

Supplementary materials

An anionic chromogenic chemosensor based on 4-(4-nitrobenzylideneamine)-2,6-diphenylphenol for selective detection of cyanide in acetonitrile–water mixtures

Vanderléia G. Marini,^a Eliane Torri,^a Lizandra M. Zimmermann,^a and Vanderlei G. Machado^{a,b*}

^a*Departamento de Química, Universidade Regional de Blumenau, FURB, CP 1507, Blumenau, SC, 89010–971, Brazil*

^b*Departamento de Química, Universidade Federal de Santa Catarina, UFSC, Florianópolis, SC, 88040–900, Brazil*

E-mail: vander@gmc.ufsc.br

Table of Contents

1. **Figure S1.** UV–vis spectra and titration curve for the behavior of **3a** in acetonitrile with 1.0% of water and the addition of increasing amounts of F[−] S2
2. **Figure S2.** UV–vis spectra and titration curve for the behavior of **3a** in acetonitrile with the addition of increasing amounts of CN[−] S3
3. **Figure S3.** IR spectrum of compound **3a** S4
4. **Figure S4.** ¹H NMR spectrum of compound **3a** (400 MHz, CDCl₃) S5
5. **Figure S5.** ¹³C NMR spectrum of compound **3a** (100.6 MHz, CDCl₃) S6
6. **Figure S6.** APT spectrum of compound **3a** (100.6 MHz, CDCl₃) S7

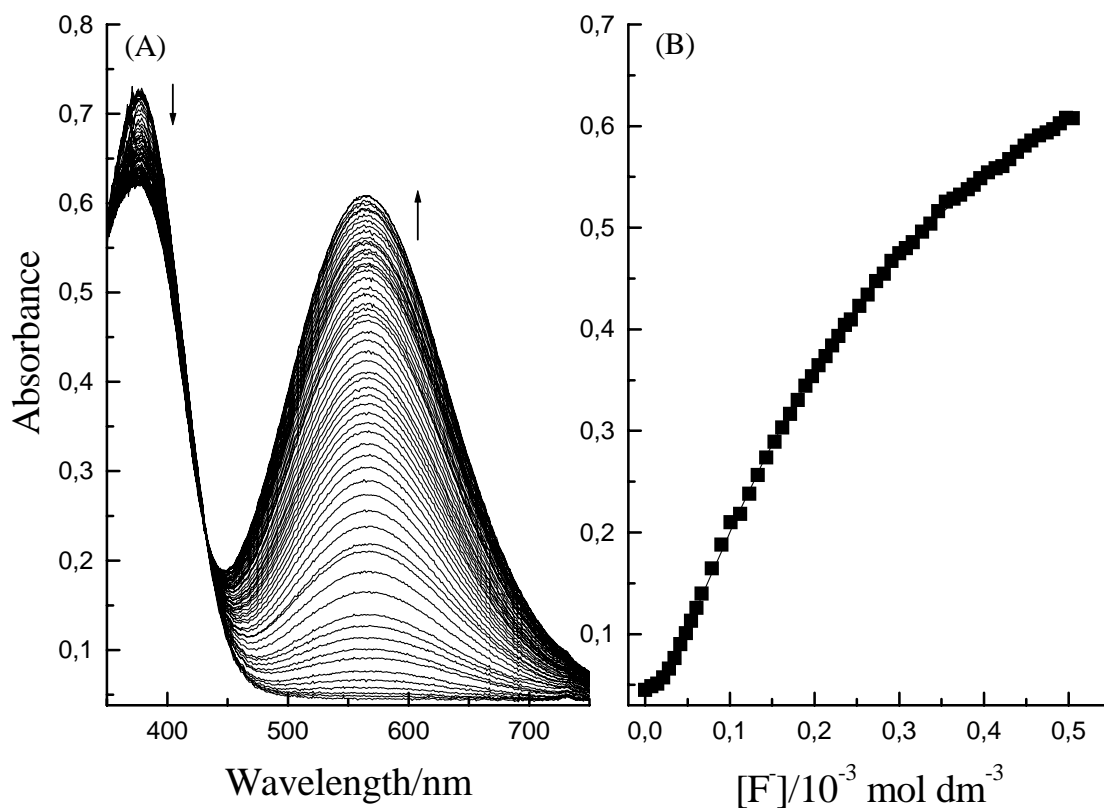


Figure S1. (A) UV-vis spectra at 25°C for the behavior of **3a** (5.9×10^{-5} mol dm⁻³) in acetonitrile with 1.0% of water and the addition of increasing amounts of F⁻. (B) Titration curve for compound **3a** with F⁻. The final concentration of F⁻ was 5.2×10^{-4} mol dm⁻³ and the absorbance values were collected at 565 nm.

