Supporting Information

Effect of counter-anion on the aggregation of thioflavin-T

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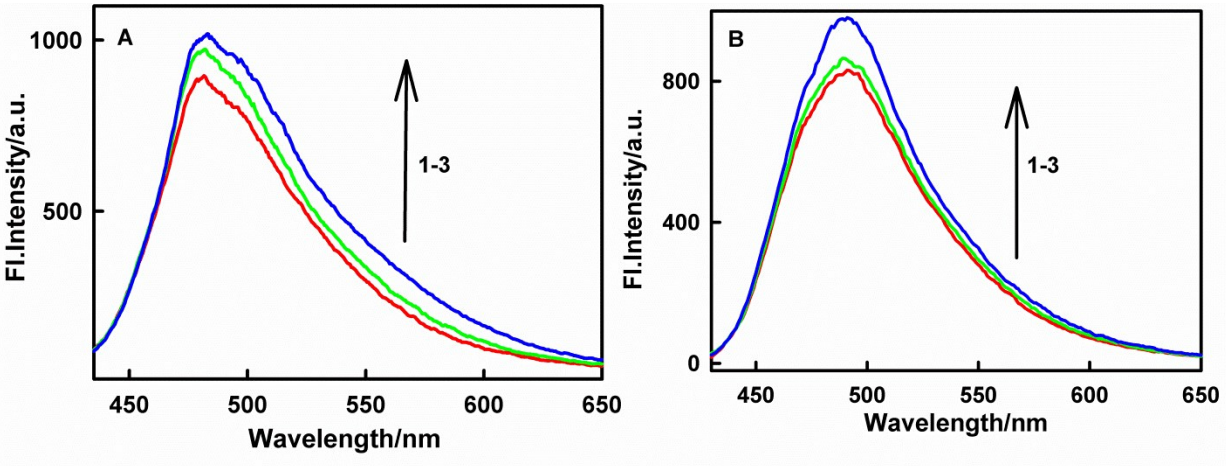

Figure S1: Steady-state fluorescence spectra of ThT at varying concentration of (**A)** NaCl and (**B)** $NaCH_3CO_2$ (1) 0 M (2) 1.65 M (3) 3.3 M

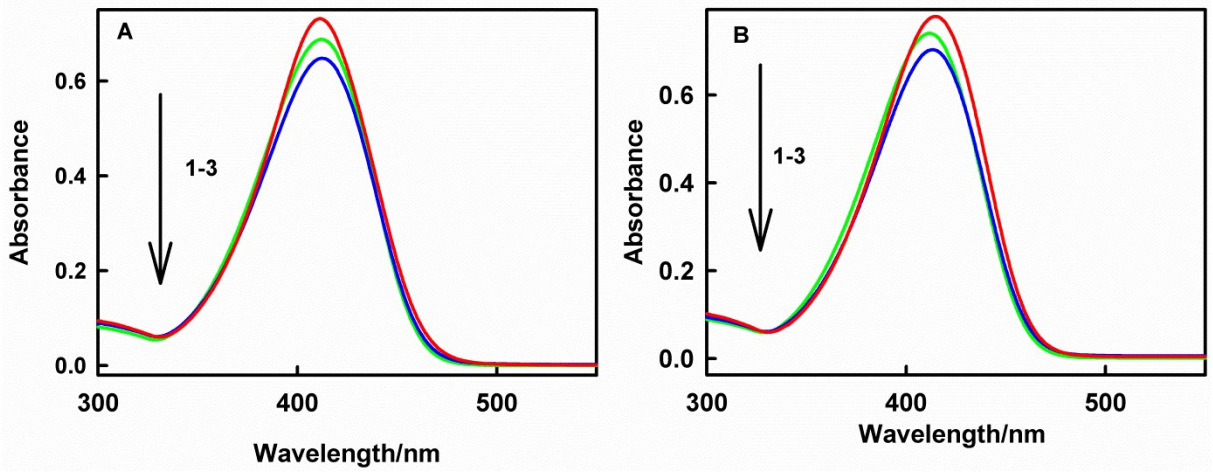

Figure S2: Ground-state absorption spectra of ThT at varying concentration of (**A)** NaCl and (**B)** $NaCH_3CO_2$ (1) 0 M (2) 1.65 M (3) 3.3 M.

