Supplementary Information

Synthesis, and optical and electrochemical properties of julolidine-structured pyrido[3,4-b]indole dye

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Fig. S1 (a) $^1$H HMR (400 MHz) and (b) $^{13}$C HMR (125 MHz) of 1 in CDCl$_3$. 

S2
Fig. S2 (a) $^1$H HMR (400 MHz) and (b) $^{13}$C HMR (125 MHz) of 2 in CDCl₃.
Fig. S3 (a) $^1$H HMR (500 MHz) and (b) $^{13}$C HMR (125 MHz) of 3 in CD$_2$Cl$_2$. 

S4
Fig. S4 (a) $^1$H HMR (500 MHz) and (b) $^{13}$C HMR (125 MHz) of ET-1 in CD$_2$Cl$_2$. 
Fig. S5 \(^1\)H NMR spectra (500 MHz) of (a) ET-1 and (b) 9-MP with and without the addition of 1 eq BF\(_3\)-O\(\text{Et}_2\) in acetonitrile-d\(_3\).
Fig. S6 $^1$H NMR spectra (500 MHz) of (a) ET-1 and (b) 9-MP with and without the addition of 1.5 eq CF$_3$COOH in acetonitrile-d$_3$. 