Supporting Information

Selective Fluorescence Assay of Aluminum and Cyanide Ions Using Chemosensor Containing Naphthol

Soojin Kim,[1§] Jin Young Noh,[2§] Yu Jeong Na,[2] Ga Ye Lee,[1] In Hong Hwang,[2] Jisook Min,[3] Cheal Kim,[2]* Jinheung Kim[1]*

[1]*Department of Chemistry and Nano Science,* Global Top 5 Research Program,

Ewha Womans University, Seoul 120-750, Korea

[2]*Department of Fine Chemistry,*

Seoul National University of Science and Technology, Seoul, Korea

[3]*National Forensic Service, Seoul, 158-707, Korea*

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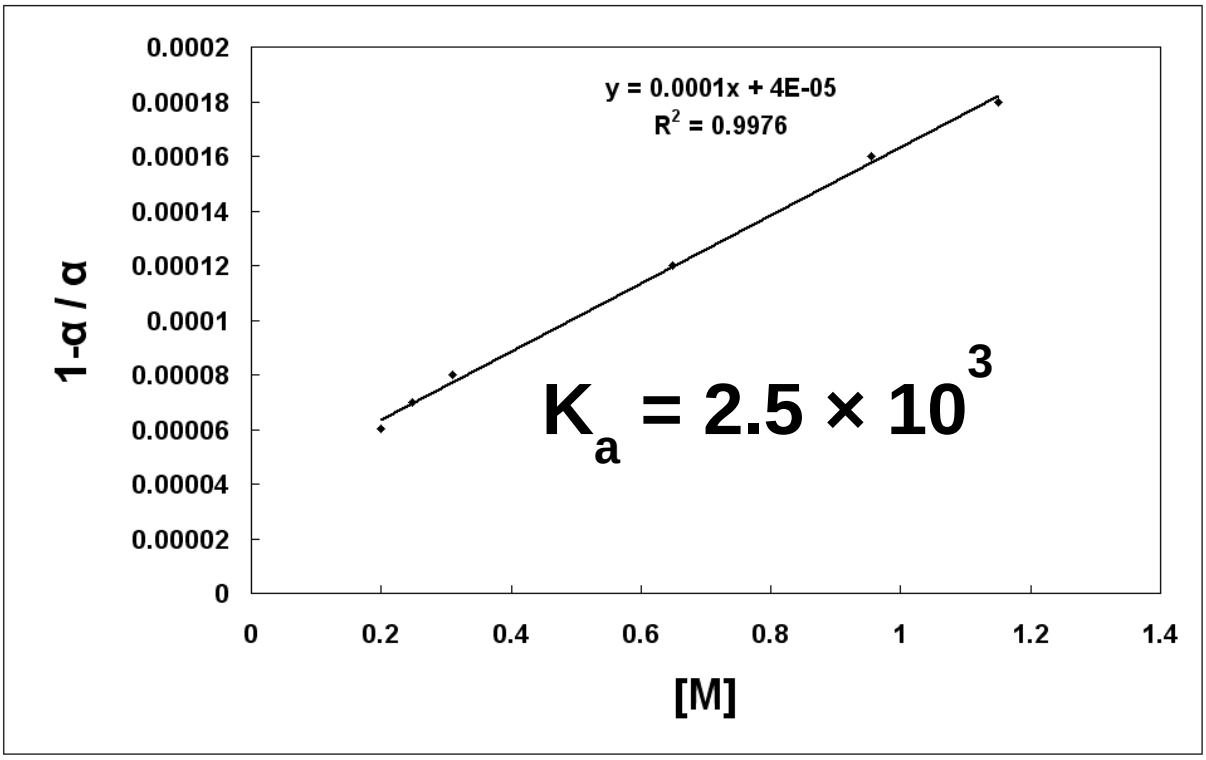

Fig. S1. Benesi-Hildebrand plot (intensity at 517 nm) of N-naph, assuming 1:1 stoichiometry for association between N-naph and Al^{3+}.