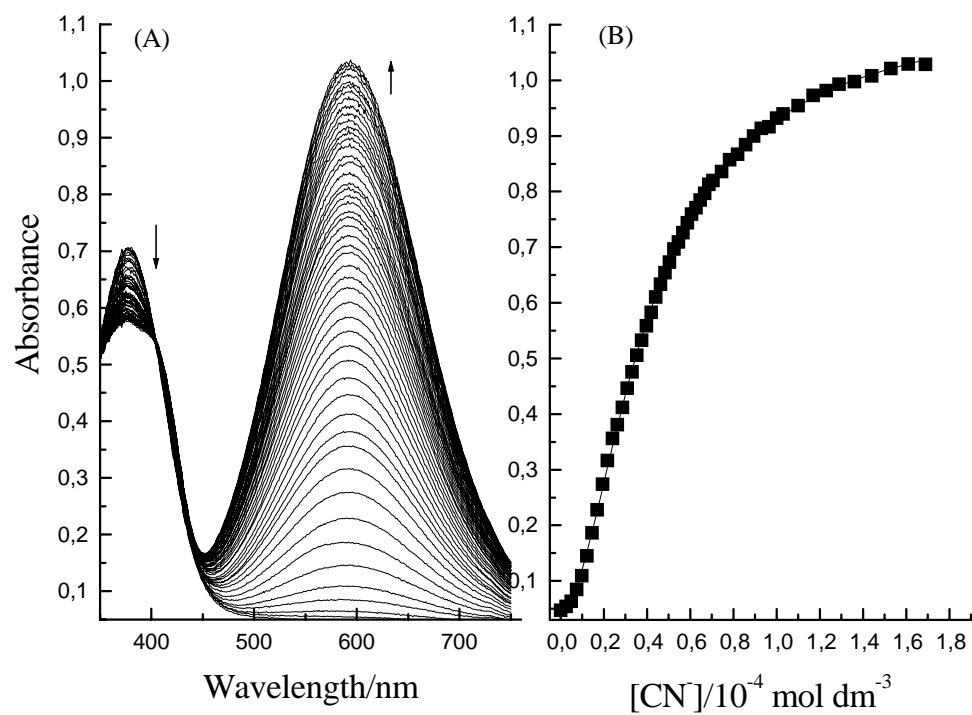


Figure S2. (A) UV-vis spectra at 25°C for the behavior of **3a** ($5.9 \times 10^{-5} \text{ mol dm}^{-3}$) in acetonitrile with the addition of increasing amounts of CN^- . (B) Titration curve for compound **3a** with CN^- . The final concentration of CN^- was $1.6 \times 10^{-4} \text{ mol dm}^{-3}$ and the absorbance values were collected at 592 nm.

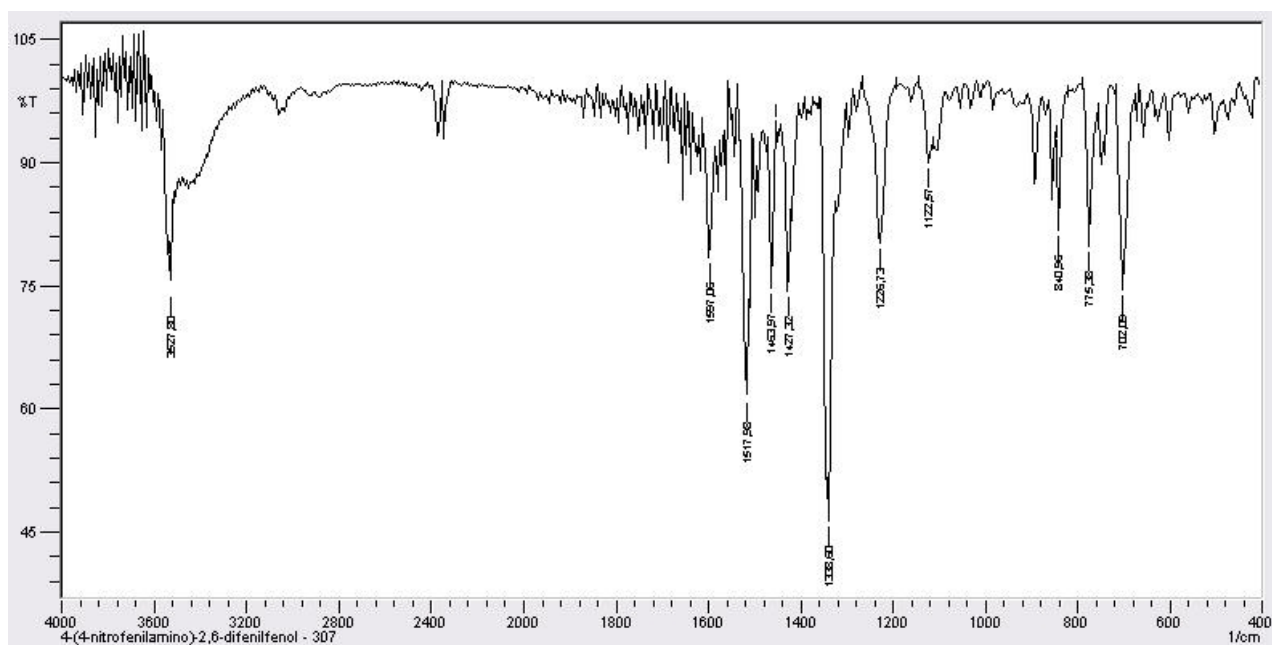


Figure S3. IR spectrum of compound **3a**.

