An optical fiber sensor based on $B_{10}H_{14}$ derivatives/PMMA film for measuring low concentration formaldehyde in aqueous solutions

Supporting Information

Contents

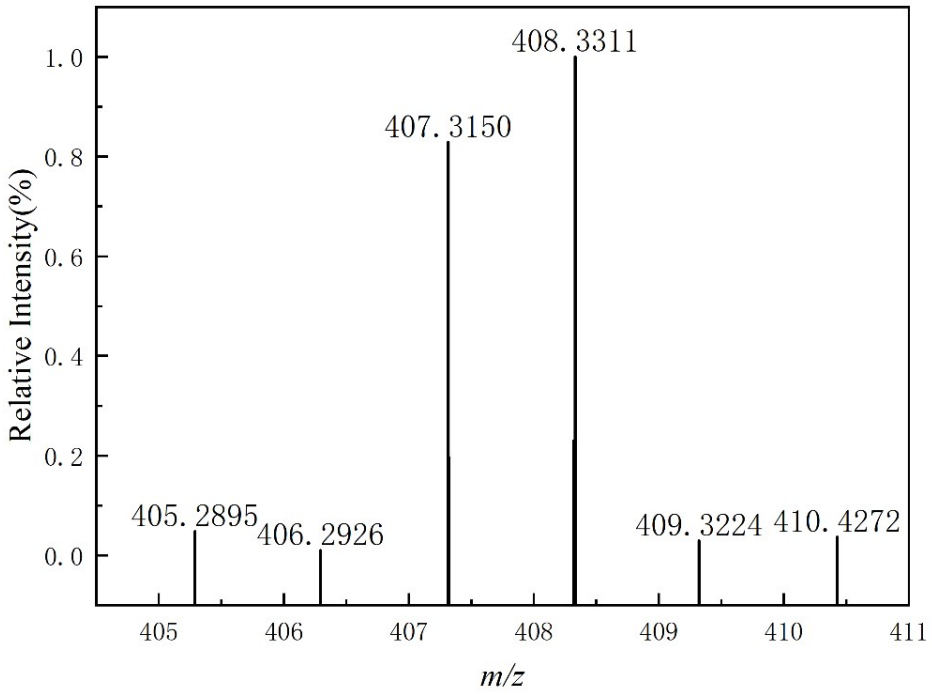

Fig. S1. M1 molecular mass spectrometry.

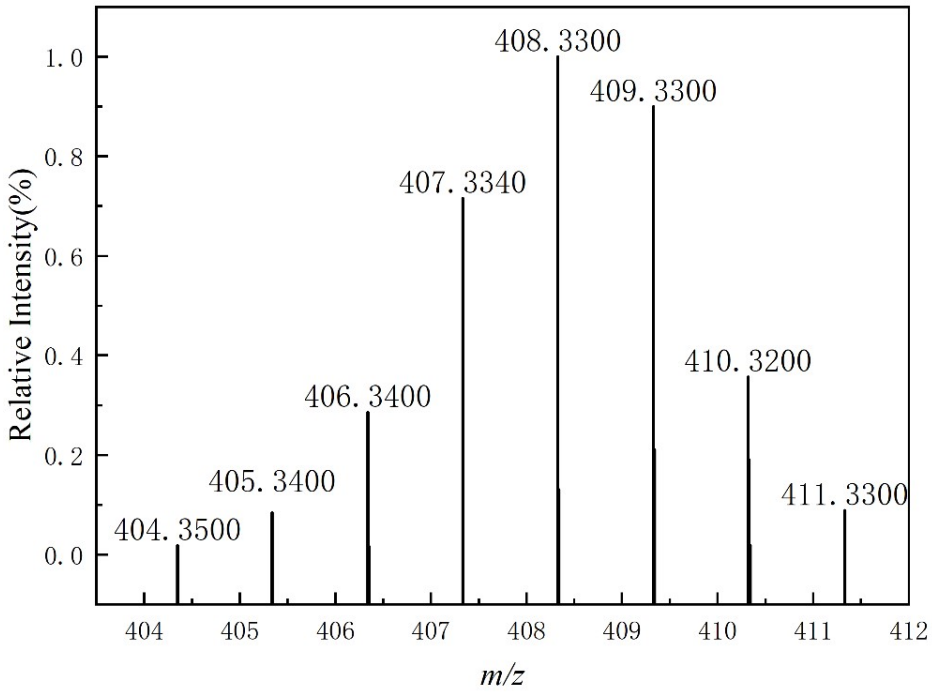

Fig. S2. M1 molecular mass spectrum simulation.

