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Decomposition of halogenated nucleobases by surface plasmon resonance excitation of gold nanoparticles

Journal Item

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Supporting Information (SI)

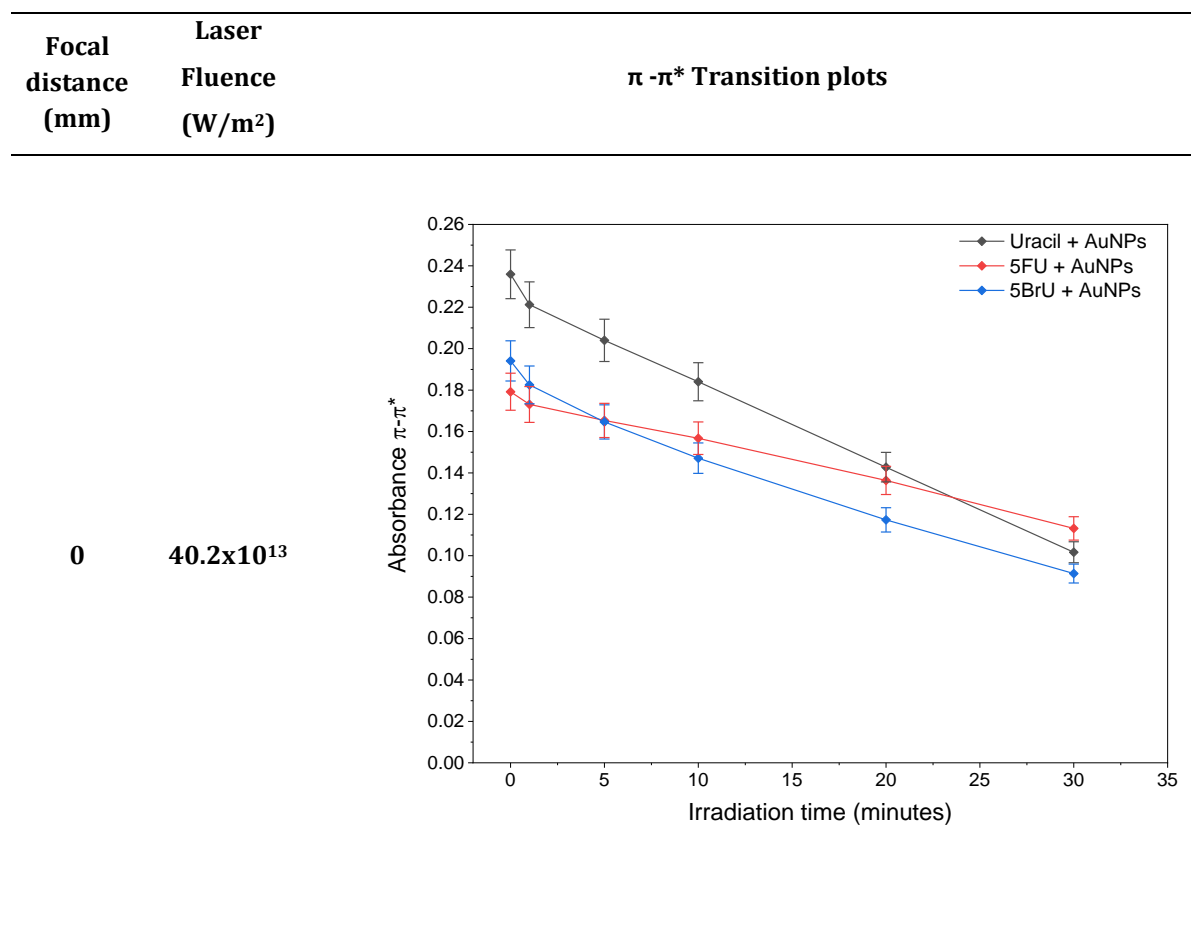
SI.1 – Laser fluence

SI.1 – Laser fluence for each focal point chose and respective beam diameter.

