

Cobalt based Bi-functional Metal Organic Framework mediated Fluorescent Bio-sensing System for Hypersensitive Detection of Ag⁺ Ions through Catalytic Hairpin Assembly

Rajaji Pavadai, Arunjegan Amalraj and Panneerselvam Perumal*

Department of Chemistry, SRM Institute of Science and Technology, Kattankulathur, 603 203,
Tamil Nadu, India.

Table S1. Comparisons of proposed sensing probe with other reported probe for Ag⁺

Sensing Probe	Signal	LoD	Linear range	Water Samples	Ref
AuNPs-DNA	FS	9.5 nM	50-750 nM	-	1
PDA-co-SiO ₂ NPs/DNA	FS	1 nM	0-1 nM	-	2
MnO ₂ /DNA	FS	9.1 nM	30–240 nM	Tap and Lake	3
WS ₂ Nanosheets	FS	1.2 nM	5.0–1000.0 nM	Tap	4
DNAzyme/MnCoPBAs -PDANCs	FS	4.2 nM	4-20 nM	Tap and Lake	5
DNAzyme/Trimetallic-MOF	FS	0.29 nM	50-500 nM	Tap and Lake	6
3D MOF-MoS ₂ NBs/Y-shaped DNAzyme	FS	0.25 nM	0-3.0 nM	Tap and Lake	7
Co-BFMO/FAM-HAPs/helper aptamer (CHA system)	FS	45 pM	0-0.8 nM	Tap, Lake and River	This Work

detection.

FS-Fluorescence Signal

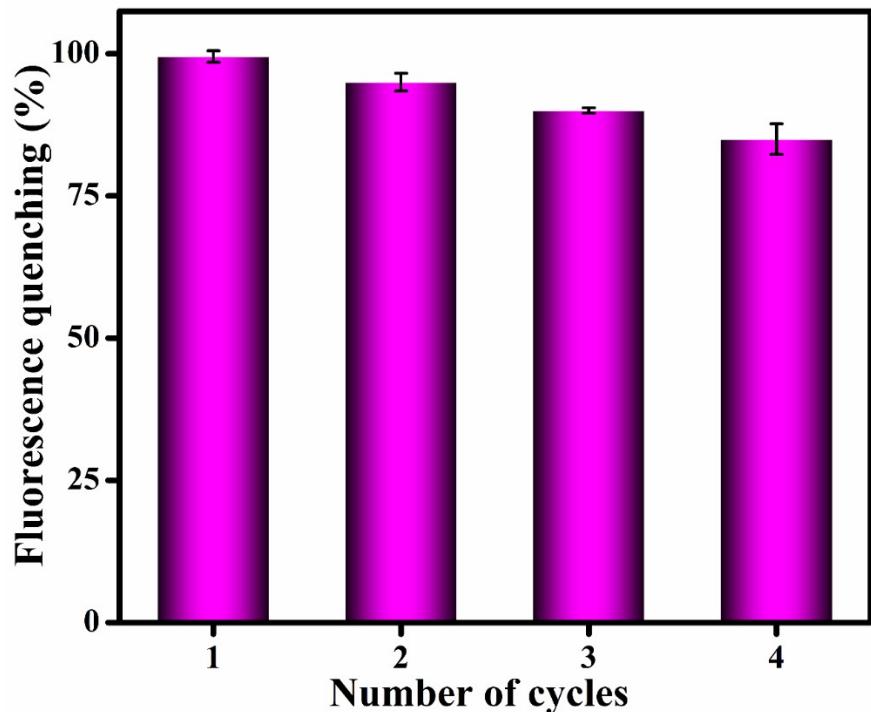


Figure S1. Recycling efficiency of Co-BFMOF

REFERENCE

1. G. Wang, S. Wang, C. Yan, G. Bai, Y. Liu, *Colloids and Surfaces B: Biointerfaces*, 2018, 167, 150-155.
2. S. Yang, M. Liu, F. Deng, L. Mao, Y. Yuan, H. Huang, J. Chen, L. Liu, X. Zhang, Y. Wei, *Applied Surface Science*, 2020, 510, 45421.
3. L. Qi, Z. Yan, Y. Huo, X. M. Hai, Z. Q. Zhang, *Biosensors and Bioelectronics*, 2017, 87, 566-571.
4. X. Zuo, H. Zhang, Q. Zhu, W. Wang, J. Feng, X. Chen, *Biosensors and Bioelectronics*, 2016, 85, 464-470.
5. P. Rajaji, P. Panneerselvam, *ACS omega*, 2020, 5, 25188-25198.
6. R. Pavadai, P. Perumal, *Journal of Photochemistry and Photobiology A: Chemistry*, 2022, 429, 113901.
7. R. Pavadai, A. Amalraj, S. Subramanian, P. Perumal, *ACS Applied Materials & Interfaces*, 2021, 13, 31710-31724.