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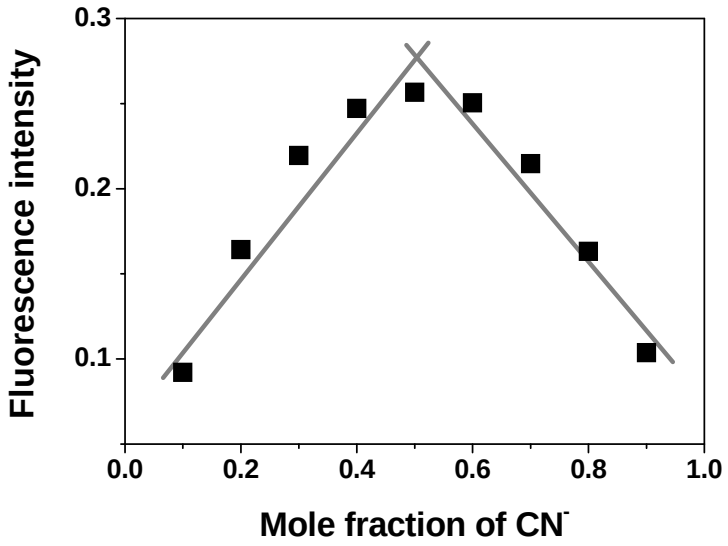

Fig. S2. Job's plot of 1:1 complex of N-naph and Al^{3+}, where the intensity at 515 nm was plotted against the mole fraction of aluminium ions. The total concentration of aluminium ions with N-naph was 10 μM.

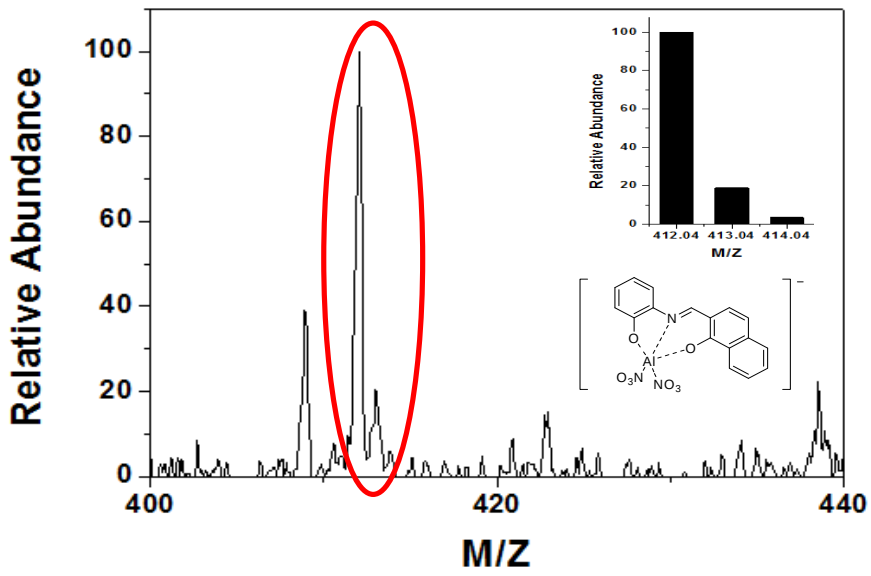

Fig. S3. ESI-MS of PNI (1.0 μM) + $Al(NO_3)_3$ in Tris buffer. Inset, calculated isotope pattern represented by bars under the peak cluster.

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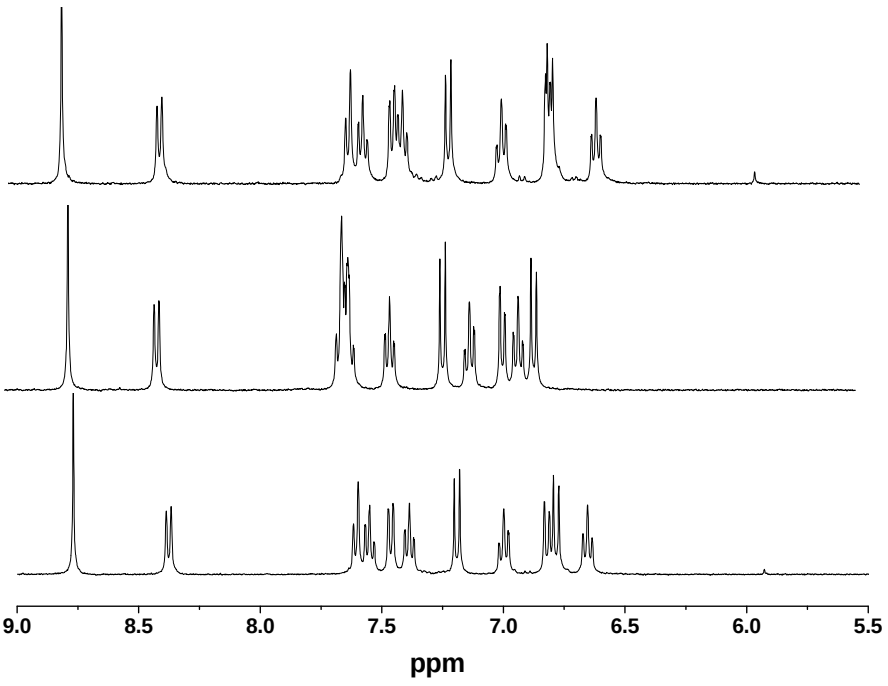

