Supplementary Information

A Highly Selective Fluorescent Chemosensor for Al^{3+} Based on 2,2':6',2”-Terpyridine with a Salicylal Schiff Base

Jiacheng Xu, a Hui Li, a Liangwei Li, a Jianzhi Wang, a Feng Wang a and Luying He a

a Key Laboratory for Green Chemical Process of Ministry of Education, School of Chemical Engineering and Pharmacy, Wuhan Institute of Technology, 430205 Wuhan, P.R. China

Figure S1. FTIR spectrum (KBr) of TPySB and TPySSB.

*e-mail: sodium2008@wit.edu.cn
Figure S2. $^1$H NMR spectrum (400 MHz, acetone-$d_6$) of TPySSB.

Figure S3. $^{13}$C NMR spectrum (100 MHz, acetone-$d_6$) of TPySSB.
Figure S4. $^1$H NMR spectrum (400 MHz, acetone-$d_6$) of TpySB.

Figure S5. Effect of pH on the fluorescence intensity of TPySSB and TPySSB-Al$^{3+}$. 
Figure S6. The plots of fluorescence intensity against time for TPySSB upon addition of 10 equiv. of Al\(^{3+}\) in ethanol.

Figure S7. Reversibility of TPySSB (1 × 10\(^{-5}\) mol L\(^{-1}\)) in the presence of Al\(^{3+}\) ions (1 × 10\(^{-4}\) mol L\(^{-1}\)) or EDTA (1 × 10\(^{-4}\) mol L\(^{-1}\)) in ethanol.
Figure S8. Fluorescence response of receptor TPySB (1 \times 10^{-5} \text{ mol L}^{-1}). The black bar represents emission intensity after adding 10 equiv. selected metal ions in ethanol solution and red bar represents emission intensity after adding 10 equiv. of Al^{3+} ions in each of the above samples. Excitation wavelength: 258 nm.

Figure S9. Job’s plot for the complexation of TPySB with Al^{3+} in ethanol.
Figure S10. Electrospray ionization MS spectrum of TPySSB with Al(NO$_3$)$_3$\cdot$9$H$_2$O (2.2 equiv.) in acetone.