Electronic Supplementary Material (ESI) for Nanoscale Advances.

SUPPLEMENTARY INFORMATION

tRNA AS STABILISING MATRIX FOR FLUORESCENT SILVER CLUSTERS: PHOTOPHYSICAL PROPERTIES AND IR STUDY

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Table S1. Dependence of the tRNA-AGNCs fluorescence intensity on the reagents concentrations ratios (excitation at 280 nm). Emission intensity is normalized on the maximum intensity obtained for the corresponding species. tRNA concentration is expressed in moles of nucleotides.

Molar ratio [tRNA]/[$AgNO_3$]	Molar ratio [$AgNO_3$]/[$NaBH_4$]	«green» type (emission at 550 nm)	«red» type (emission at 635 nm)
2:1	4:1	0.90	0.83
1:1	4:1	0.59	1.00
2:1	2:1	1.00	0.84
1:1	2:1	0.62	0.96

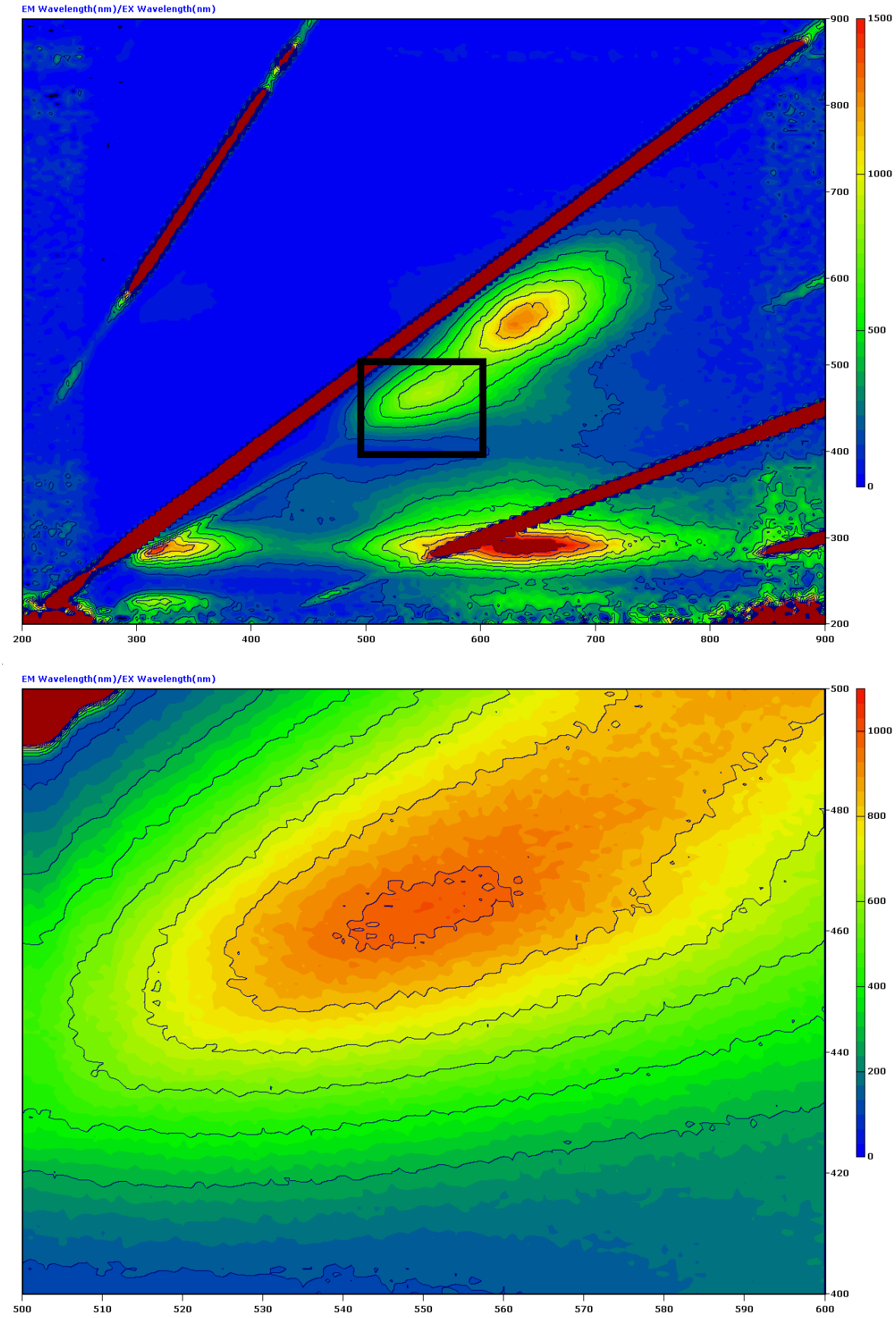

Figure S1. 2D fluorescence contour plot for the “green” type of the tRNA-AgNCs. (X –axis is emission and Y-axis is excitation).

