

Fig. 1. The influence of metal ions on arginase activity

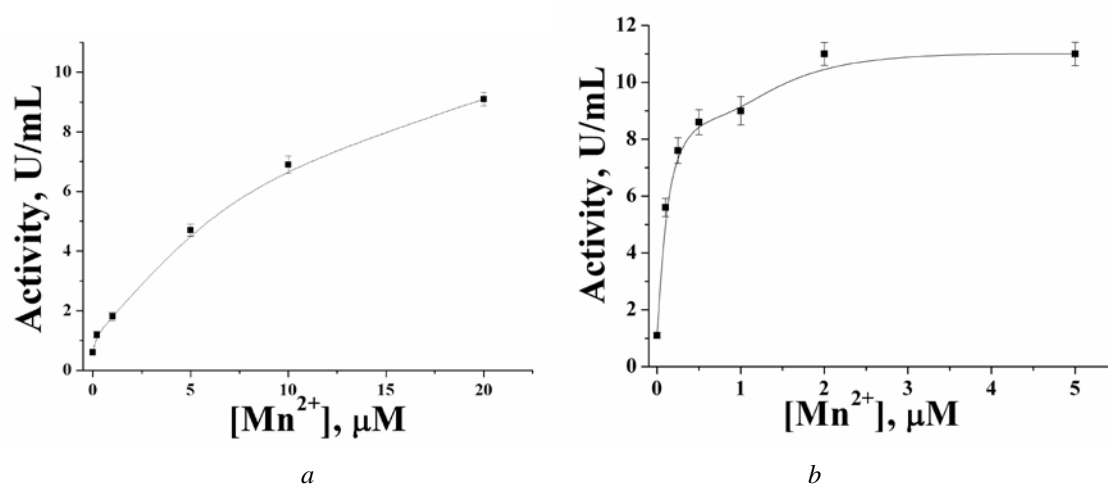


Fig. 2. The dependence of enzymatic activity on the concentration of Mn^{2+} and conditions of reconstruction: *a* – pH 7.5, 30 min, 37 °C; *b* – pH 9.5, 10 min, 56 °C

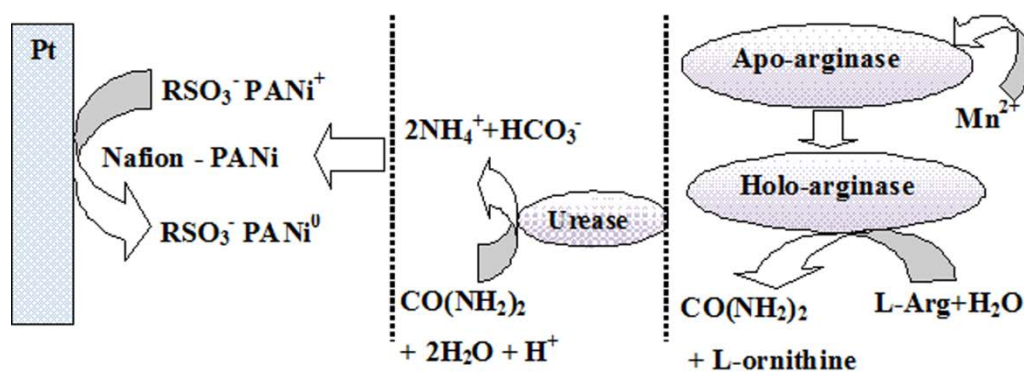


Fig. 3. Principal scheme of Mn^{2+} assay by the bi-enzyme PANi-Nafion/Pt electrode. PANi⁺ and PANi⁰ – oxidized and reduced forms of PANi, respectively; RSO₃⁻ – a skeleton of Nafion.