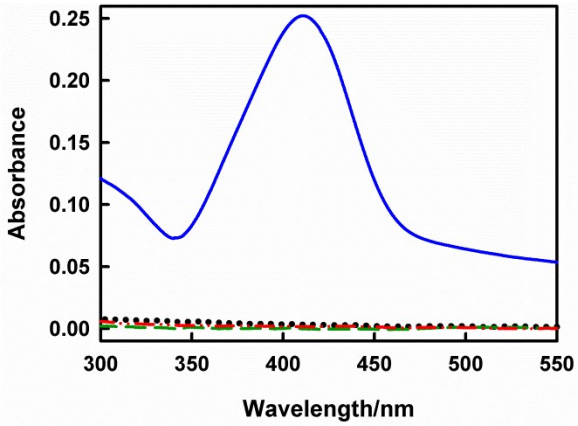

Figure S3: Ground-state absorption spectra of ThT- $NaClO_4$ system (solid blue line), only 0.5 M $NaClO_4$ in water (green dashed line), only 1 M $NaClO_4$ in water (red dash dot dot line). The black dotted line represents the baseline of water in absence of ThT or $NaClO_4$.

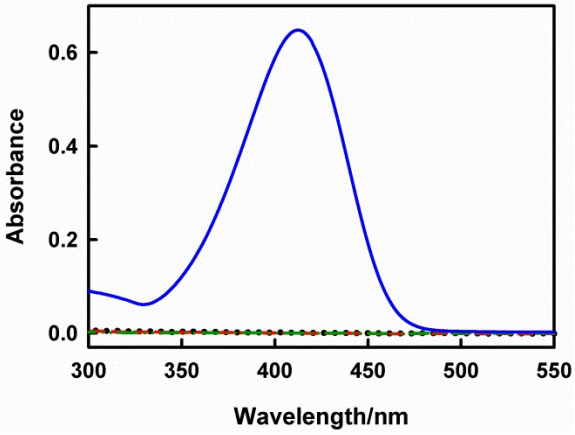

Figure S4: Ground-state absorption spectra of ThT- NaCl system (solid blue line), only 0.5 M NaCl in water (green dashed line), only 1 M NaCl in water (red dash dot dot line). The black dotted line represents the baseline of water in absence of ThT or NaCl.

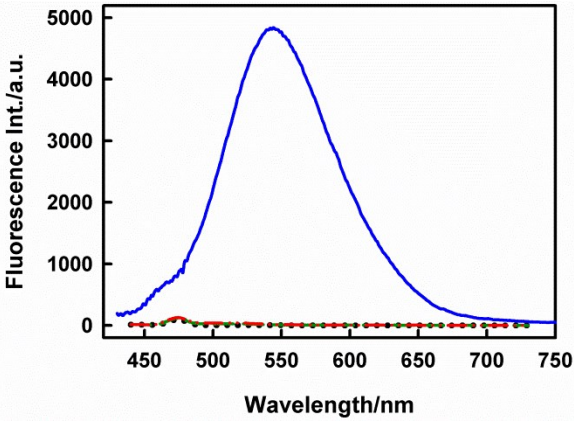

Figure S5: Steady-state emission spectra of ThT- $NaClO_4$ system (solid blue line), only 0.5 M $NaClO_4$ in water (green dashed line), only 1 M $NaClO_4$ in water (red dash dot dot line). The black dotted line represents the emission spectrum of water collected in absence of ThT or $NaClO_4$.

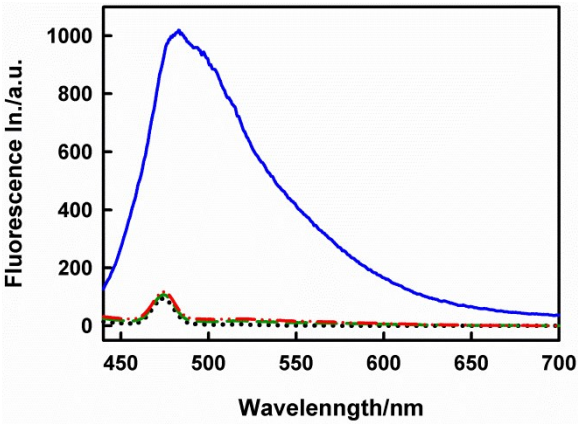

Figure S6: Steady-state emission spectra of ThT- NaCl system (solid blue line), only 0.5 M NaCl in water (green dashed line), only 1 M NaCl in water (red dash dot dot line). The black dotted line represents the emission spectrum of water collected in absence of ThT or NaCl.