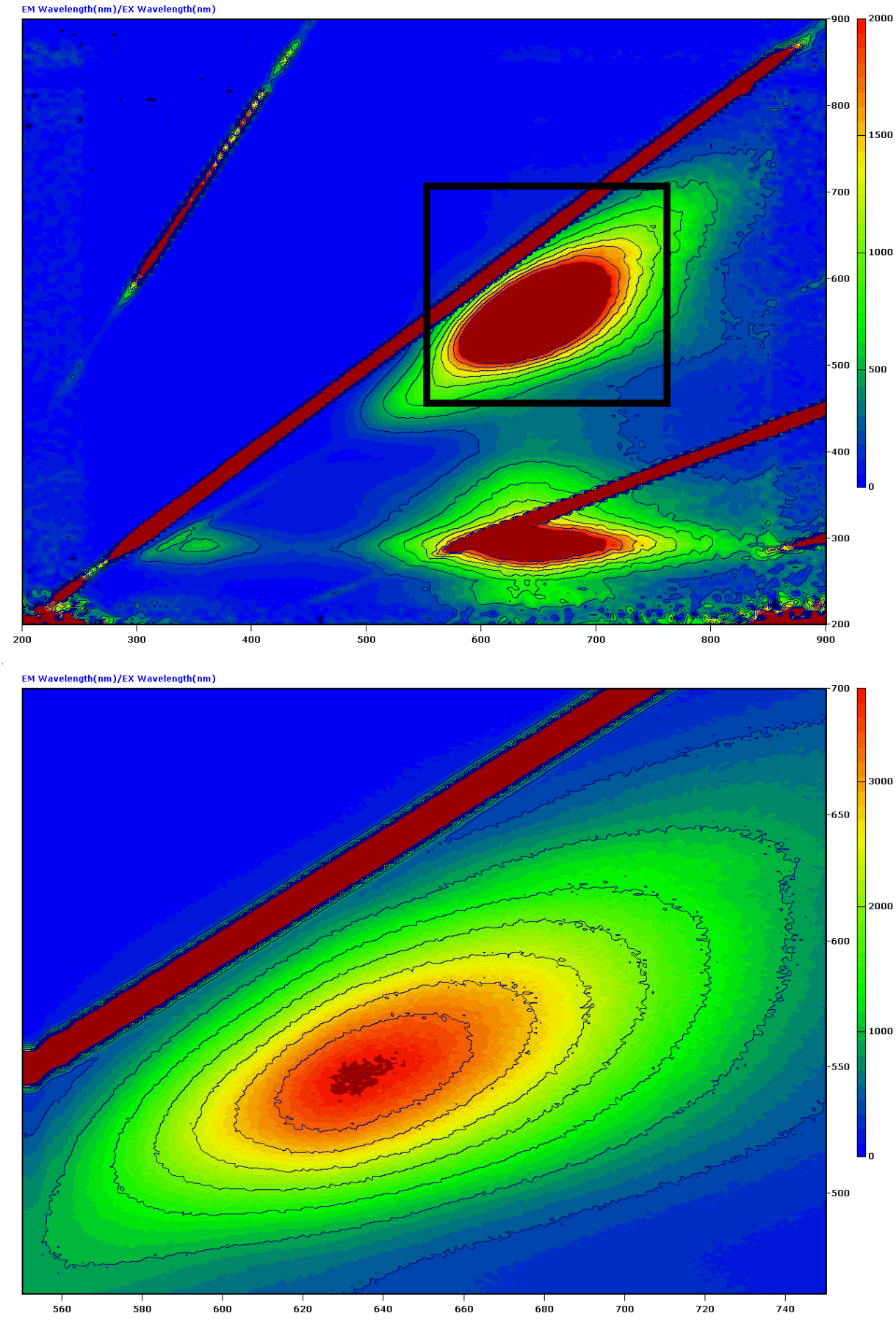

Figure S2. 2D fluorescence contour plot for the “red” type of the tRNA-AgNCs. (X –axis is emission and Y-axis is excitation)

