

Ionophore-Based Potassium Selective Fluorescent Organosilica Nano-Optodes Containing Covalently Attached Solvatochromic Dyes

Yupu Zhang ¹, Xinfeng Du ² and Xiaojiang Xie ^{1,*}

¹ Department of Chemistry, Southern University of Science and Technology, Shenzhen 518055, China; 12032864@mail.sustech.edu.cn

² School of Chemistry and Chemical Engineering, Harbin Institute of Technology, Harbin 150001, China; 11849569@mail.sustech.edu.cn

* Correspondence: xiexj@sustech.edu.cn

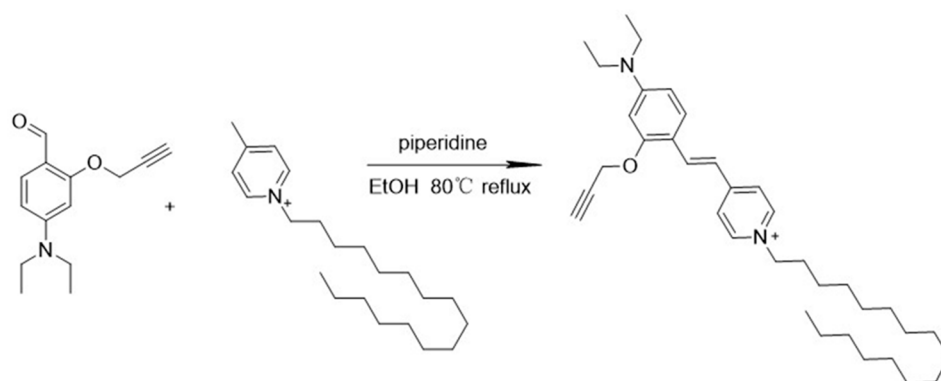


Figure S1. Synthesis of the solvatochromic dye (SD).

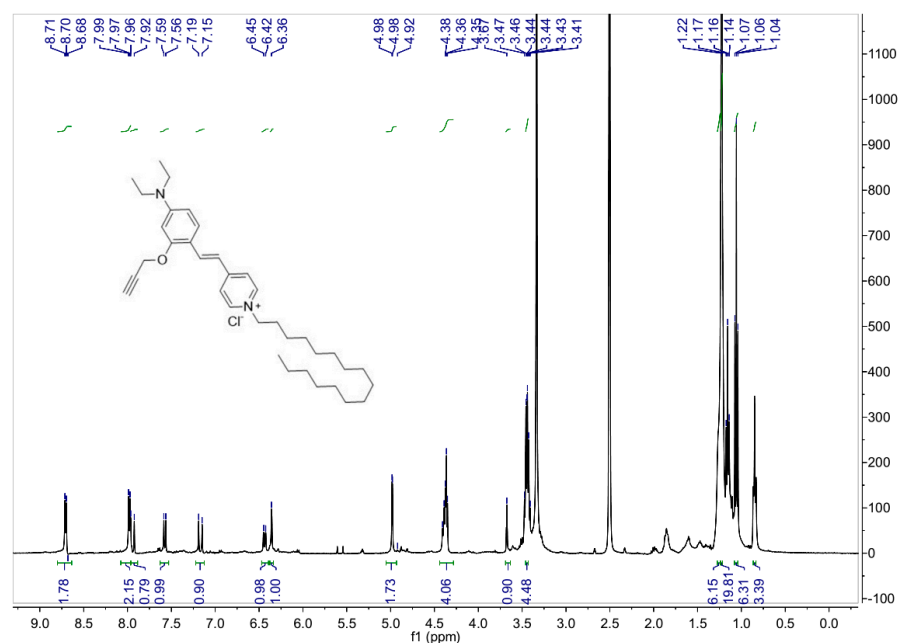


Figure S2. ¹H NMR spectra for SD.