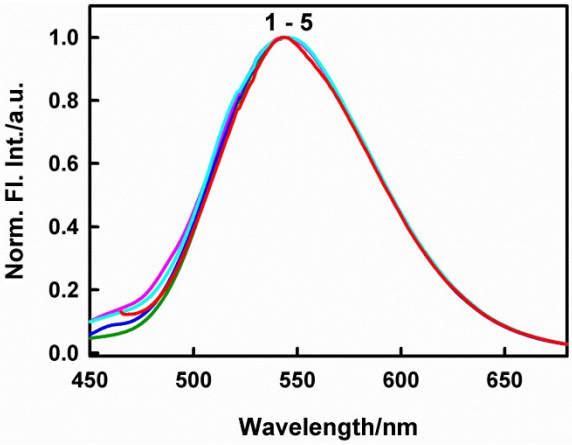

Figure S7: Normalized fluorescence spectra of ThT-$NaClO_4$ system at various excitation wavelengths (1) 390 nm (2) 410 nm (3) 430 nm (4) 450 nm (5) 470 nm.

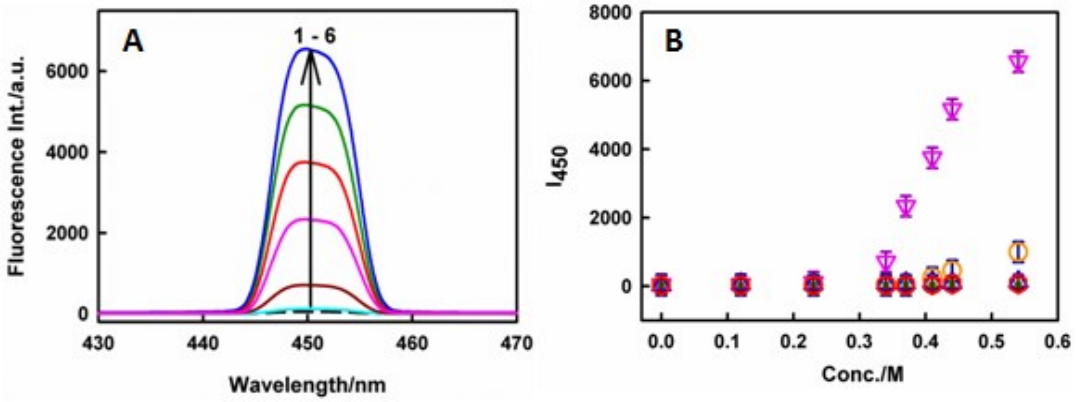

Figure S8: (A) Rayleigh's scatter plot of ThT (λ_{em} =450 nm) in the presence of various concentrations of $NaClO_4$ (in M) (1) 0.23 (2) 0.34 (3) 0.37 (4) 0.41 (5) 0.44 (6) 0.54. The dashed line represents the spectrum of ThT in water. (B) Variation in the Rayleigh scattering intensity in the presence of various concentrations of different salts (1) $NaClO_4$ (pink triangles) (2) NaBr (red circles) (3) $NaCH_3CO_2$ (green squares) (4) NaCl (blue triangles) (5) $NaBF_4$ (orange circles).