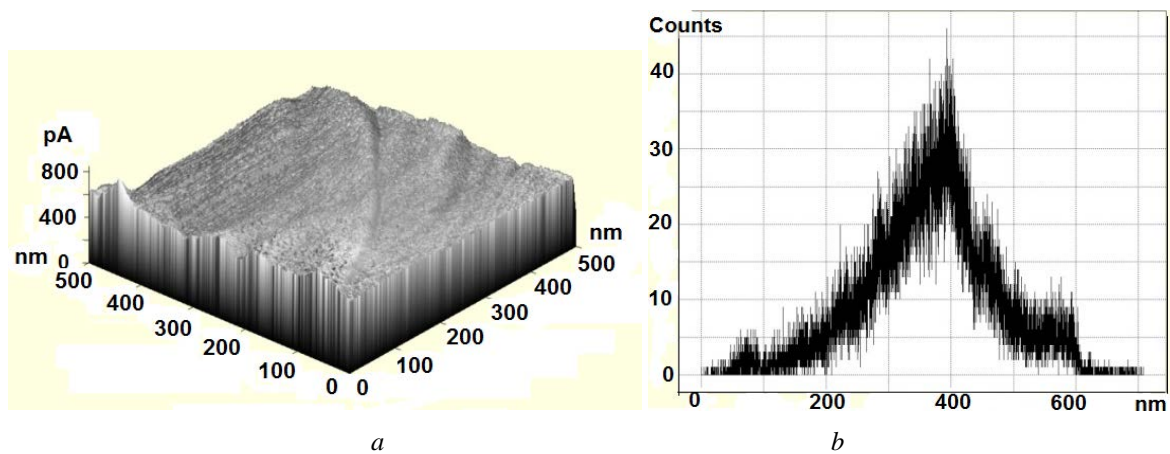


Fig. 4. Structure and thickness of the PANi film on the Pt electrode characterized with AFM. **A** – micrograph, resonance frequency – 160 kHz, scan rate of 1 Hz/s and resolution of 256×256 pixels. **B** – the Gaussian distribution by size

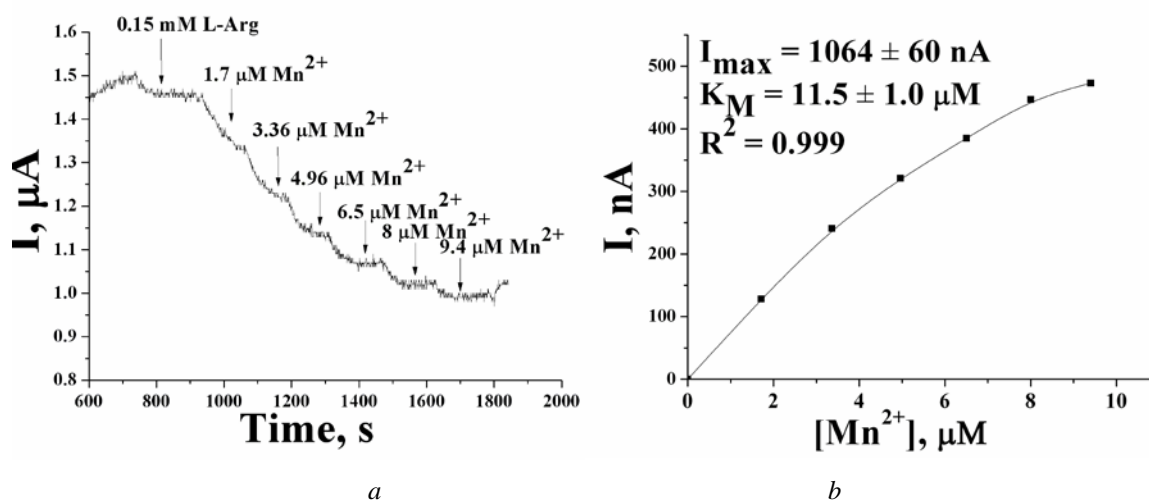


Fig. 5. Amperometric response on Mn^{2+} of the developed bi-enzyme PANi-Nafion/Pt electrode: chronoamperogram (a) and calibration curve (b).
Conditions: $-200 \text{ mV vs Ag/AgCl}$ electrode, pH 10.5 at 22°C