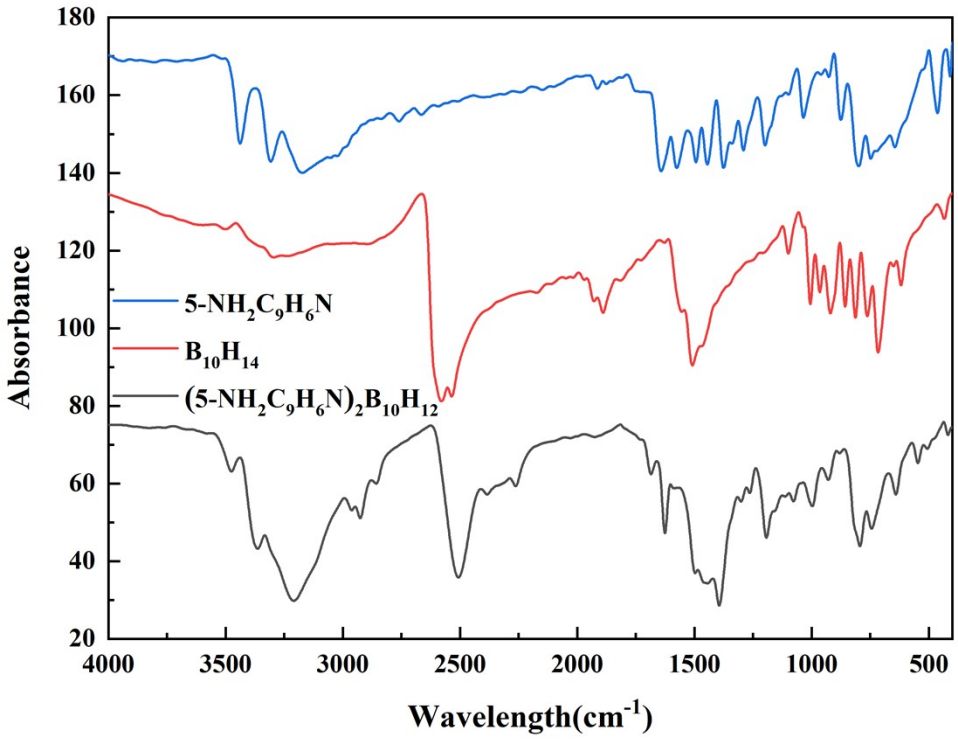

Fig. S3. FT-IR spectra of the **M1.**

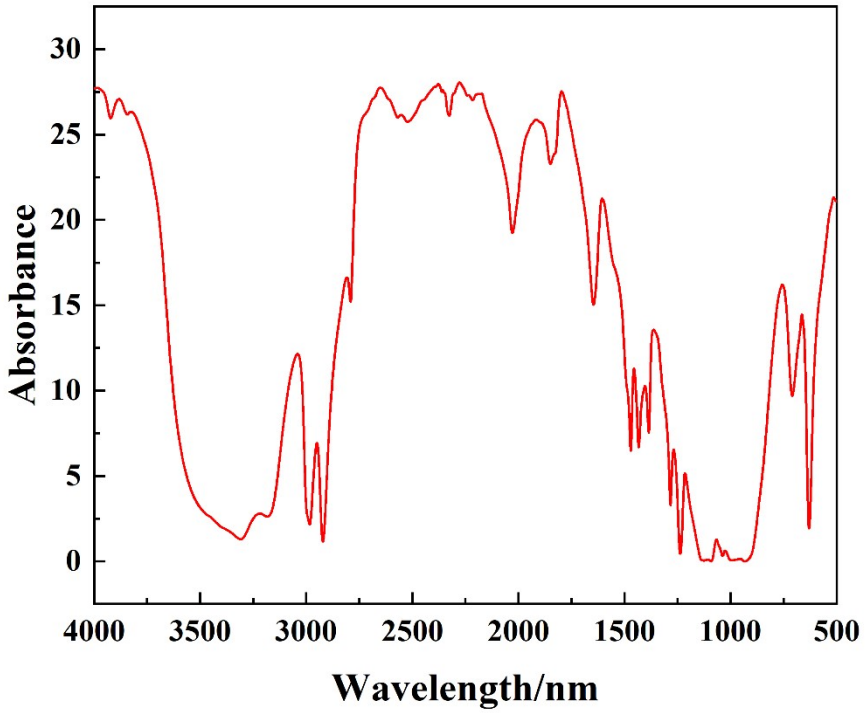

Fig. S4. FT-IR spectra of the **M2.**

Table S5

Comparison of FA detection time using different probes.

Probe	Response time(min)	Ref	Year
FA-P	180	[1]	2019
NFD	40	[2]	2023
QH-FA	10	[3]	2023
Probe	30	[4]	2021
Na-Hy	30	[5]	2022
CmNp-CHO	1	[6]	2022
Dm-FA	40	[7]	2023
Mito-FA-FP	20	[8]	2019
BNH	5	This work	

Table S6

Comparison of detection limits of different probes.

Probe	Detection limit(μM)	Ref	Year
DM-FA	1.1	[7]	2023
FAP1	0.016	[9]	2023
QH-FA	0.0081	[3]	2023
NFD	0.95	[2]	2023
DBP	38	[10]	2023
Probe-NH_2	1.87	[11]	2022
BNH	0.069	This work	

Reference

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