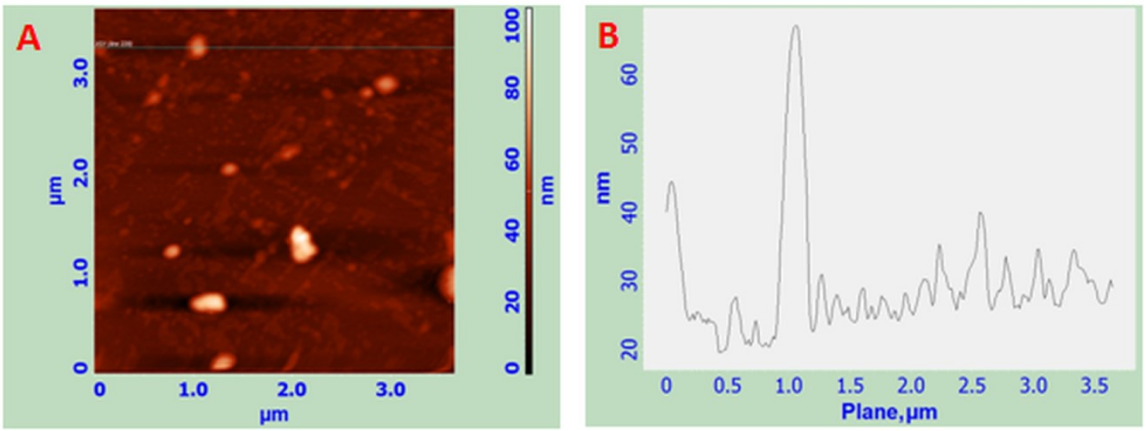

Figure S9: AFM images of ThT-perchlorate system

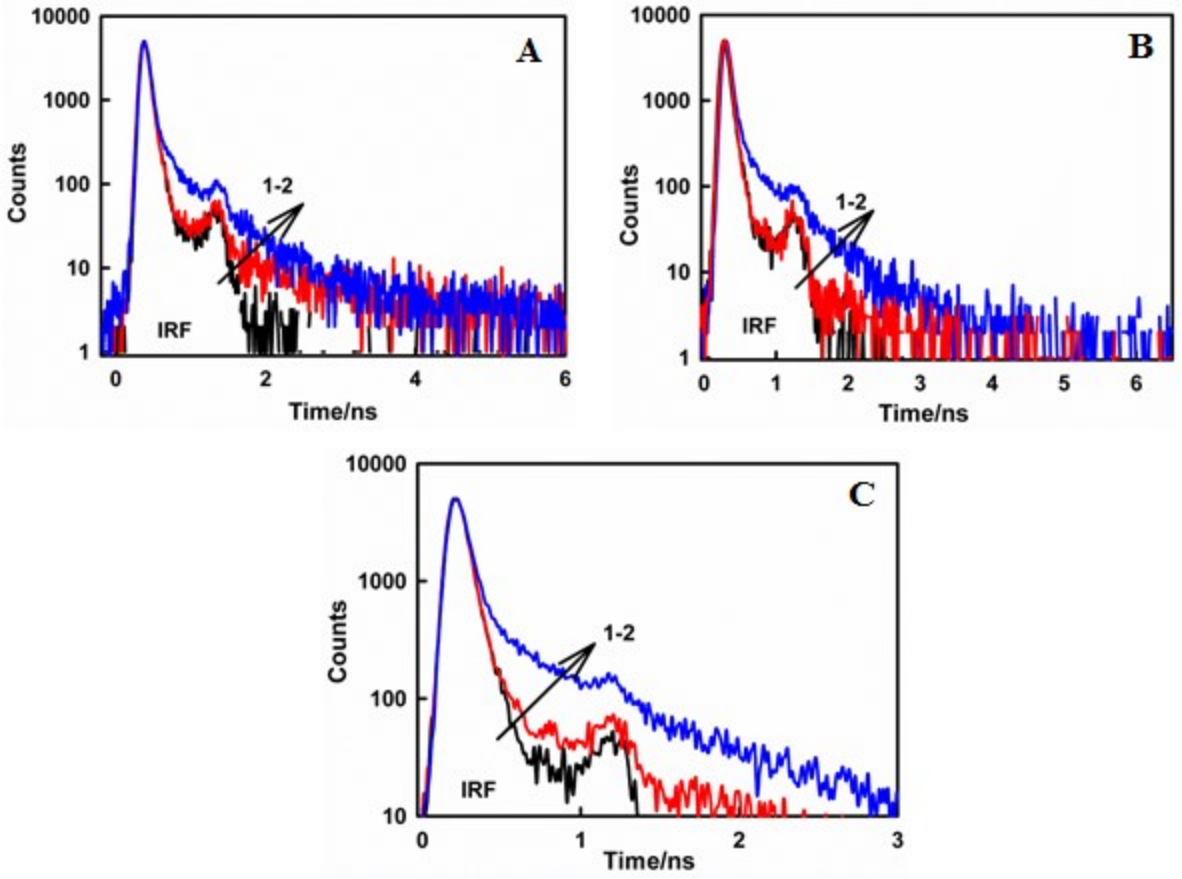

Figure S10: Transient decay trace for ThT in **(A)**:$NaCH_3CO_2$ **(B)**:NaCl **(C)**:NaBr (1.0 M) at emission wavelengths (λ_{ex} = 410 nm): (1) 470 nm (2) 650 nm The solid black line represents instrument response function (IRF).

