# Supplementary Information

## Excited State Intermolecular Proton Transfer Dependent on Substitution Pattern of Anthracene–Diurea Compounds involved in Fluorescent ON$^1$–OFF–ON$^2$ response by the Addition of Acetate Ions

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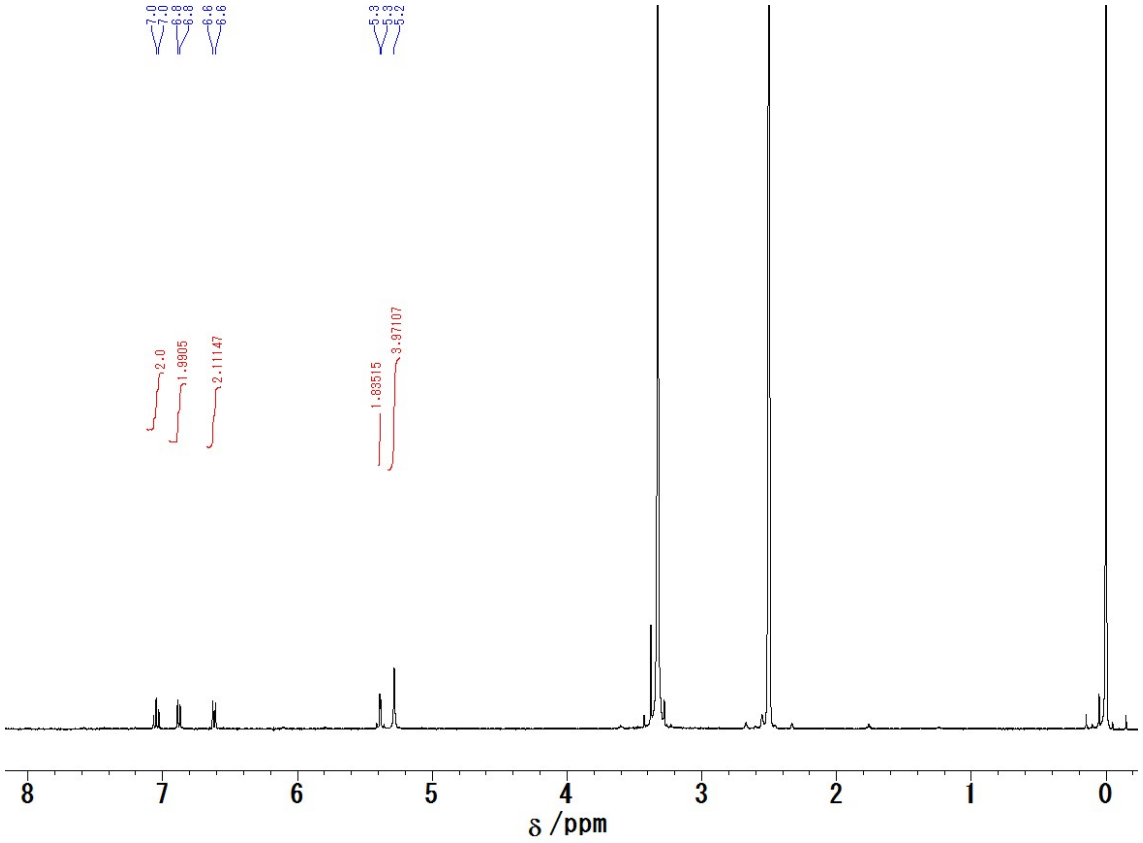


Fig. S1. $^{1}$H NMR spectrum of **1,5-diaminoanthracene**.

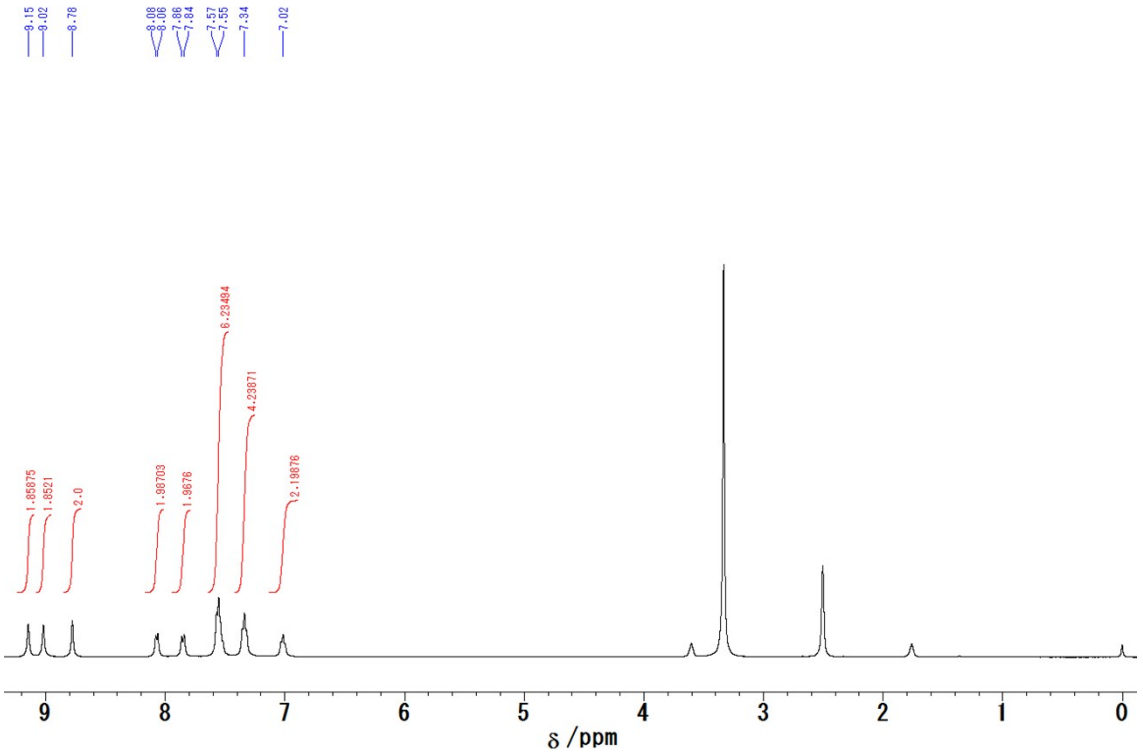


Fig. S2. $^{1}$H NMR spectrum of **1,5BPUA**.