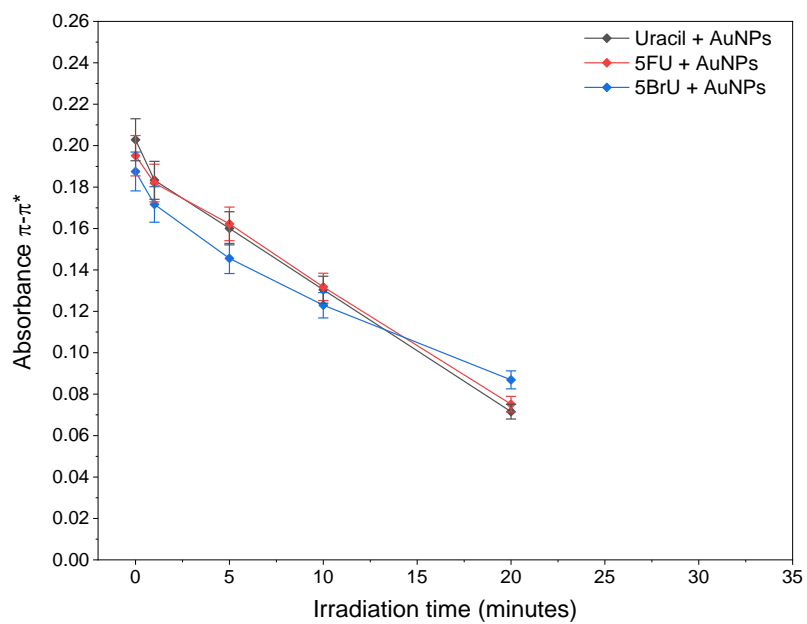
Focal distance (mm)	Beam diameter (mm)	Surface area (m ²)	Laser Fluence (W/m ²)
0	0.39	1.19x10 ⁻⁰⁷	40.2x10 ¹³
1	0.49	1.89 x10 ⁻⁰⁷	25.5 x10 ¹³
2	0.58	2.64 x10 ⁻⁰⁷	18.2 x10 ¹³
3.5	0.78	4.78 x10 ⁻⁰⁷	10.0 x10 ¹³
5	0.96	7.24 x10 ⁻⁰⁷	6.63 x10 ¹³
10	1.98	3.08 x10 ⁻⁰⁶	1.56 x10 ¹³

SI.2 - Maximal absorbance for U, 5FU and 5BrU

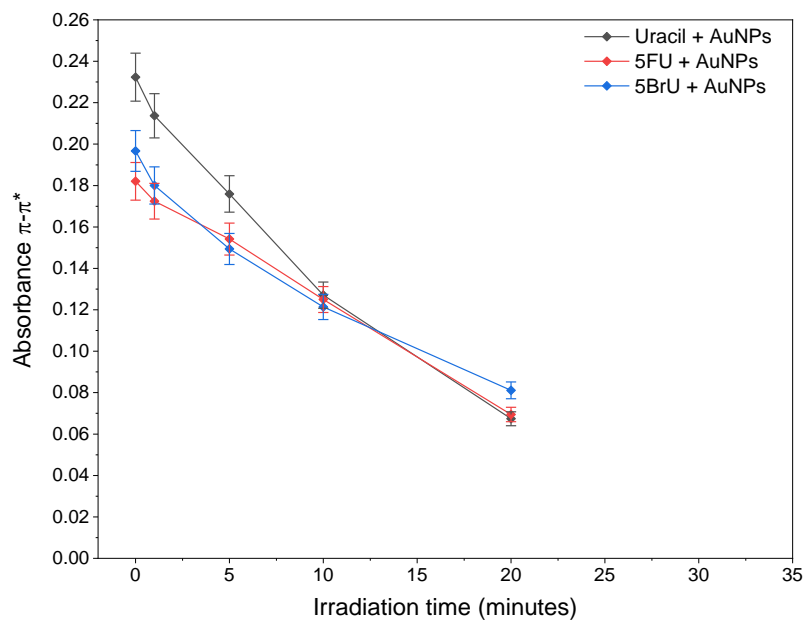
SI.2 - Maximal absorbance, associated with the π - π^* transitions, measured in the corrected spectra of U, 5FU and 5BrU as a function of the irradiation with Nd:YAG at laser fluence.