Fig. S4. Plots of ^{1}H-NMR spctra of PNI on addition of 0, 1, and 2 equiv CN^- (from the bottom) in CD_3OD.

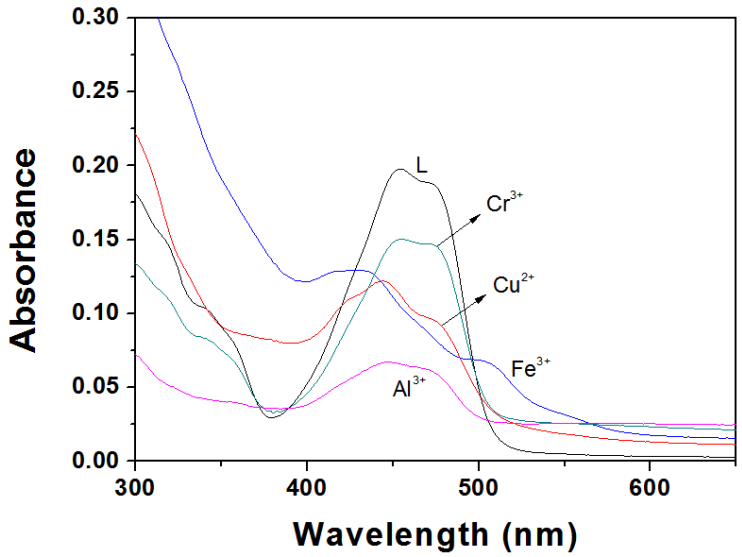

Figure S5. Absorption spectra of aluminum ion (34 μM) and PNI (10 μM) in the absence and presence of competing metal ions, such as Cu^{2+}, Cr^{3+}, and Fe^{3+} (34 μM) in 50 mM Tris buffer. L stands for PNI.

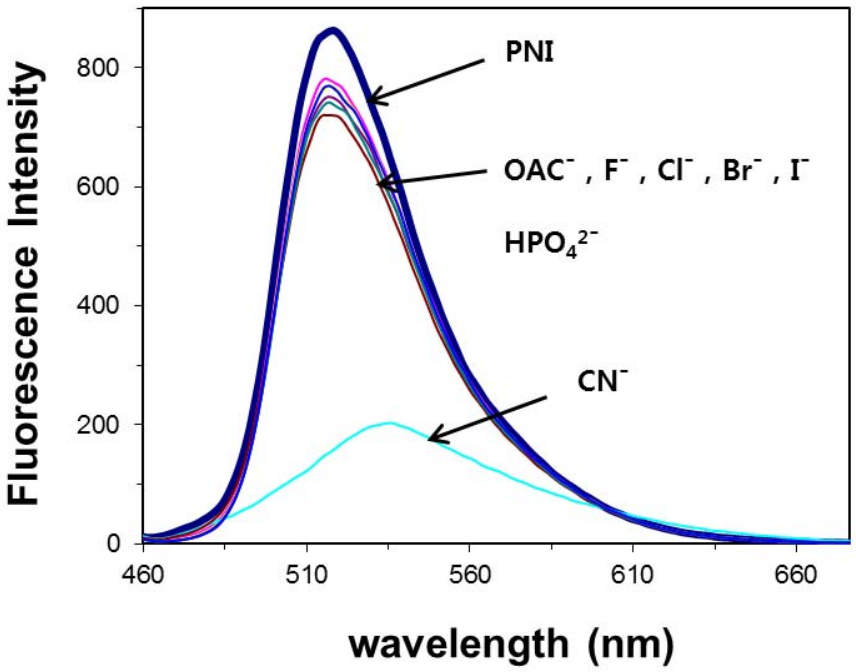

Figure S6. Fluoresence spectral changes of 20 μM PNI obtained at 518 nm upon the addition of 100 equiv of various anions in methanol. All fluorescence spectra were acquired with excitation at 450 nm.