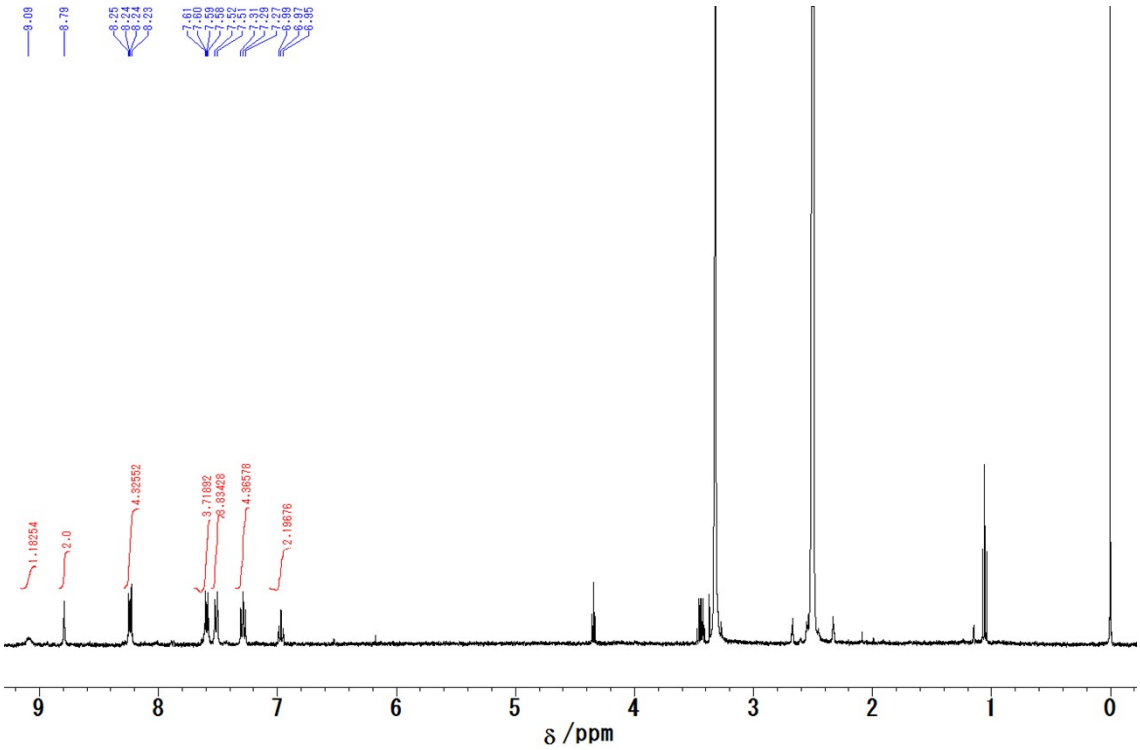


Fig. S3. $^{1}$H NMR spectrum of **9,10BPUA**.

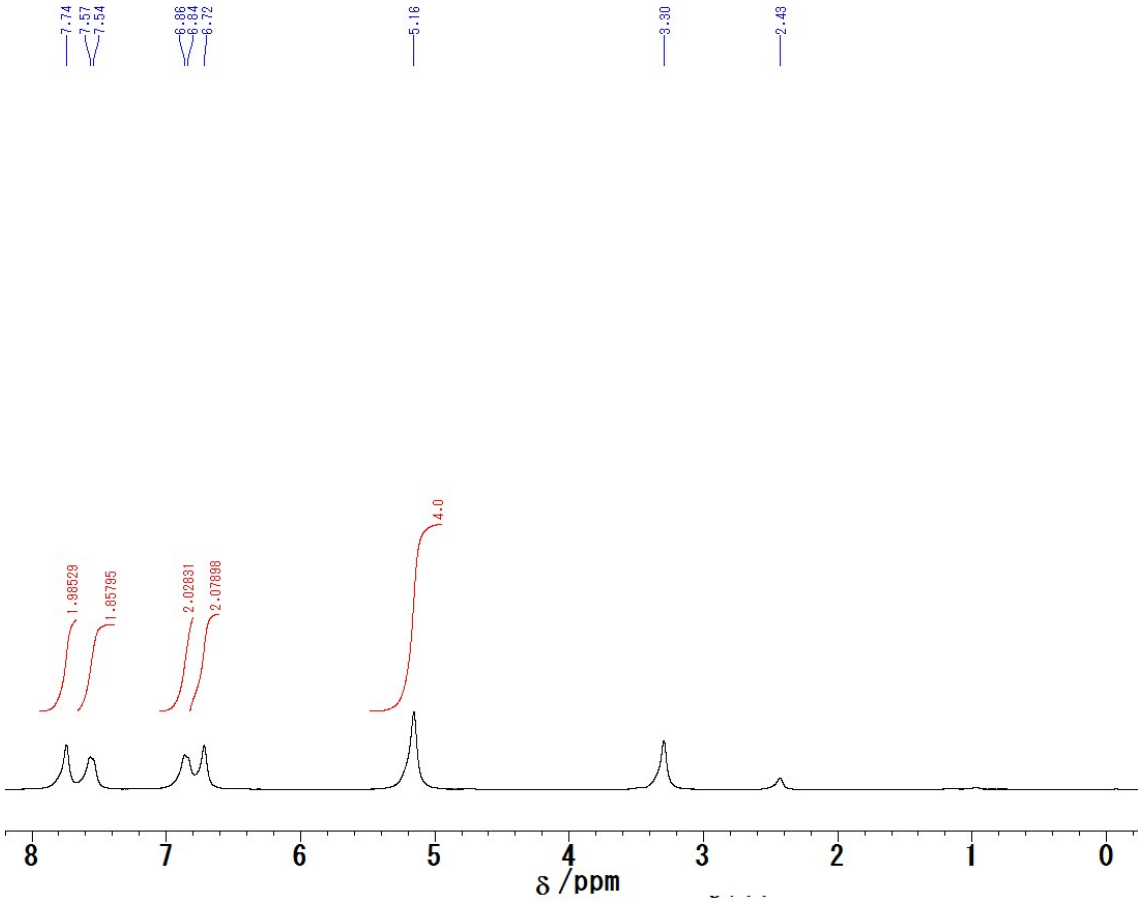


Fig. S4. $^{1}$H NMR spectrum of **2,6-diaminoanthracene**.

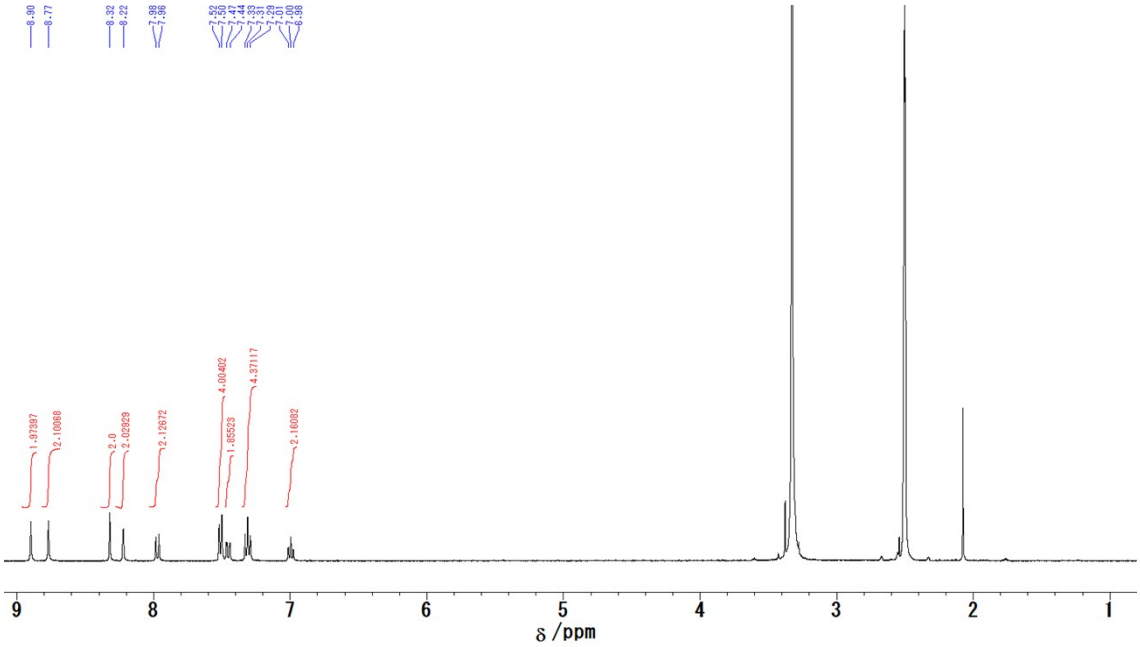


Fig. S5. $^{1}$H NMR spectrum of **2,6BPUA**.