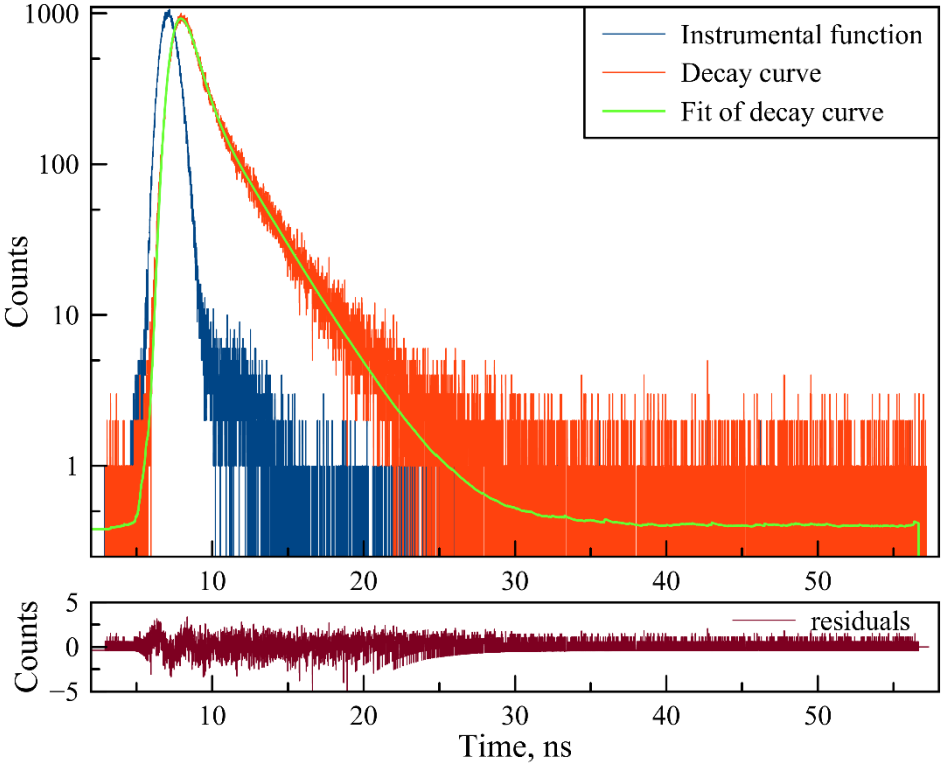

Figure S3. Fluorescence decay of the "green" type of the tRNA-AgNCs (λ_{ex} 465 nm, λ_{em} 550 nm, LED 450 nm). Fit: 0.8exp(-t/0.7) + 0.2exp(-t/2.7).

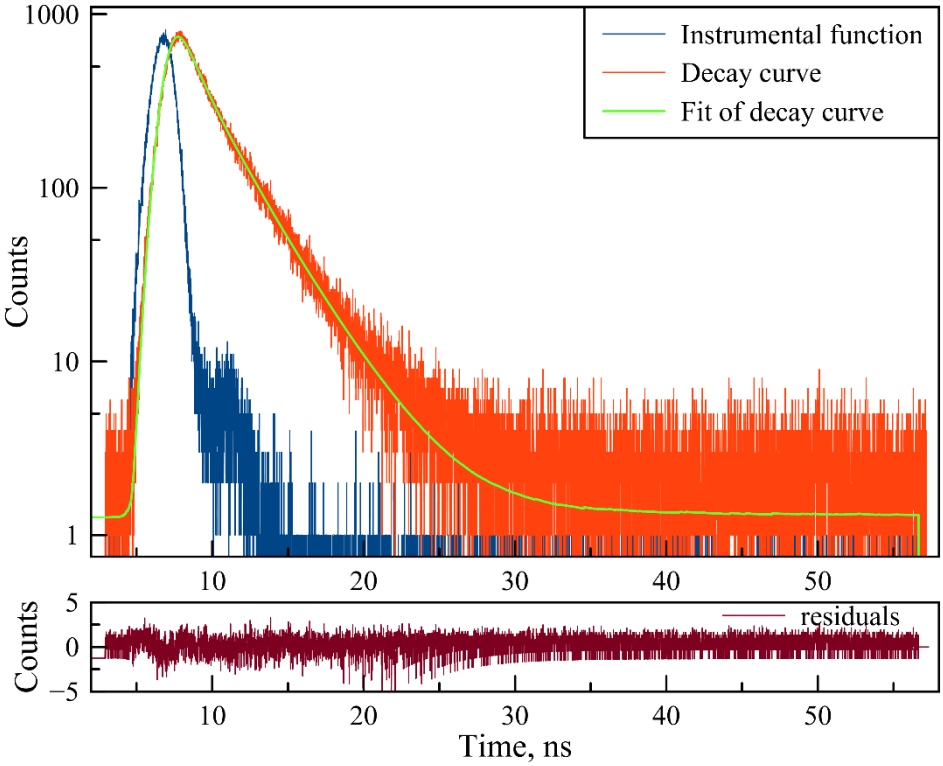

Figure S4. Fluorescence decay of the "red" type of the tRNA-AgNCs (λ_{ex} 550 nm, λ_{em} 635 nm, LED 570 nm). Fit: 0.57exp(-t/1.4) + 0.43exp(-t/3.1).

