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SIMPLE COLORIMETRIC SCHIFF'S BASE PROBES FOR THE NAKED-EYE DETECTION ON CN- ION

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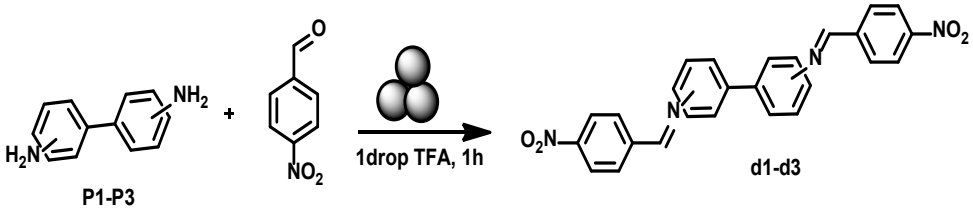
Abstract. Recently, the development of small molecule as colorimetric probes has received a lot of attention due to the importance of anions in biology and environment systems.[1]

We have synthesized simple probes d1-3 by using isomeric 4,4'-, 3,3' and 2,2'-diamino-biphenyls P1-3 and 4-nitrobenzaldehyde (Scheme 1) under ball milling condition. These probes demonstrated high selectivity and sensitivity towards CN^- ion in DMSO solution by changing their colours. Test strips were prepared by immersing filter papers in a DMSO solution to investigate the practical application of the probe d3 (Figure 1).



Scheme 1. Synthesis colorimetric probes in ball milling

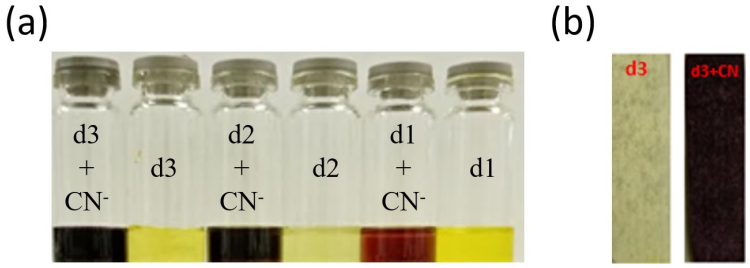


Figure 1. Naked-eye visible response towards CN^- ion in DMSO (a); on stripes (b)

References

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