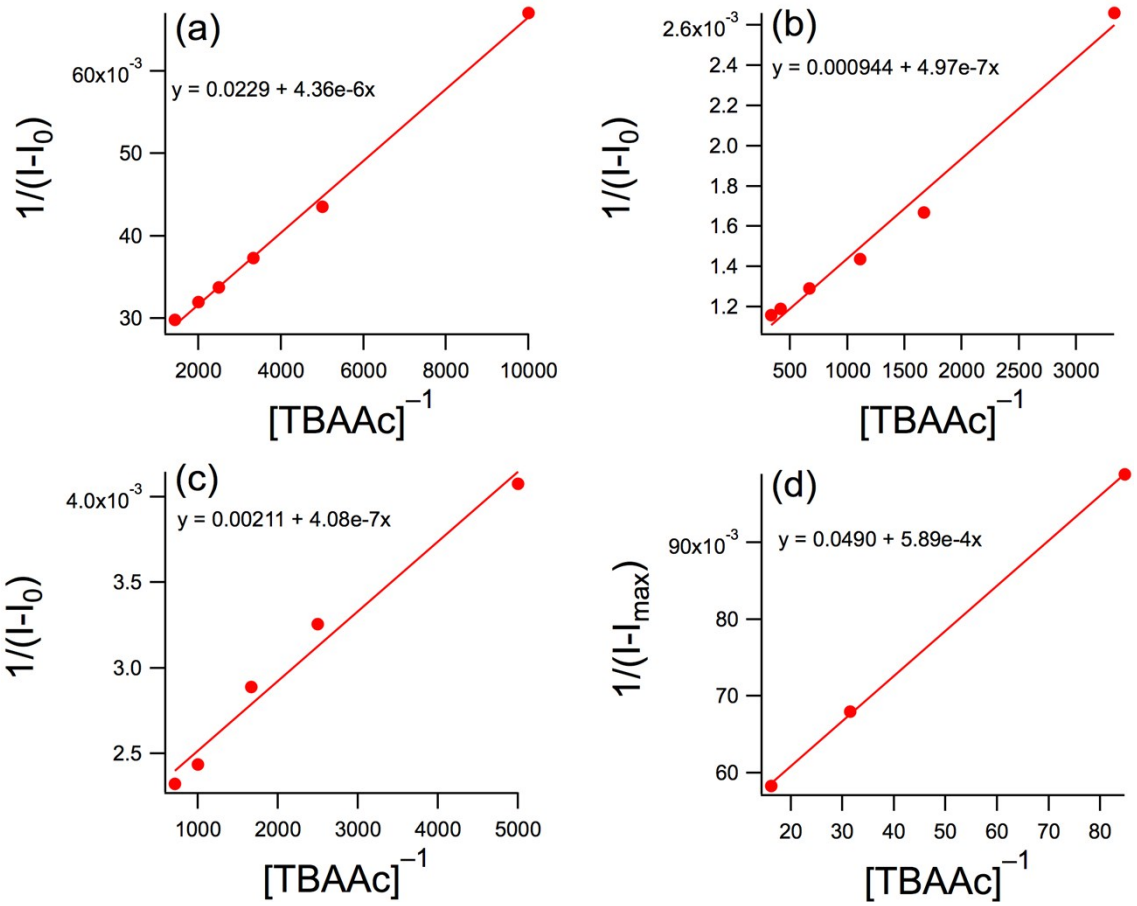


Fig. S6. Theoretical fits to estimate association constants of (a) **1,5BPUA** (b) **2,6BPUA** (c) **9,10BPUA** ($K_{a1}$) (d) **9,10BPUA** ($K_{a2}$).

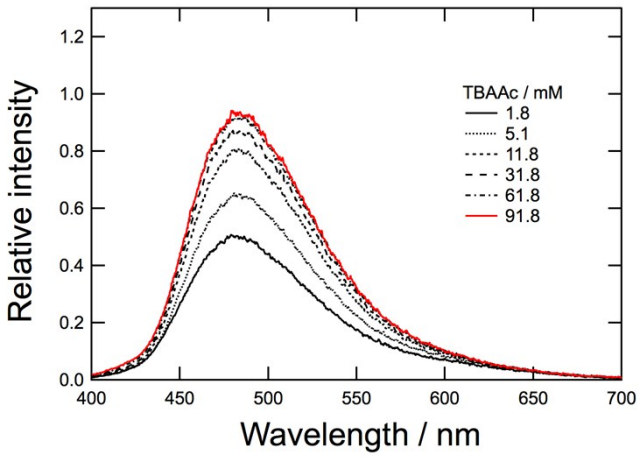


Fig. S7. Changes in the fluorescence spectra of **9,10BPUA** ($8.6 \times 10^{-6}$ M) in the presence of TBAAc (1.8-91.8 mM).

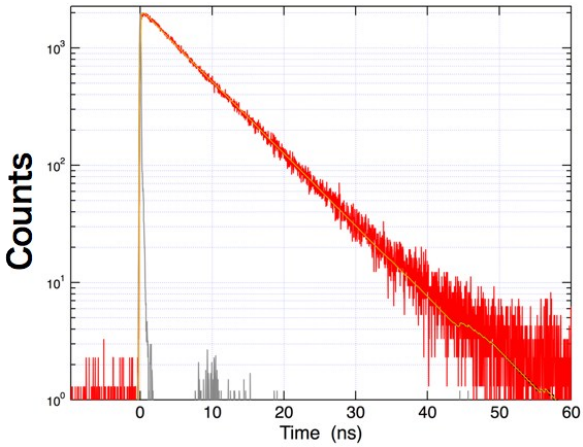


Fig. S8. Fluorescence decay of **1,5BPUA** in the absence of TBAAc monitored at 450 nm.

