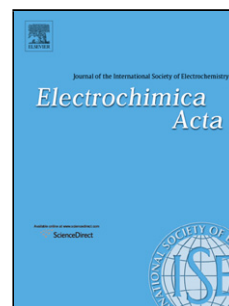


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## Enzyme-Free Amperometric Detection of Glucose on Platinum-Replaced Porous Copper Frameworks

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### Highlights

- Macroporous Cu foams with large surface were assembled by electrodeposition assisted with hydrogen evolution;
- The synthesized Cu was substituted by metallic Pt through facile galvanic replacement, forming Pt monolayer-support alloy structures with highly catalytic activity;
- The electrochemical oxidation behavior of glucose on this interface was investigated;

Favorable properties for nonenzymatic glucose detection were obtained at the proposed sensor based on Pt-placed Cu frameworks

### Abstract

With respect to a nonenzymatic electrochemical sensor for detection of small biomolecules like glucose, it is well recognized that an interface with highly electrocatalytic properties is desired. Our previous studies have demonstrated that porous Cu foams from hydrogen evolution assisted electrodeposition could provide

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