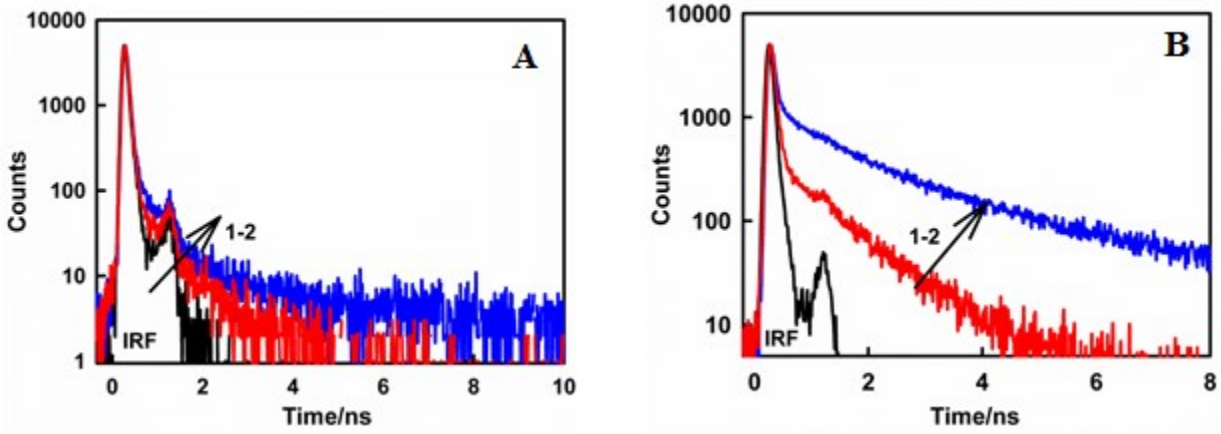

Figure S11: Transient decay traces for ThT in **(A)** NaI **(B)** $NaBF_4$ (1.0 M) at emission wavelengths (λ_{ex} = 410 nm): (1) 470 nm (2) 630 nm The solid black line represents instrument response function (IRF).

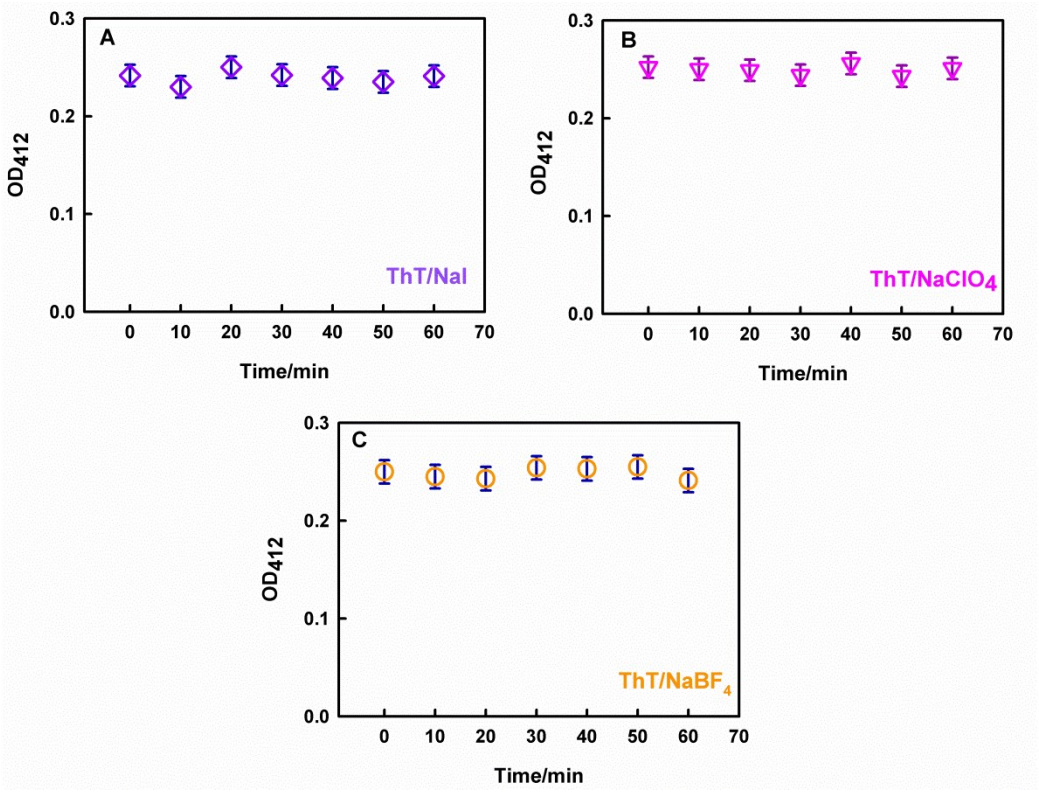

Figure S12: Variation in the OD of ThT (20 μM) at 412 nm as a function of time in the presence of (A) 0.8 M NaI (B) 1.1 M $NaClO_4$ (C) 4.8 M $NaBF_4$.

