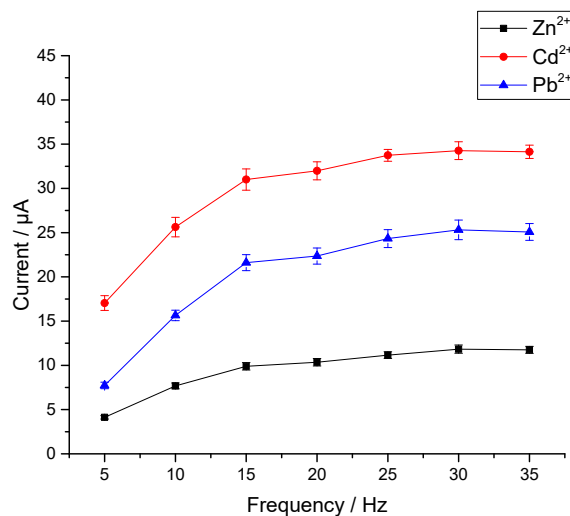
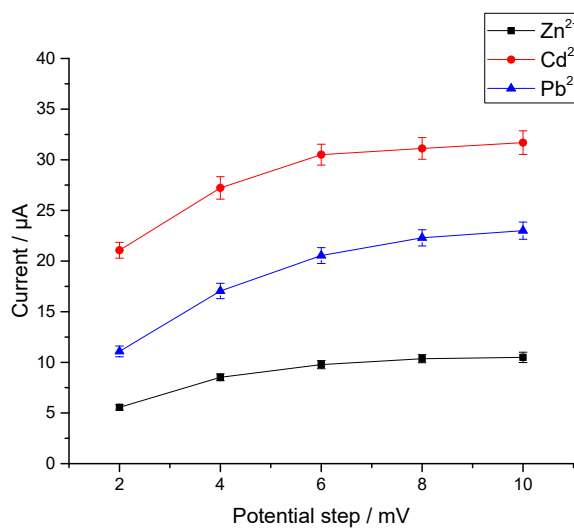


The supplementary information document for the paper entitled:

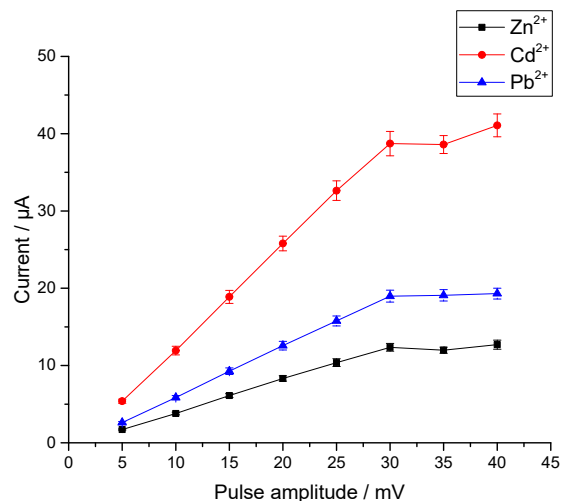
Simultaneous voltametric sensing of Zn^{2+} , Cd^{2+} , and Pb^{2+} using an electrodeposited Bi–Sb nanocomposite modified carbon paste electrode



(a)



(b)



(c)

Fig. S1. Effect of (a) frequency, (b) potential step, and (c) pulse amplitude on the stripping peak currents for $100 \mu\text{g L}^{-1}$ Zn^{2+} , Cd^{2+} , and Pb^{2+} in ABS (pH 5.6) at the Bi-Sb/CPE.

Sensitivity, LOD and LOQ calculation

The limit of detection (LOD) and the limit of quantification (LOQ) were calculated by the following equations:

$$\text{LOD} = 3 \text{ SD/S}$$

$$\text{LOQ} = 10 \text{ SD/S}$$

where (SD) is the standard deviation of the intercept of the calibration curve equation (3 replicates) and (S) is the sensitivity of the method (equal to the slope of calibration curve).

Table S2. Precision and accuracy of the described SW-ASV method for simultaneous determination of Zn^{2+} , Cd^{2+} , and Pb^{2+}

| Metal ions | Spiked ($\mu\text{g L}^{-1}$) | Found ($\mu\text{g L}^{-1}$) | % recovery | RSD (n=5) |
|------------|------------------------------------|-----------------------------------|------------|--------------|
| Zn | 15 | 14.75 | 98.3 | 2.35 |
| | 75 | 74.63 | 99.5 | 2.94 |

| | | | | |
|----|-----|--------|-------|------|
| | 150 | 148.05 | 98.7 | 4.13 |
| | 15 | 15.06 | 100.4 | 1.54 |
| Cd | 75 | 74.48 | 99.31 | 3.27 |
| | 150 | 151.8 | 101.2 | 3.63 |
| | 15 | 14.73 | 98.2 | 2.62 |
| Pb | 75 | 73.8 | 98.4 | 3.44 |
| | 150 | 150.6 | 100.4 | 2.89 |