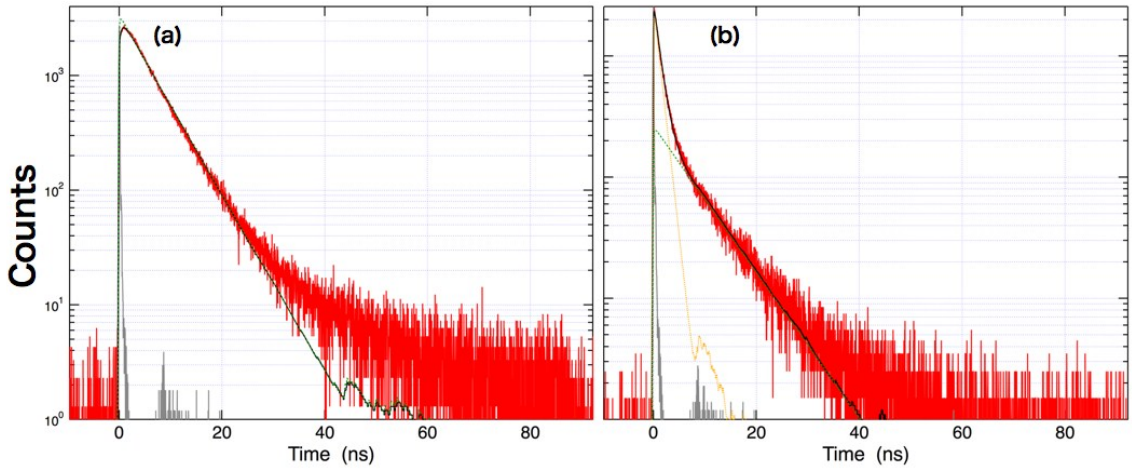


Fig. S9. Fluorescence decay of **1,5BPUA** in the presence of TBAAc (3.0 mM) monitored at (a) 450 nm and (b) 630 nm.

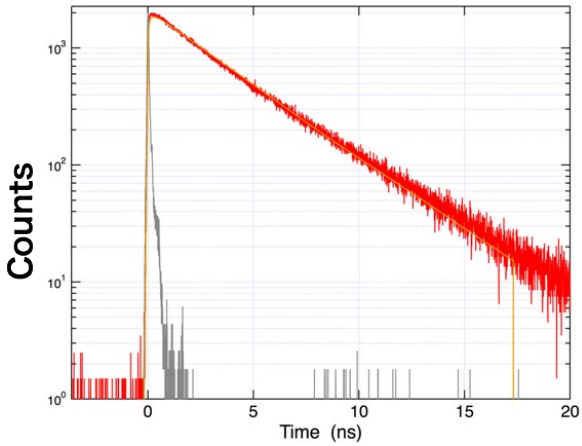


Fig. S10. Fluorescence decay of **9,10BPUA** in the absence of TBAAc monitored at 450 nm.

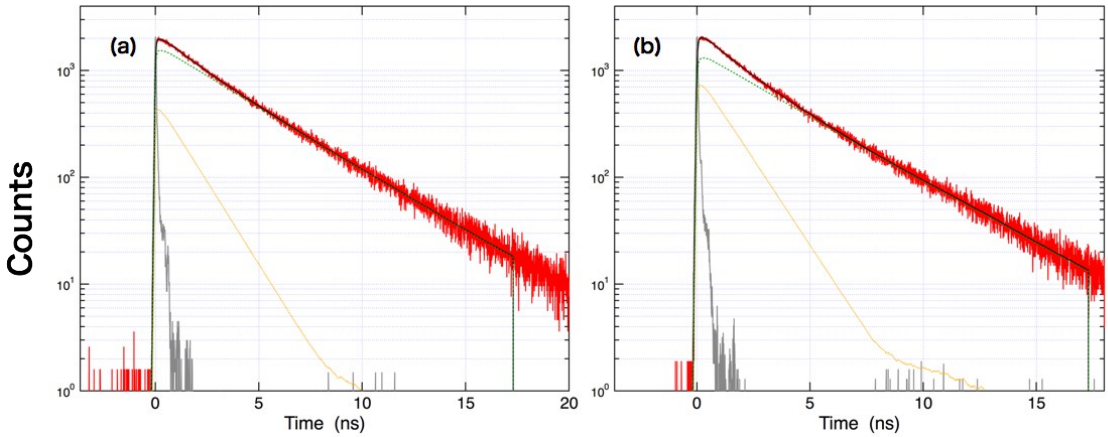


Fig. S11. Fluorescence decay of **9,10BPUA** in the presence of TBAAc (0.8 mM) monitored at (a) 450 nm and (b) 600 nm.

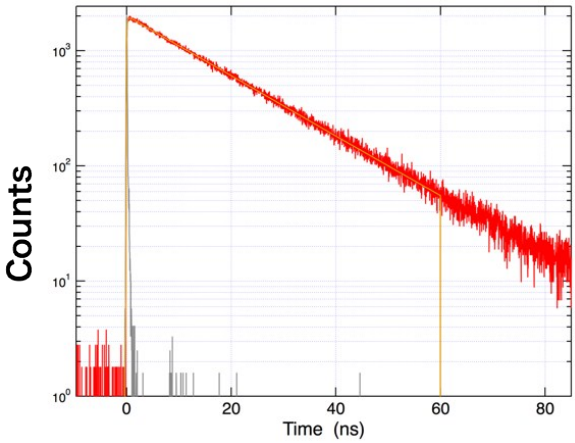


Fig. S12. Fluorescence decay of **2,6BPUA** in the absence of TBAAc monitored at 450 nm.

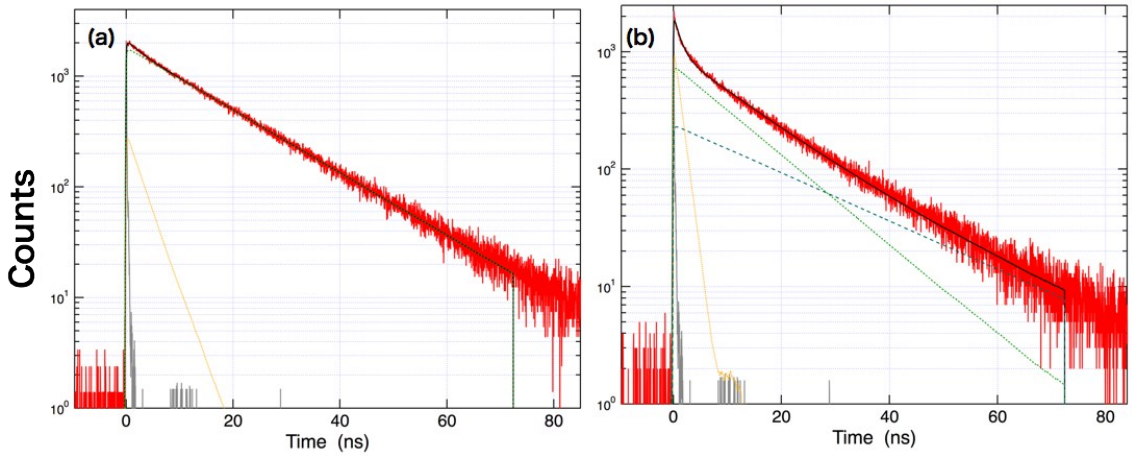


Fig. S13. Fluorescence decay of **2,6BPUA** in the presence of TBAAc (8.1 mM) monitored at (a) 450 nm and (b) 600 nm.