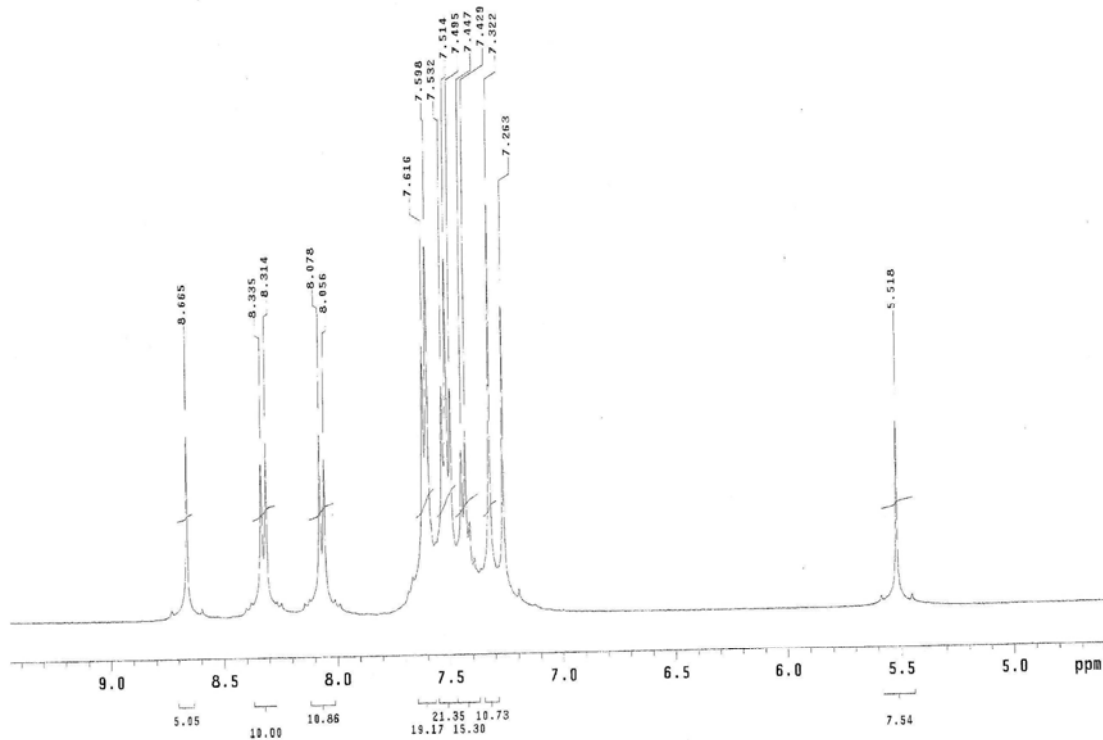


Figure S4. ¹H NMR spectrum of compound **3a** (400 MHz, CDCl₃).

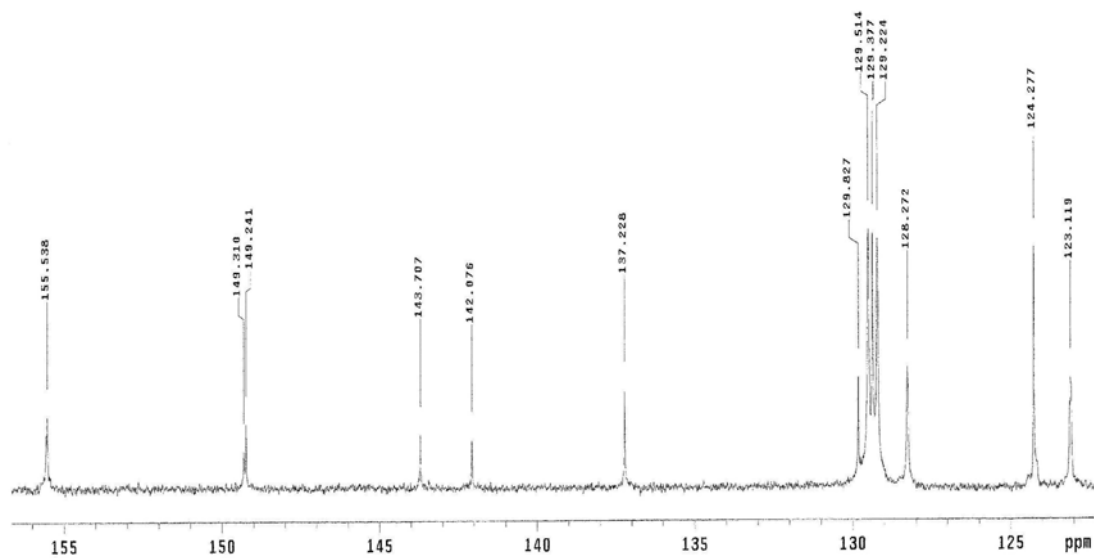


Figure S5. ^{13}C NMR spectrum of compound **3a** (100.6 MHz, CDCl_3).



Figure S6. APT spectrum of compound 3a (100.6 MHz, CDCl₃).