

## SUPPLEMENTARY MATERIALS

### **Silver-enhanced lateral flow immunoassay for highly-sensitive detection of potato leafroll virus**

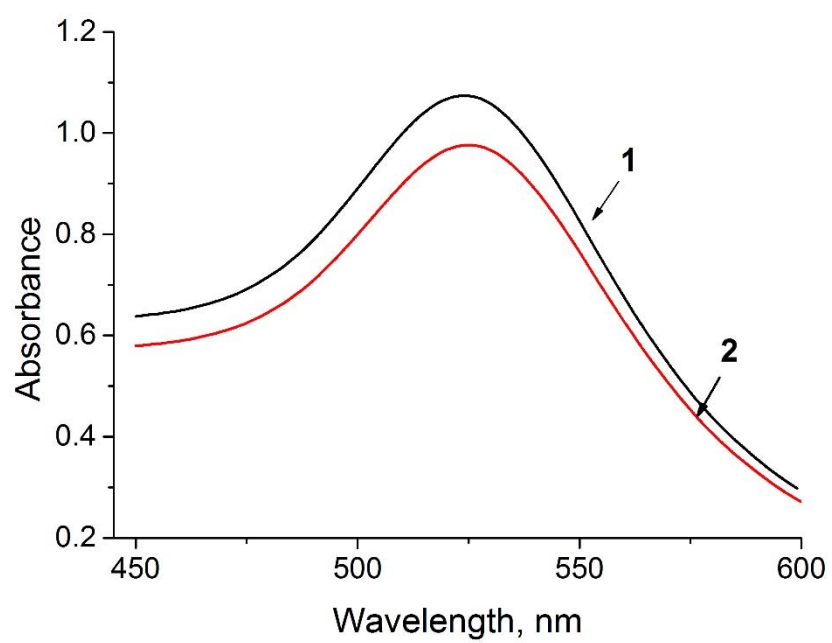
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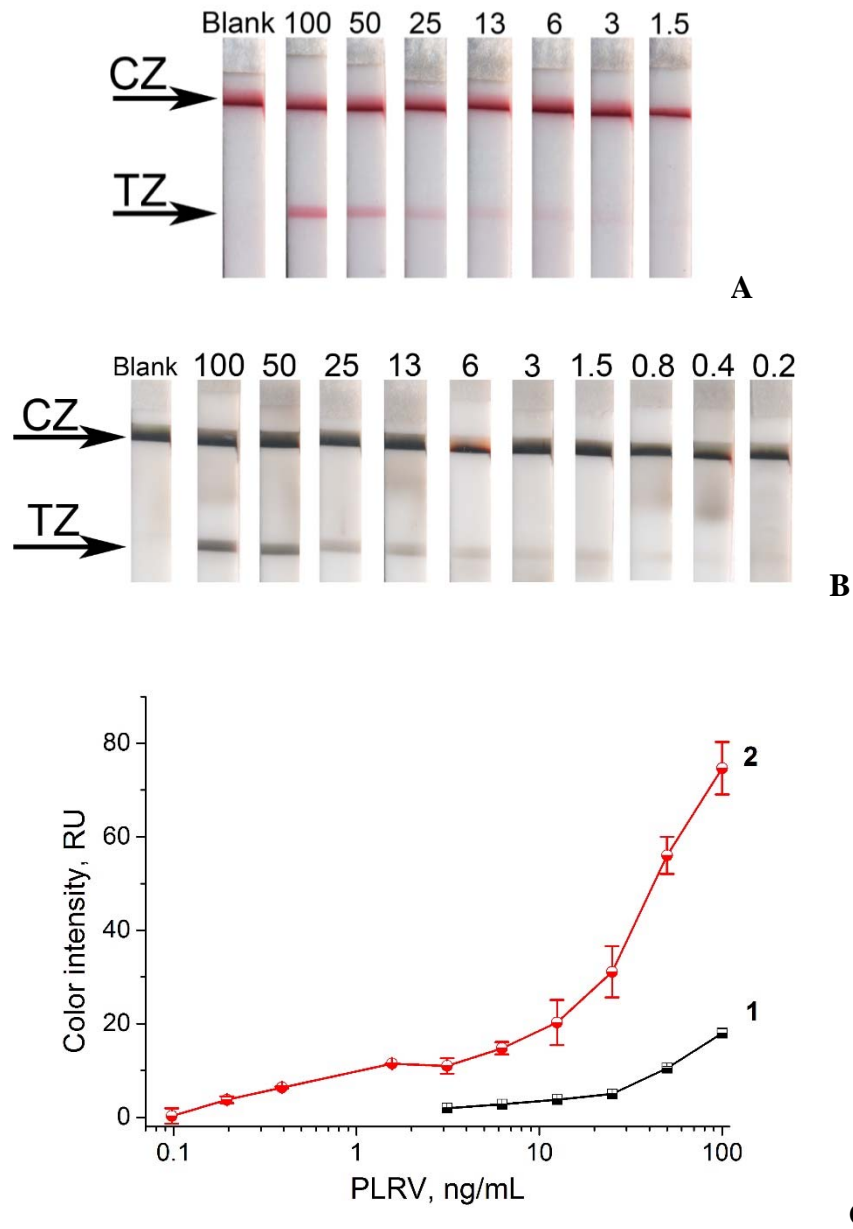
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## Spectral studies of GNPs and their conjugate



**Figure S1.** Adsorption spectra for GNPs (1) and GNP-antibody conjugate (2)

## Silver enhancement of LFIA for PLRV assay in buffer



**Figure S2.** Results of LFIA for PLRV in buffer: (A) Appearance of the test strips after convenient LFIA (CZ, control zone; TZ, test zone). The number above the strip denotes PLRV concentration (ng/mL). (B) Appearance of the test strips after LFIA with silver enhancement. The notations are the same as in (A). (C) Color intensity of the test zone depending on PLRV concentration. Curves 1 and 2 correspond to the test strips presented at (A) and (B), respectively.

## Analysis of infected potato leaves

**Table S1.** Results of ELISA and LFIA for dilutions of leaf extracts of infected potatoes

<b>Sample</b>	<b>Dilution</b>	<b>ELISA</b>	<b>Convenient LFIA</b>	<b>LFIA with silver enhancement</b>
Extract 1	1:50	+	+	+
	1:500	+	+	+
	1:2,500	–	+/-	+
	1:4,000	–	–	+
Extract 2	1:50	+	+	+
	1:500	+	+	+
	1:2,500	–	+/-	+
	1:4,000	–	–	+
Extract 3	1:50	+	+	+
	1:500	+	+	+
	1:2,500	–	+/-	+
	1:4,000	–	–	+