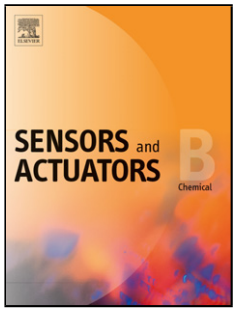

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A miniaturized electrochemical system for high sensitive determination of chromium(VI) by screen-printed carbon electrode with gold nanoparticles modification

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Highlights

- A new miniaturized portable electrochemical system for Cr(VI) in-situ determination was developed.
- Linear sweep voltammetry was used for Cr(VI) determination without any accumulation.
- Supporting electrolyte matrix, scan rate and pH were analyzed.
- The gold nanoparticles modified screen-printed carbon electrode presented good capability for Cr(VI) detection in terms of sensitivity, reproducibility and selectivity.
- Real sample was analyzed and the results were consistent with atomic adsorption spectrometry.