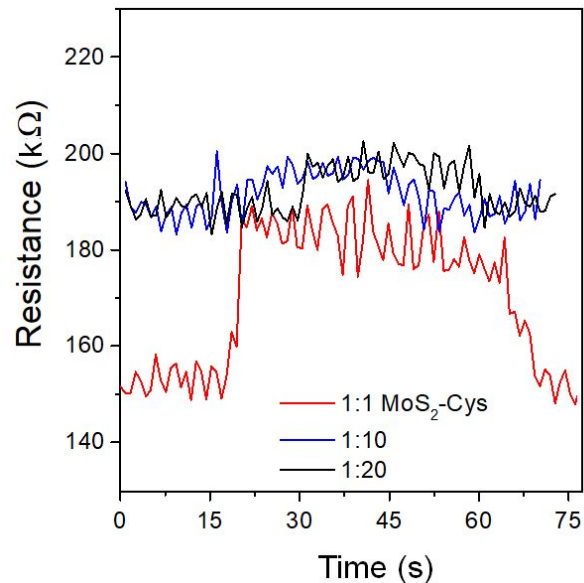


Figure S1. Comparison of MoS₂-Cys baseline resistances depending on the degree of cysteine functionalization. Baseline resistance is shown to increase significantly when cysteine concentrations greater than 1:1 mass ratio are used.

Table S1. Dry resistances inferred from baseline values in Figure 1S.

MoS ₂ -Cys Sensor	Dry Resistance (kΩ ±10%)
1:1	150
1:10	188
1:20	184

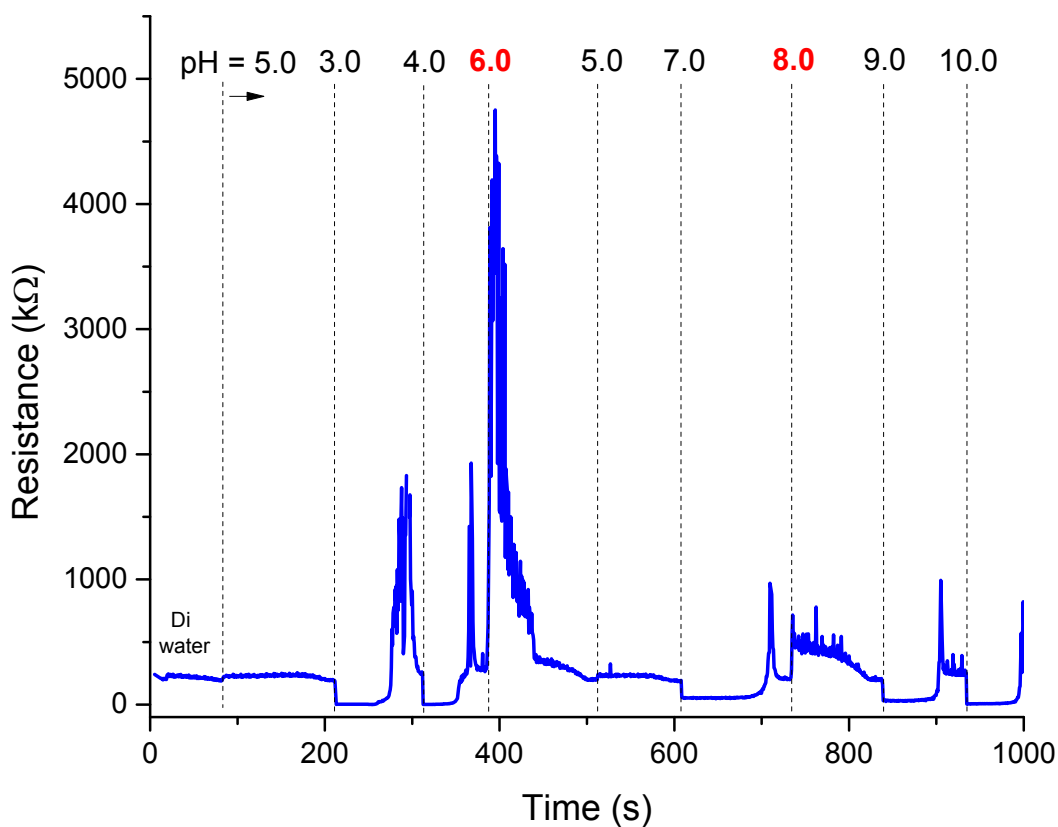


Figure S2. Sensing measurements for MoS₂-Cys 1:20 chemiresistor challenged with 10 ppb CdCl₂ solution at varied pH values. The dotted lines mark when the metal ion solution was added at the stated pH. Large increases in resistance seen after a solution has passed for example at approximately 300, 380, 710 and 910 seconds, are due to washing with deionized water.