## **Supporting Information**

## An organic-inorganic nanohybrid of calix[4]arene based chromogenic chemosensor for simultaneous estimation of ADP and NADH

Harpreet Kaur<sup>a†</sup>, Jasminder Singh<sup>b†</sup>, Shweta Chopra<sup>a</sup>, Pushap Raj<sup>b</sup>, Narinder Singh<sup>\*b</sup>, Navneet Kaur<sup>\*a,c</sup>

<sup>a</sup>Centre for Nanoscience and Nanotechnology (UIEAST), Panjab University, Chandigarh, India, 160014.

Tel: 91-1722534464; E-mail: navneetkaur@pu.ac.in

<sup>b</sup>Department of Chemistry, Indian Institute of Technology Ropar (IIT Ropar), Rupnagar, Punjab, India,

140001, Tel: 91- 1881242176, E-mail: nsingh@iitrpr.ac.in

<sup>c</sup>Department of Chemistry, Panjab University, Chandigarh, India, 160014. Tel: 91-1722534464; E-mail: navneetkaur@pu.ac.in

† Both authors contributed equally.



**Receptor 1** 

p-tert butyl calix[4]arene-based dipodal aldehyde 1



Scheme S1: Synthesis of Receptor 1

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(b

Figure S1: DLS histogram of ONPs formed at conc. (a) 0.4 nM (b) 0.8 nM (c) 1.0 nM



Figure S2: Colour change of N1 on formation of H1 from colourless to pink



Figure S3 a: TEM image for H1 showing a clear incorporation of dark spotted gold nanoparticles on the surface of N1



Figure S3b: DLS histogram of organic-inorganic nanohybrids of R1 has average distribution of 28 nm.



Figure S4: Comparison of calibration curves obtained by successive addition of ADP alone (blue) and ADP in presence of NADH as interferent (red).



Figure S5: Comparison of calibration curves obtained by successive addition of NADH alone (blue) and NADH in presence of ADP as interferent (red).



Figure S6: UV-Visible spectra of H1 at various pH.



**Figure S7:** Effect of ionic concentration on absorption profile of **H1** by adding varying concentration of tetrabutyl ammonium perchlorate salt (0-100 eqv.)



Figure 8a (Inset): Linear regression plot for ADP by adding small aliquots of ADP (0-100 nM) to solution of H1 (6µM)



Figure 8b (Inset): Linear regression plot for NADH by adding small aliquots of NADH (0-80 nM) to solution of H1 ( $6\mu M$ )