Development of Amperometric α-Ketoglutarate Biosensor based on Ruthenium-Rhodium Modified Carbon Fiber Enzyme Microelectrode

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Supplementary data
Figure S1 SEM images of Rh (A) and Ru (B) CFEs; accelerating voltage: 20 kV.

Figure S2 EDX image of Ru/Rh-CFE; accelerating voltage: 20 kV.
Figure S3 Hydrodynamic voltammograms obtained at bare and Ru/Rh-CFE for the oxidation of 100 μM NADH in 0.1 M phosphate buffer.

Figure S4 Stability: repetitive chronoamperometric measurements of 100 μM NADH at bare CFE (E = +0.9 V) and Ru/Rh-CFE (E = +0.4 V); performed in 0.1 M phosphate buffer.
Figure S5 Amperograms obtained at bare CFE (A) and Ru/Rh-CFE (B) for the oxidation of 300 μM NADH in 0.1 M phosphate buffer; E = +0.9 V and +0.4 V for bare and Ru/Rh-CFE, respectively; stirring rate: 150 rpm. The arrow indicates the addition of 300 μM NADH.

Figure S6 Effect of GLUD loading on the current response for 500 μM α-KG in phosphate buffer containing 100 μM NH₄ Cl and 1 mM NADH at GLUD-Ru/Rh-CFE; step potential: +0.4 V.