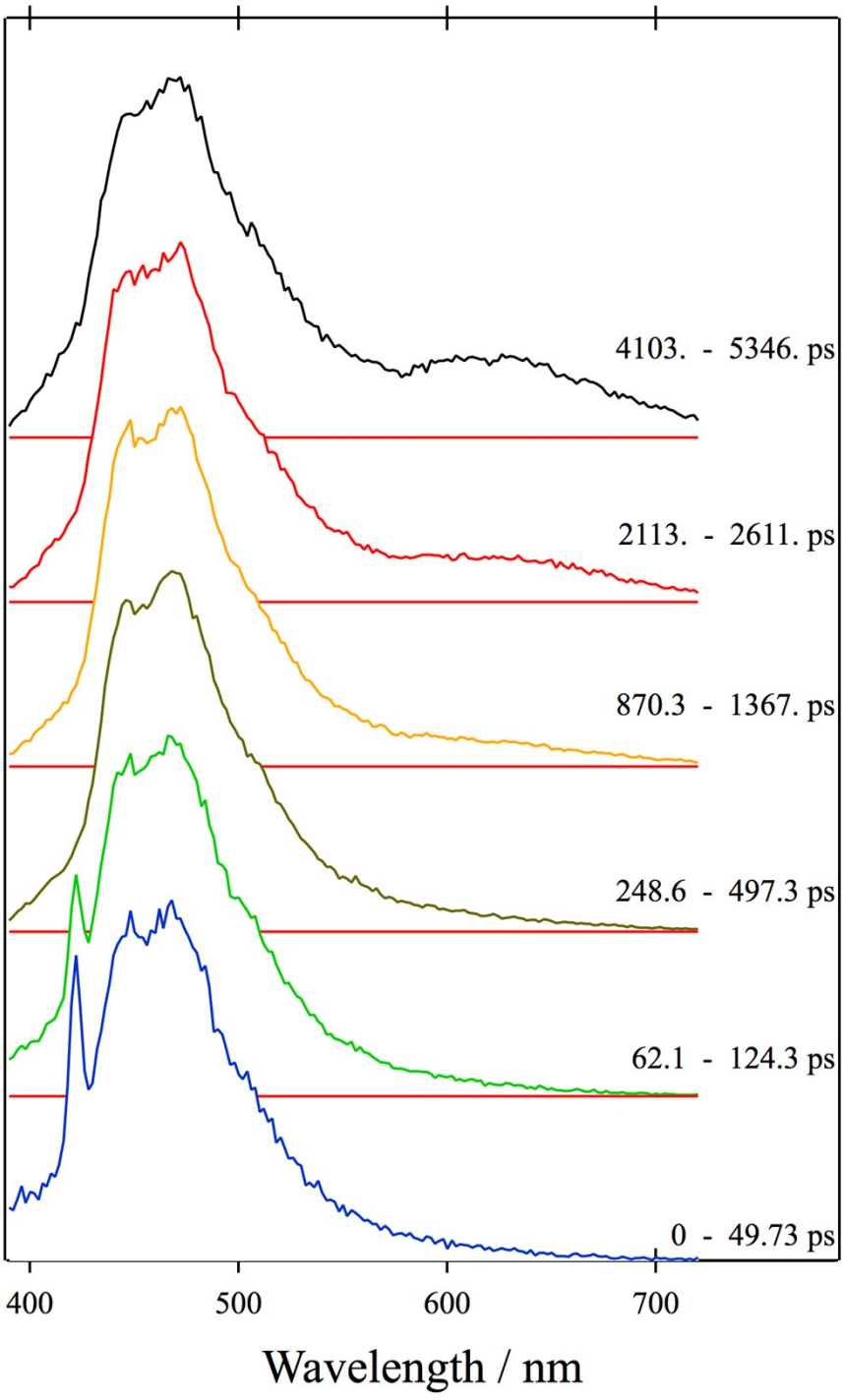


Fig. S14. Time-resolved fluorescence spectra of **1,5BPUA** in the presence of TBAAc (3.0 mM) in DMSO. Spectra were normalized at maximum intensity.

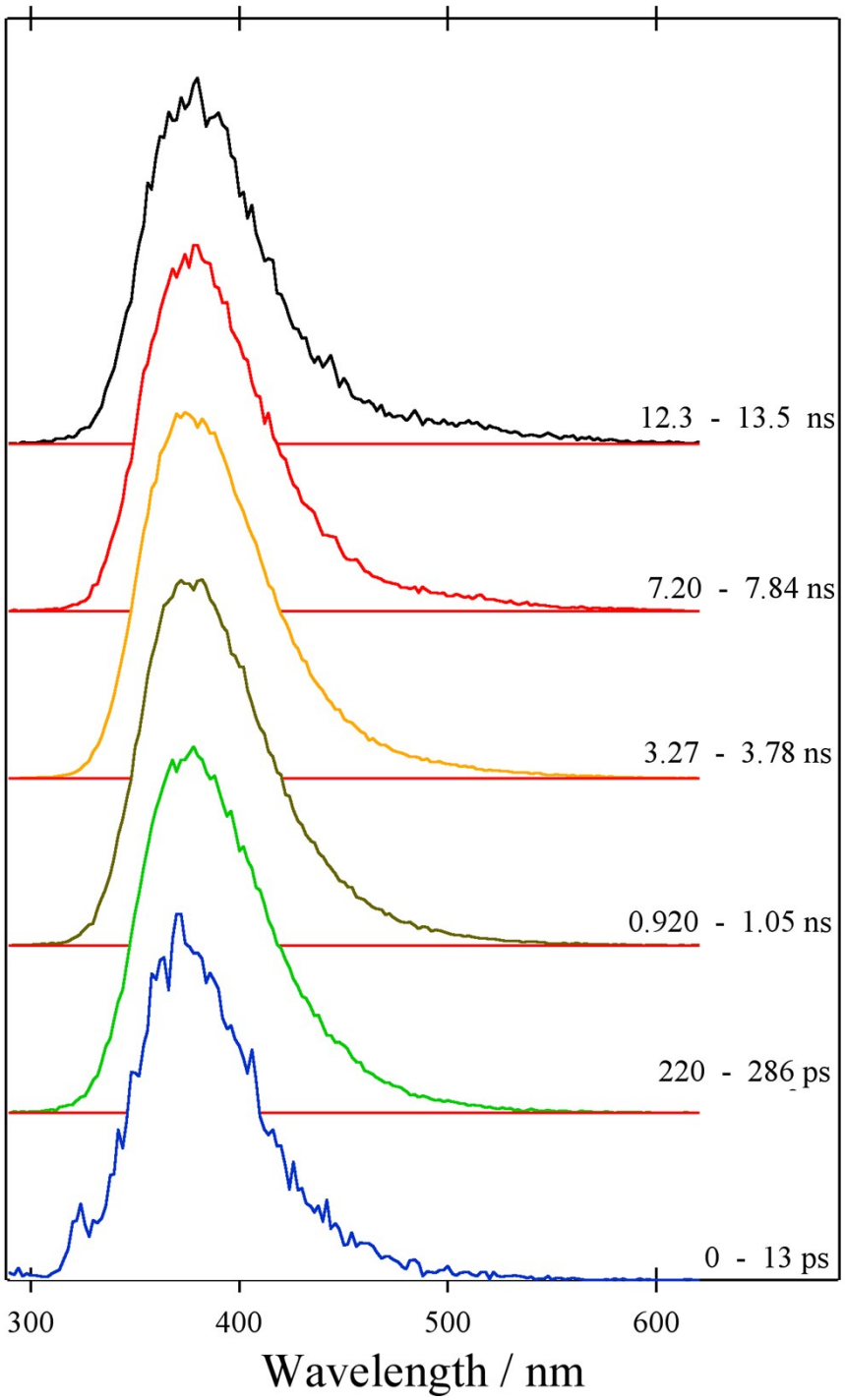


Fig. S15. Time-resolved fluorescence spectra of **9,10BPUA** in the presence of TBAAc (0.8 mM) in DMSO. Spectra were normalized at maximum intensity.