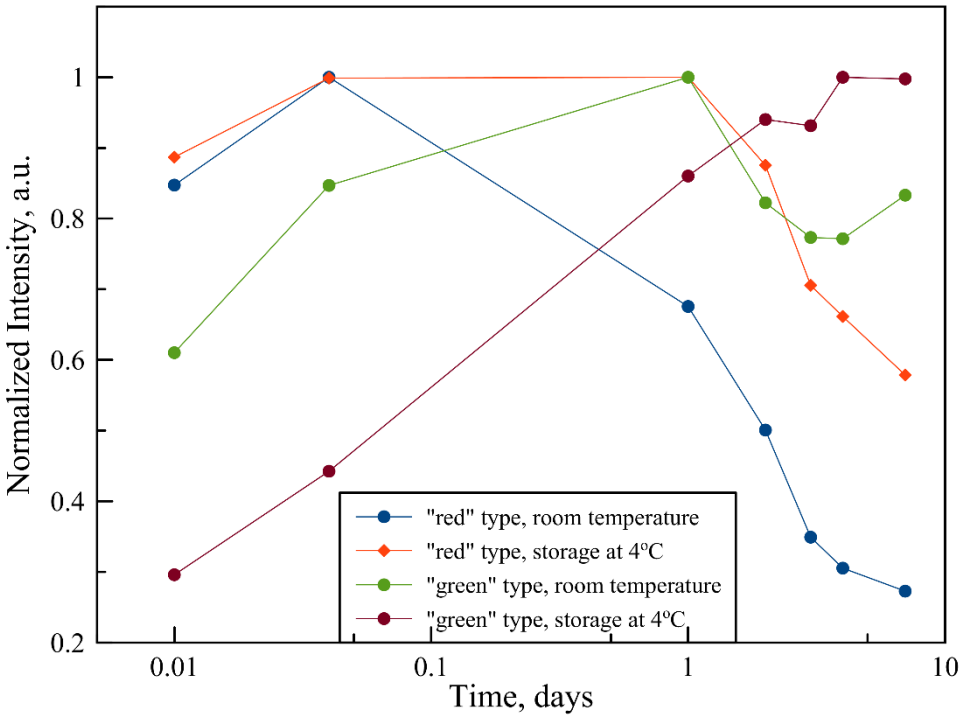

Figure S5. Time dependence of the fluorescence intensity for the clusters (λ_{ex} 465 nm and λ_{em} 550 nm for "green" type; λ_{ex} 550 nm and λ_{em} 635 nm for "red" type) in different temperature conditions.

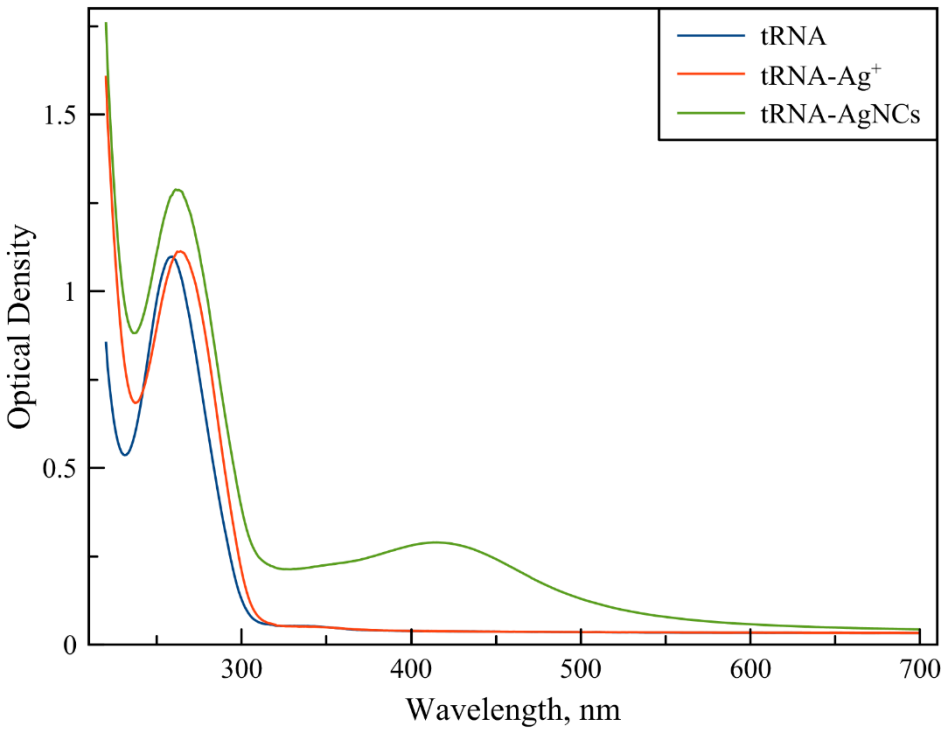

Figure S6. Optical density of the samples: bare tRNA (blue curve), tRNA-Ag^+ (red curve) and tRNA-AgNCs (green curve).