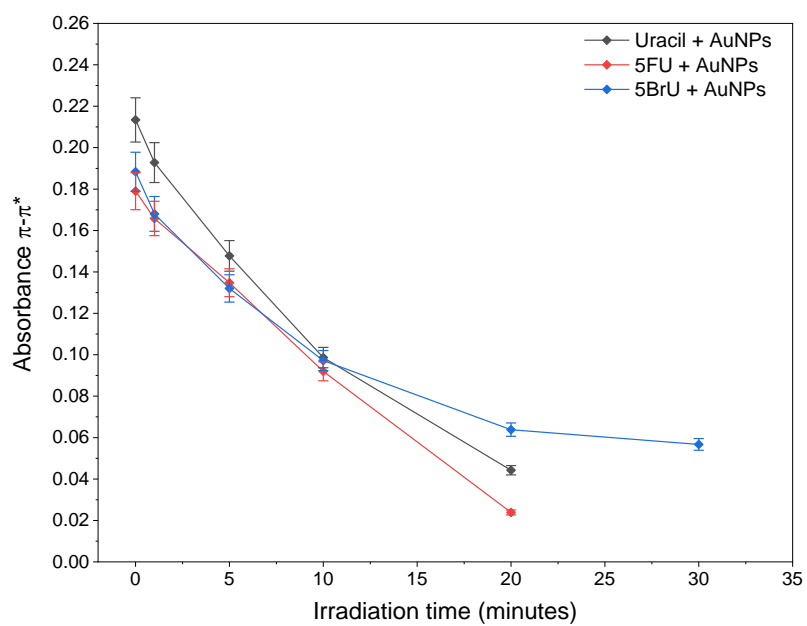
1 **25.5×10^{13}**



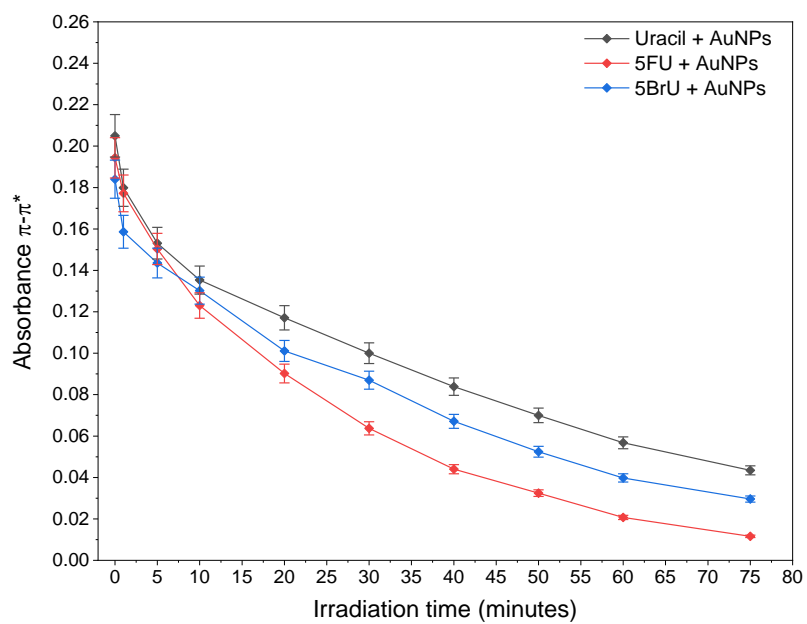
2 **18.2×10^{13}**



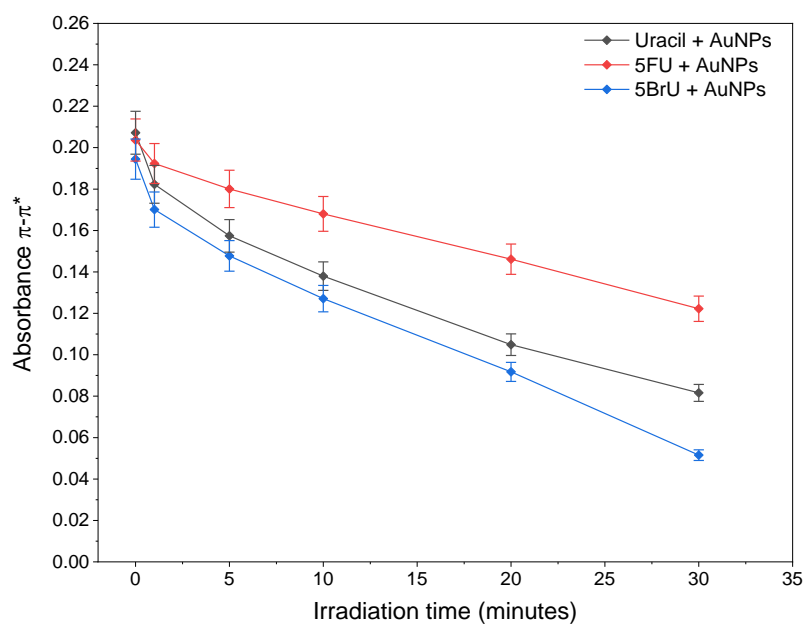
3.5 10.0×10^{13}



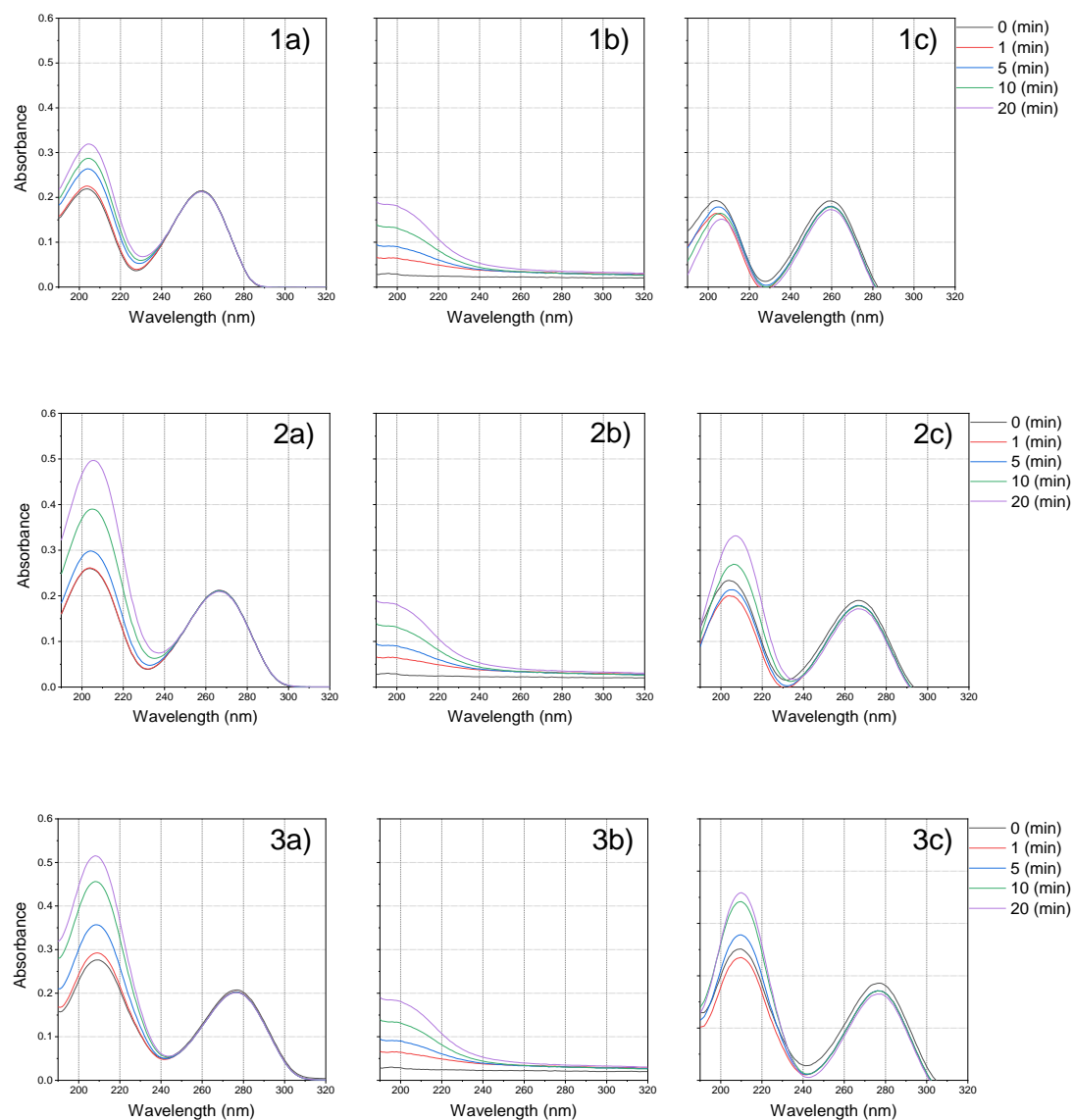
5 6.63×10^{13}



10 1.56×10^{13}



SI.3 – Spectra correction in absence of AuNPs



SI.3 – Absorption spectra of samples without AuNPs following exposure to 532 nm Nd:YAG laser radiation for up to 30 minutes with $Z = 1$ mm. The curves from left to right show a) the raw spectra of solutions containing nucleobases (NB), b) the raw spectra of pure UHPW samples, and c) the *corrected* spectra for U, 5FU, and 5BrU produced by subtracting the UHPW-only spectra from the NB spectra.