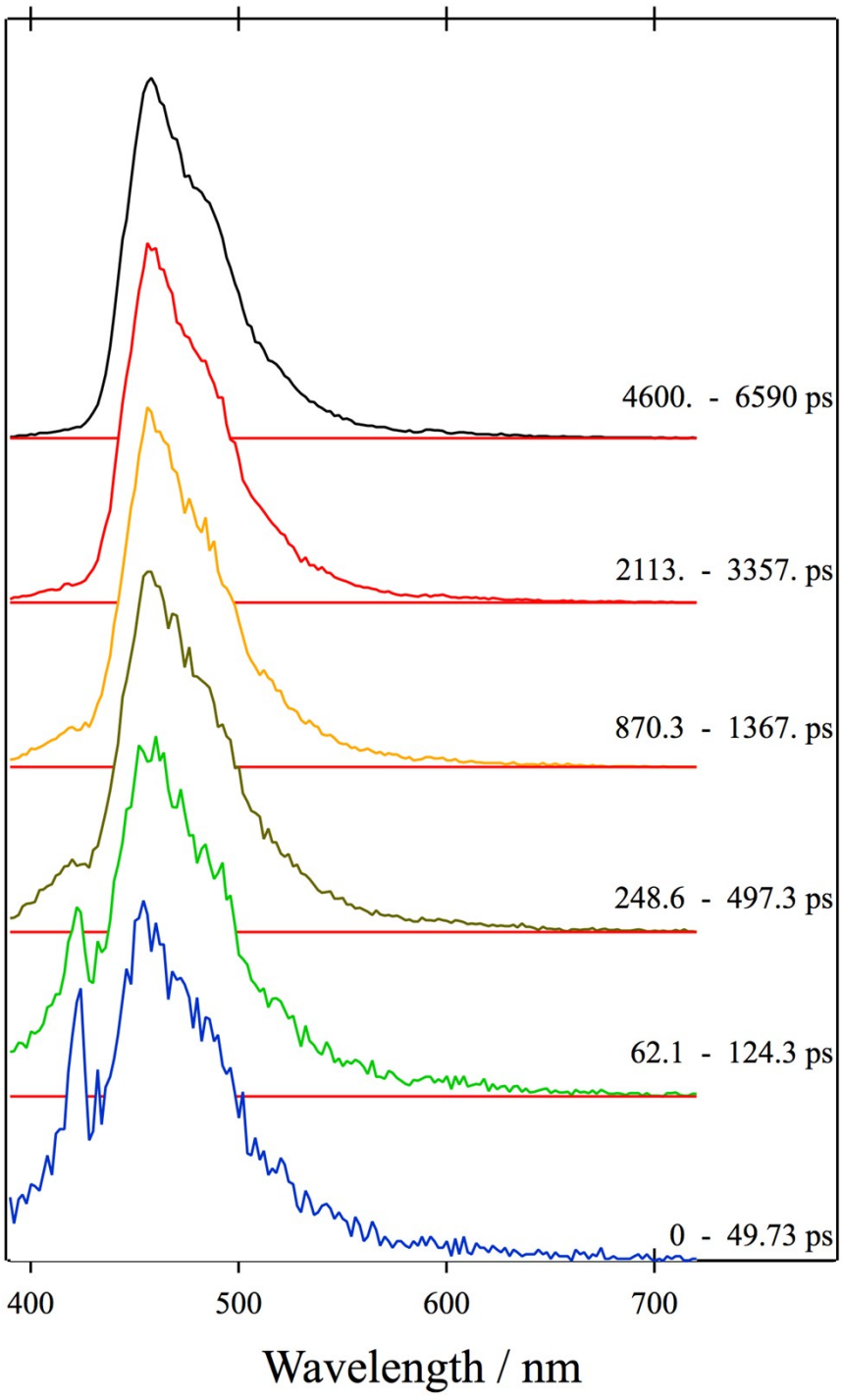


Fig. S16. Time-resolved fluorescence spectra of **2,6BPUA** in the presence of TBAAc (8.1 mM) in DMSO. Spectra were normalized at maximum intensity.

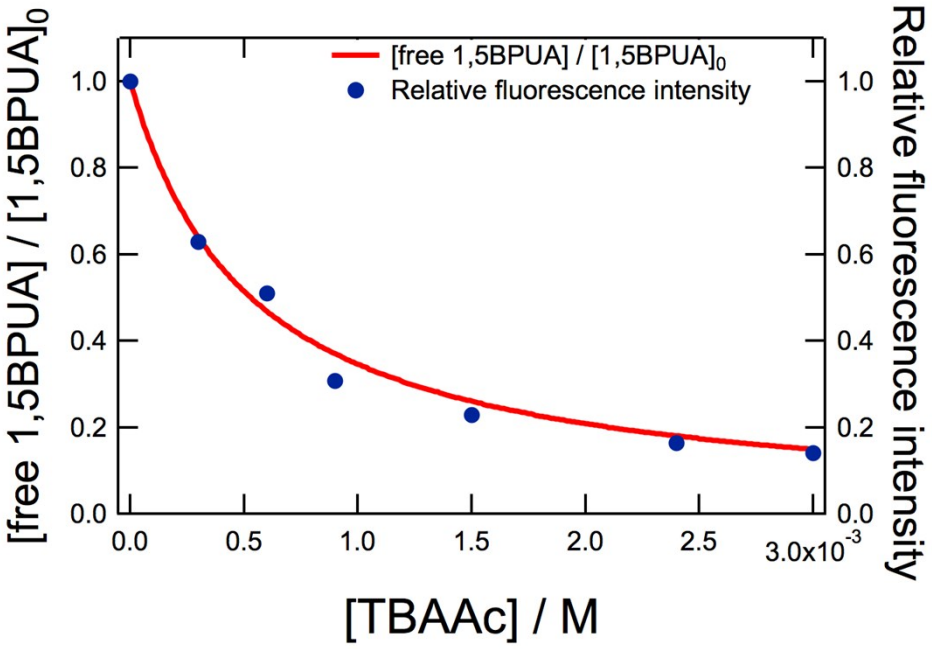


Fig. S17. Evaluation of the emissive property of the complex of **1,5BPUA** with TBAAc.

