

Supplementary Materials

Article

Surface Enhanced Raman Spectroscopy of Lactoferrin Adsorbed on Silvered Porous Silicon Covered with Graphene

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Figure S1. Original views of the SERS-active substrates: the samples of the silicon wafer with the square 0.5×0.5 cm area of the silvered *por*-Si placed in the Eppendorf tubes.

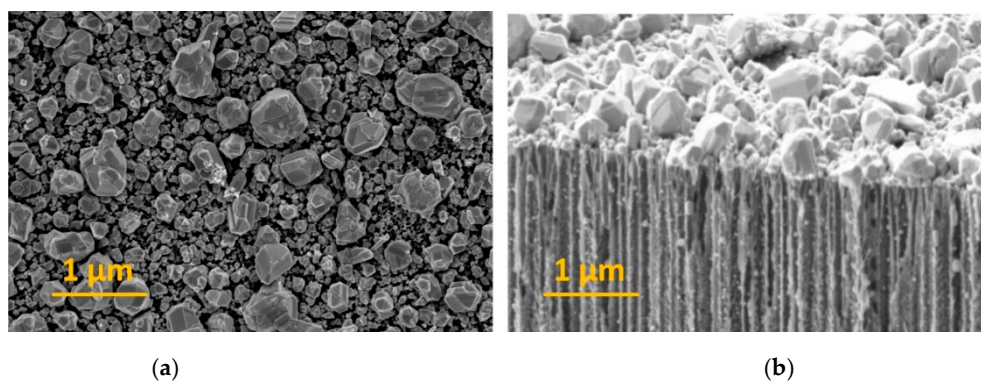


Figure S2. SEM images of the silvered *por*-Si: (a) Top view; (b) Cross-section.

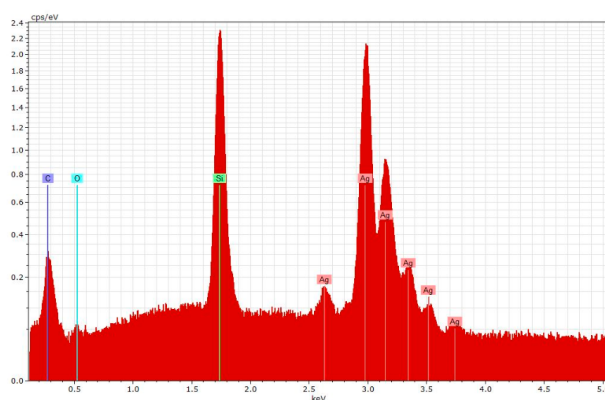


Figure S3. EDX spectrum typical for the silvered Si-based substrate.

Table S1. Parameters of the Raman and SERS-spectra of the graphene-containing films.

Spot	Spectrum	FWHM, cm ⁻¹	Raman Shift, cm ⁻¹		I _G /I _{2D}
			G band	2D band	
light	Raman, on <i>c</i> -Si	42	1587	2725	0.52
	SERS, on <i>por</i> -Si	29	1587	2725	0.39
dark	Raman, on <i>c</i> -Si	69	1582	2725	1.19
	SERS, on <i>por</i> -Si	84	1585	2723	2.86

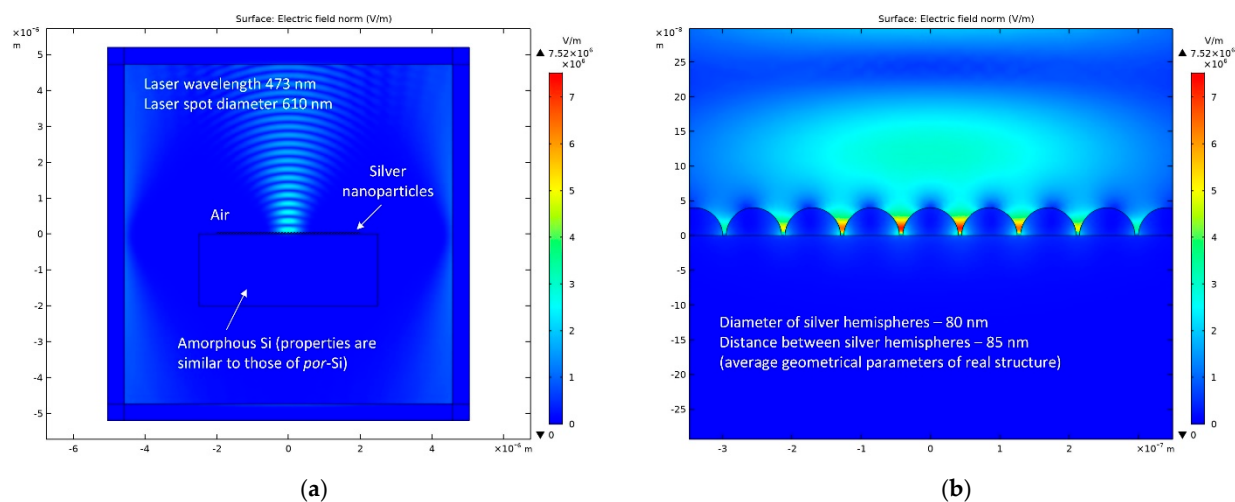


Figure S4. Electric field strength distribution simulated for the silvered *por*-Si: (a) Overview; (b) In the laser spot.

The same electric field strength distribution was typical for the silvered *por*-Si covered with graphene.