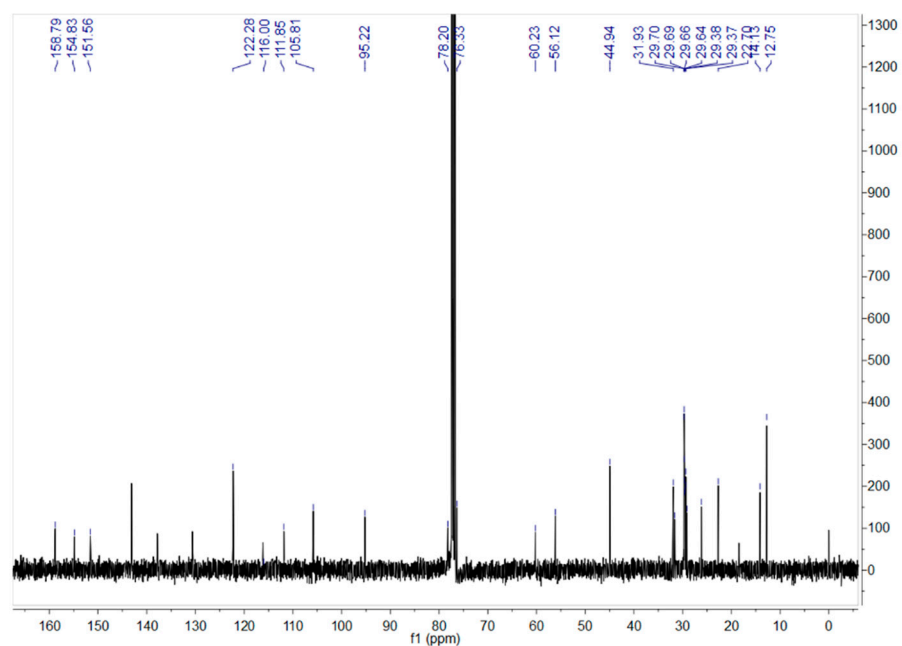


Figure S3. ^{13}C NMR spectra for SD.

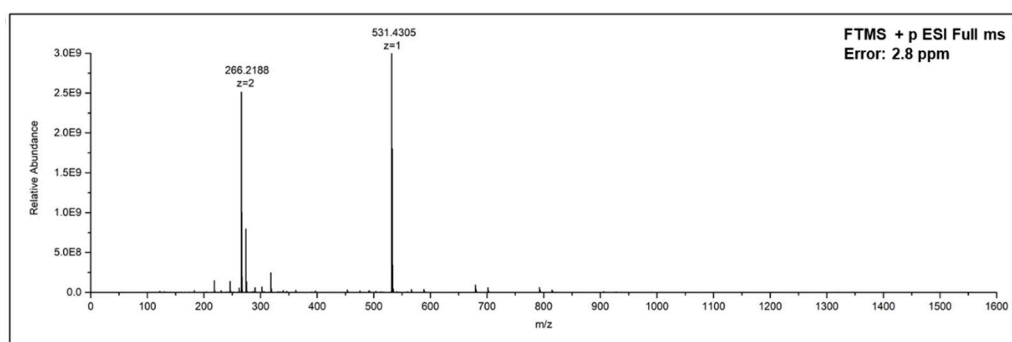


Figure S4. Mass Spectrometry for SD.

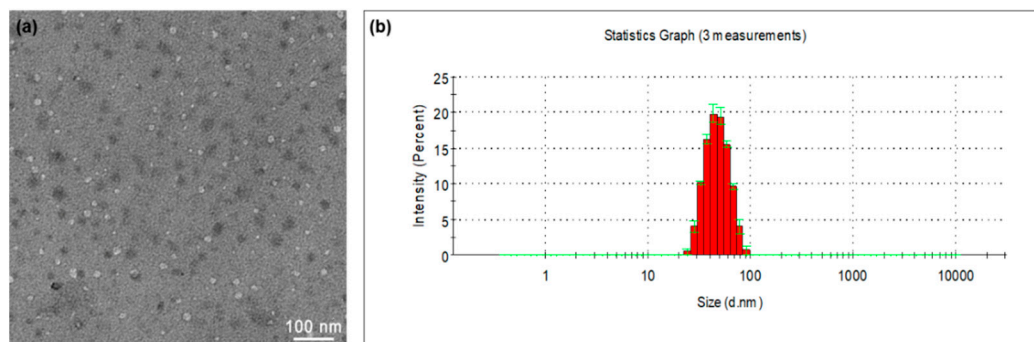


Figure S5. Transmission electron microscopy (TEM) image and the size distribution from dynamic light scattering (DLS) for the nanoparticles.

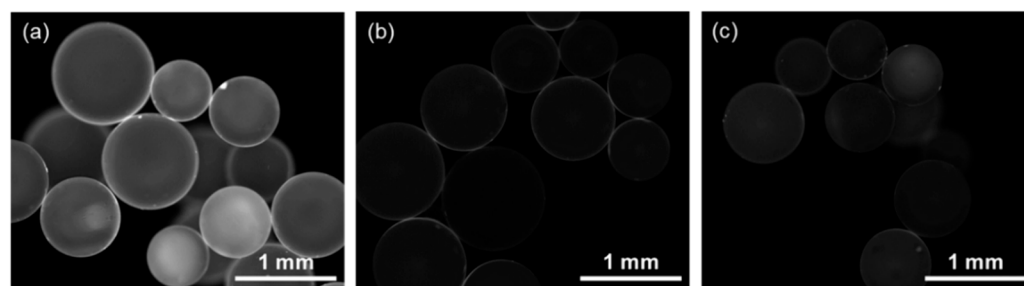


Figure S6. The fluorescence microscope images of cation exchange resin after treatment with the different solutions: **(a)** a suspension of organosilica nanoparticles with SDs directly adsorbed on the surface. **(b)** a suspension of organosilica nanoparticles with SDs covalently clicked on the surface. **(c)** water as a reference.