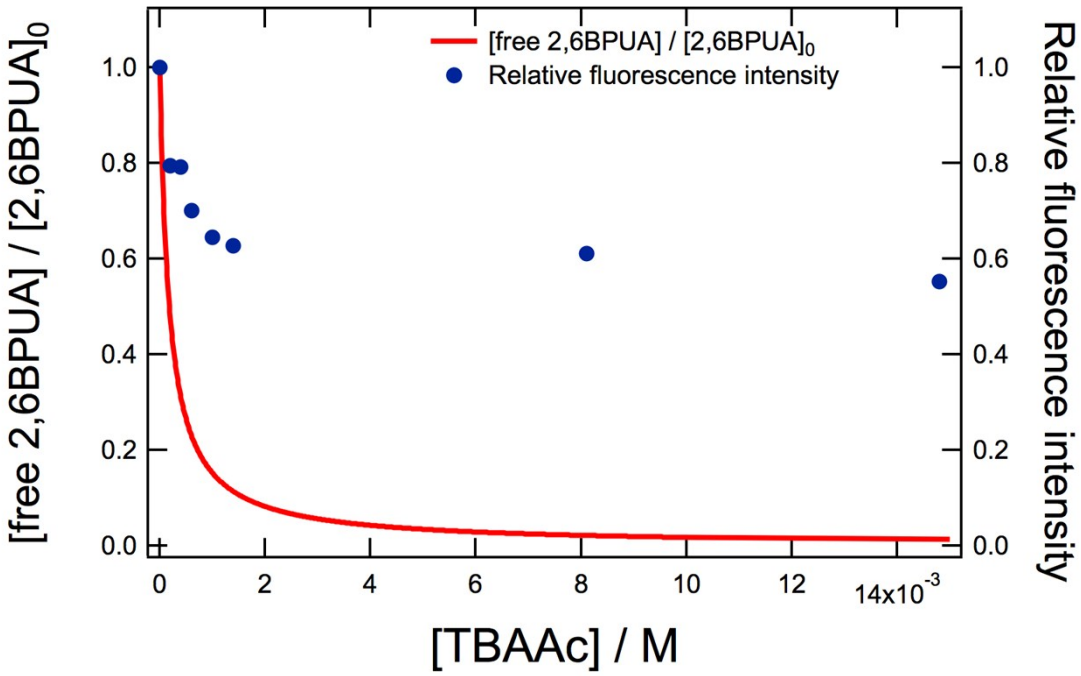


Fig. S18. Evaluation of the emissive property of the complex of **2,6BPUA** with TBAAc.

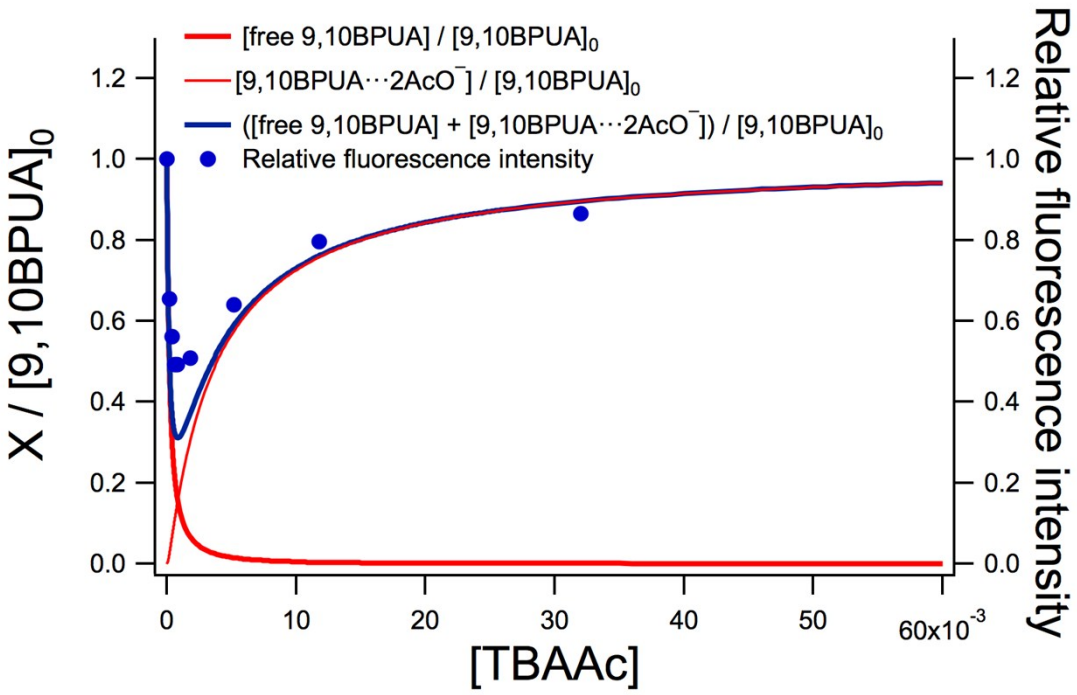


Fig. S19. Evaluation of the emissive property of the complex of **9,10BPUA** with TBAAc.

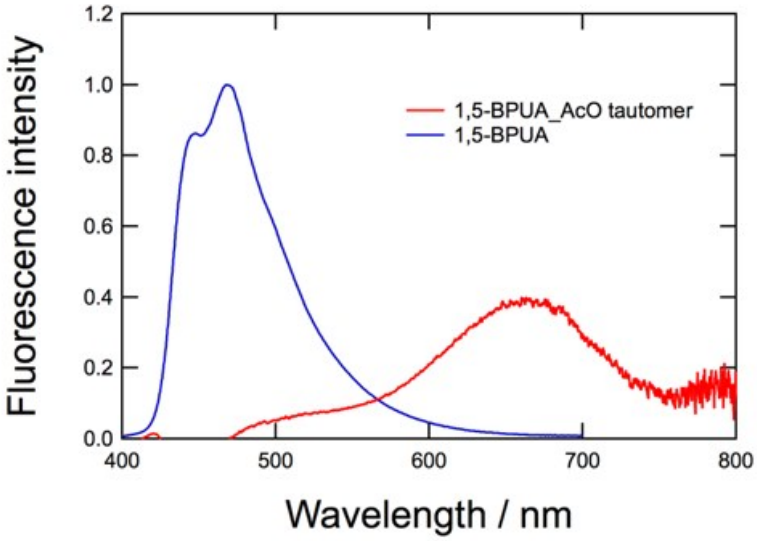


Fig. S20. Fluorescence spectra of tautomer of **1,5BPUA** (red line) separated by subtraction.

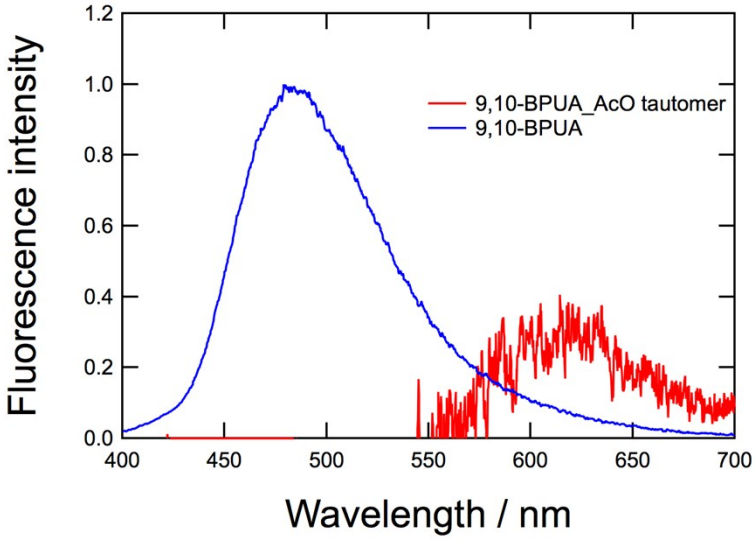


Fig. S21. Fluorescence spectra of **9,10BPUA** tautomer (red line) separated by subtraction.