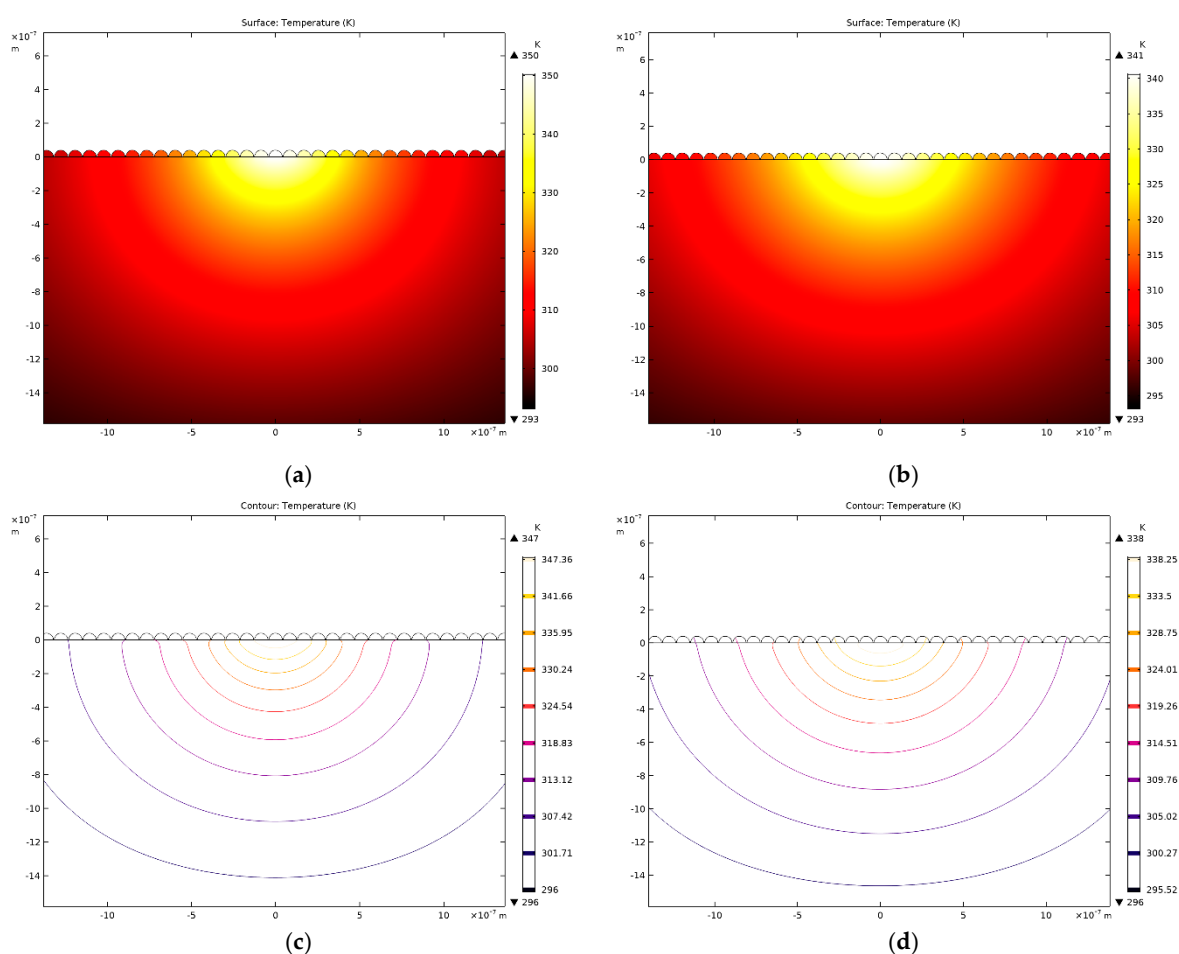


Figure S5. (a, b) Temperature distributions and (c, d) isothermal contours simulated for the silvered *por*-Si: (a, c) free of graphene; (b, d) covered with graphene.

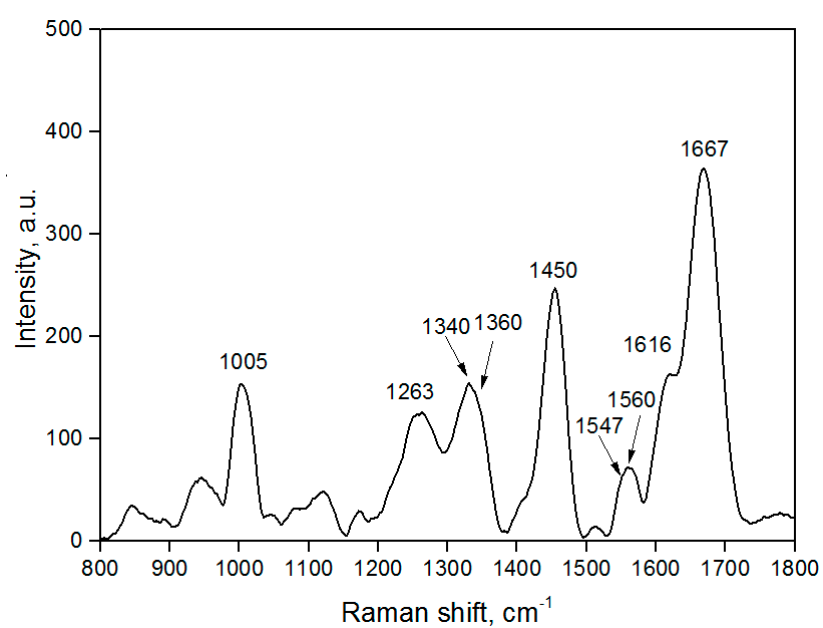


Figure S6. Raman spectrum of lactoferrin (10⁻⁴ M water solution).