

Electronic Supplementary Information

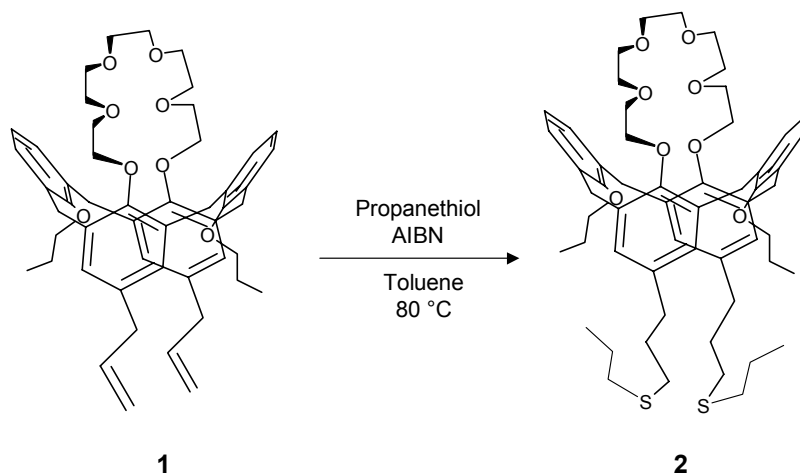
Ordered anchored cavities at work: A new and rapid SPR-based method for the detection of trace amounts of Cs⁺.

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25,27-Bis(propoxy)-5,17-bis[3-(propylsulfanyl)propyl]calix[4]arene-crown-6 1,3-alternate

A solution of **1**¹ (0.30 g, 0.38 mmol), propanethiol (0.60 g, 7.90 mmol) and AIBN (0.10 g) in anhydrous toluene (5 ml) was heated at 80 °C under nitrogen for 48 hours.² The solvent was removed under reduced pressure and the residue purified by column chromatography (SiO₂; *n*-hexane:EtOAc 1:1) to afford pure product **2** as a solid (0.25 g, 70%). ¹H NMR (CDCl₃, 500 MHz): δ 7.07 (d, 4H, Ar-H_{meta}), 6.82 (s, 4H, Ar-H_{meta}), 6.82 (t, 2H, Ar-H_{para}), 3.74 (s, 8H, ArCH₂Ar), 3.70-

3.32 (m, 24H, $\text{CH}_{2\text{crown}}$ and $\text{OCH}_2\text{CH}_2\text{CH}_3$), 2.53 (m, 12H, CH_2SCH_2 and $\text{ArCH}_2\text{CH}_2\text{R}$), 1.85 (m, 4H, $\text{ArCH}_2\text{CH}_2\text{CH}_2\text{S}$), 1.62 (m, 4H, $\text{SCH}_2\text{CH}_2\text{CH}_3$), 1.28 (m, 4H, $\text{OCH}_2\text{CH}_2\text{CH}_3$), 0.98 (t, 6H, $\text{SCH}_2\text{CH}_2\text{CH}_3$), 0.75 (t, 6H, $\text{OCH}_2\text{CH}_2\text{CH}_3$). MS (ESI): m/z 944 ($\text{M}+1$)⁺. Anal. Calcd. for $\text{C}_{56}\text{H}_{78}\text{O}_8\text{S}_2$: 71.30% C, 8.33% H, 13.57% O, 6.80% S. Found: 71.07% C, 8.30% H, 6.78% S.

References

- 1 G. Arena, A. Casnati, A. Contino, L. Mirone, D. Sciotto and R. Ungano, *Chem. Commun.*, 1996, 2277.
- 2 Y. Gafni, H. Weizman, J. Libman, A. Shanzer and I. Rubinstein, *Chem. Eur. J.*, 1996, **2**, 759.