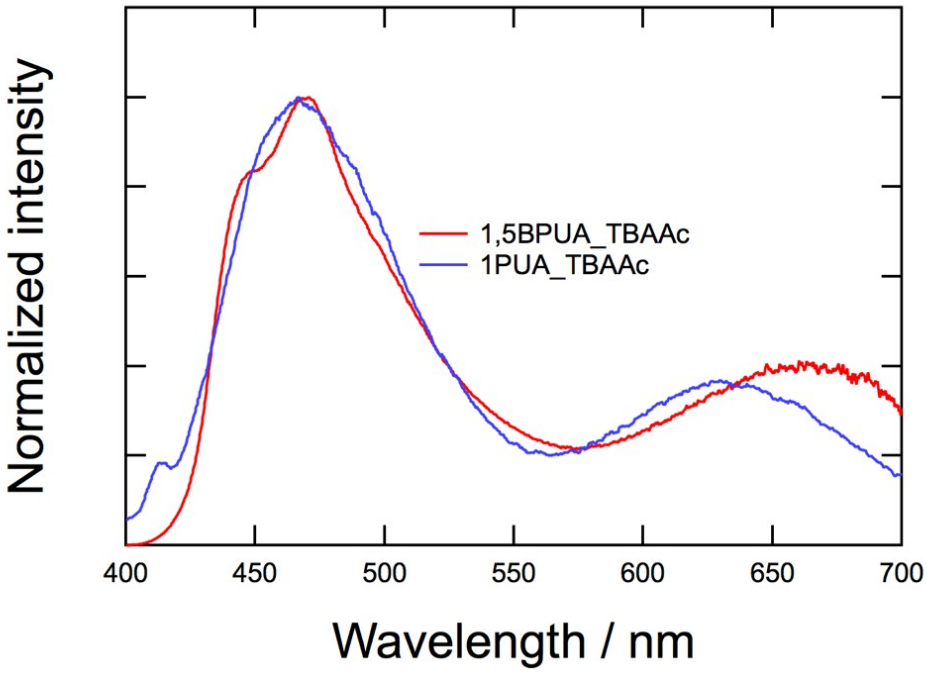


Fig. S22. Fluorescence spectra of **1,5BPUA** and **1PUA** in the presence of TBAAc (3.0 and 1.0 mM, respectively)

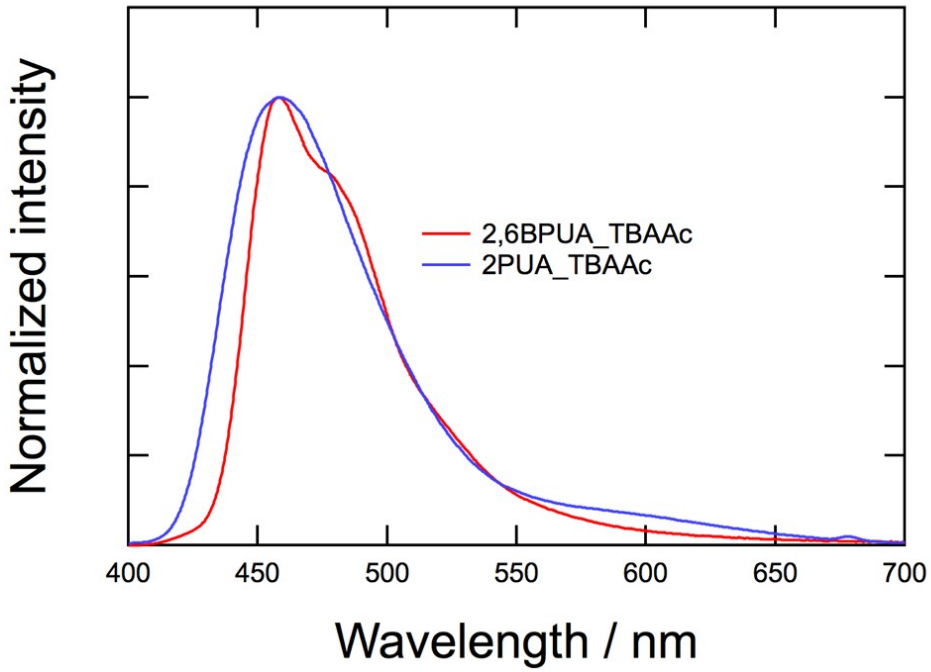


Fig. S23. Fluorescence spectra of **2,6BPUA** and **2PUA** in the presence of TBAAc (8.1 and 1.0 mM, respectively)

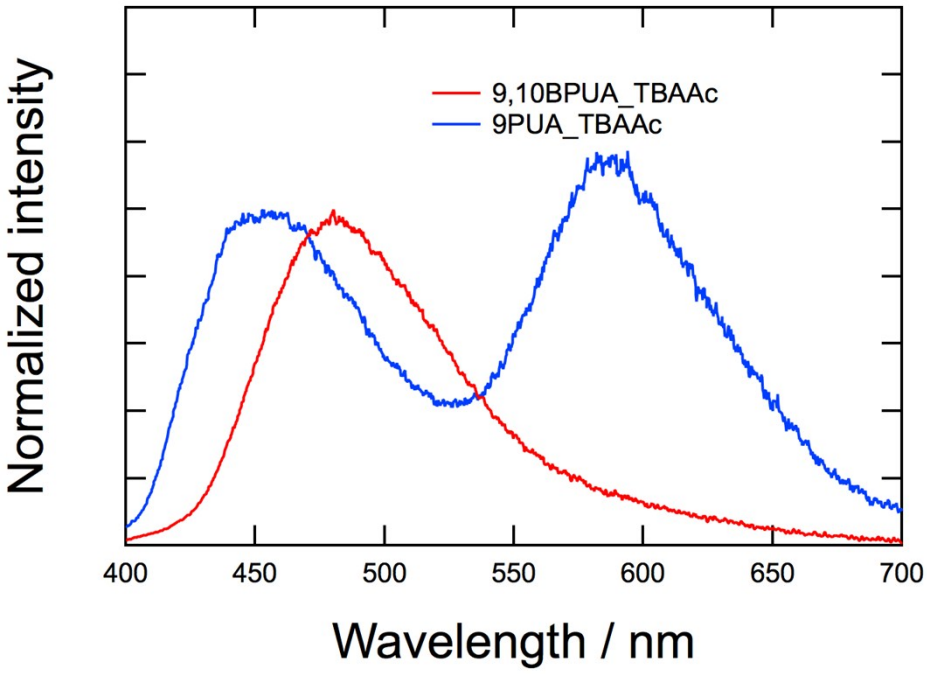


Fig. S24. Fluorescence spectra of **9,10BPUA** and **9PUA** in the presence of TBAAc (0.8 and 1.0 mM, respectively)