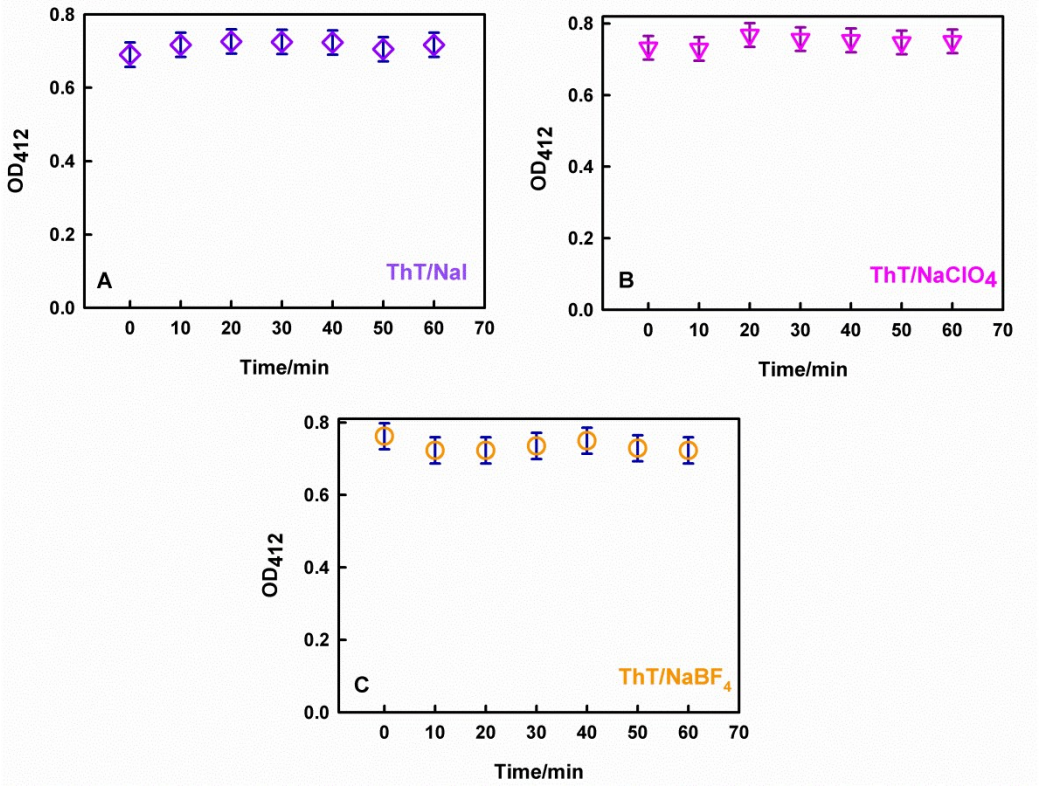

Figure S13: Variation in the OD of ThT (60 μM) at 412 nm as a function of time in the presence of (A) 0.8 M NaI (B) 1.1 M $NaClO_4$ (C) 4.8 M $NaBF_4$.

Table T1: Fitting parameters for transient decay trace of ThT-perchlorate system at different temperatures

Temperature (^{0}C)	a_1	τ_1/ns	a_2	τ_2/ns	a_3	τ_3/ns	χ^2
20	0.138	0.028	0.368	0.65	0.494	1.40	1.08
25	0.156	0.028	0.348	0.66	0.496	1.39	1.11
30	0.191	0.027	0.418	0.72	0.391	1.42	1.09
35	0.153	0.029	0.474	0.74	0.373	1.42	1.10
40	0.214	0.027	0.494	0.81	0.292	1.44	1.06

45	0.305	0.028	0.452	0.84	0.243	1.42	1.05
50	0.375	0.030	0.401	0.87	0.224	1.42	1.04
55	0.475	0.027	0.363	0.91	0.162	1.42	1.06