SUPPORTING INFORMATION

Fluoride Selective Optical Sensor Based on Aluminum(III)-Octaethylporphyrin in Thin Polymeric Film: Further Characterization and Practical Application

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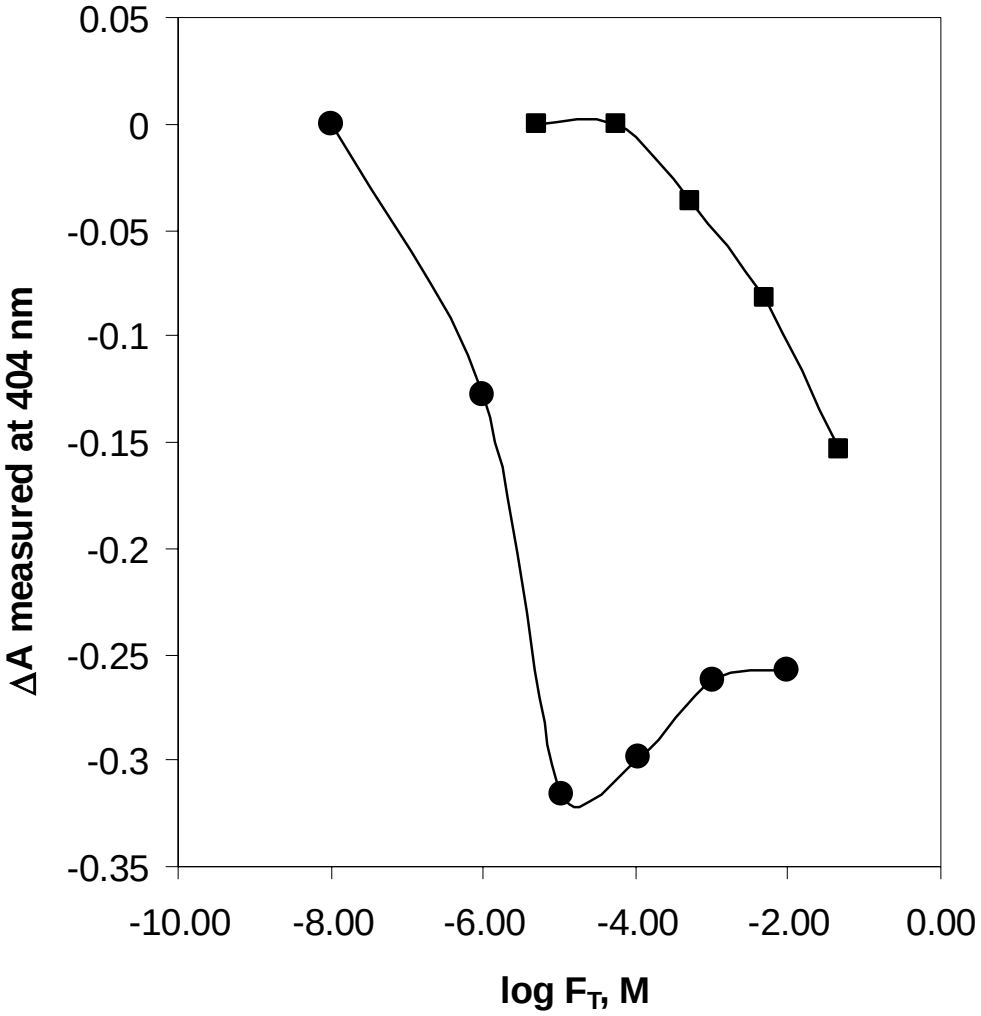

Fig. 1s Absorbance change of fluoride optical sensitive film containing Al[OEP] and 100 mol % TFPB, Film-3, measured in 50 mM glycine-phosphate, pH 3.00, when exposed to different concentrations of the following: tetrabutylammonium fluoride (●), and sodium fluoride (■)

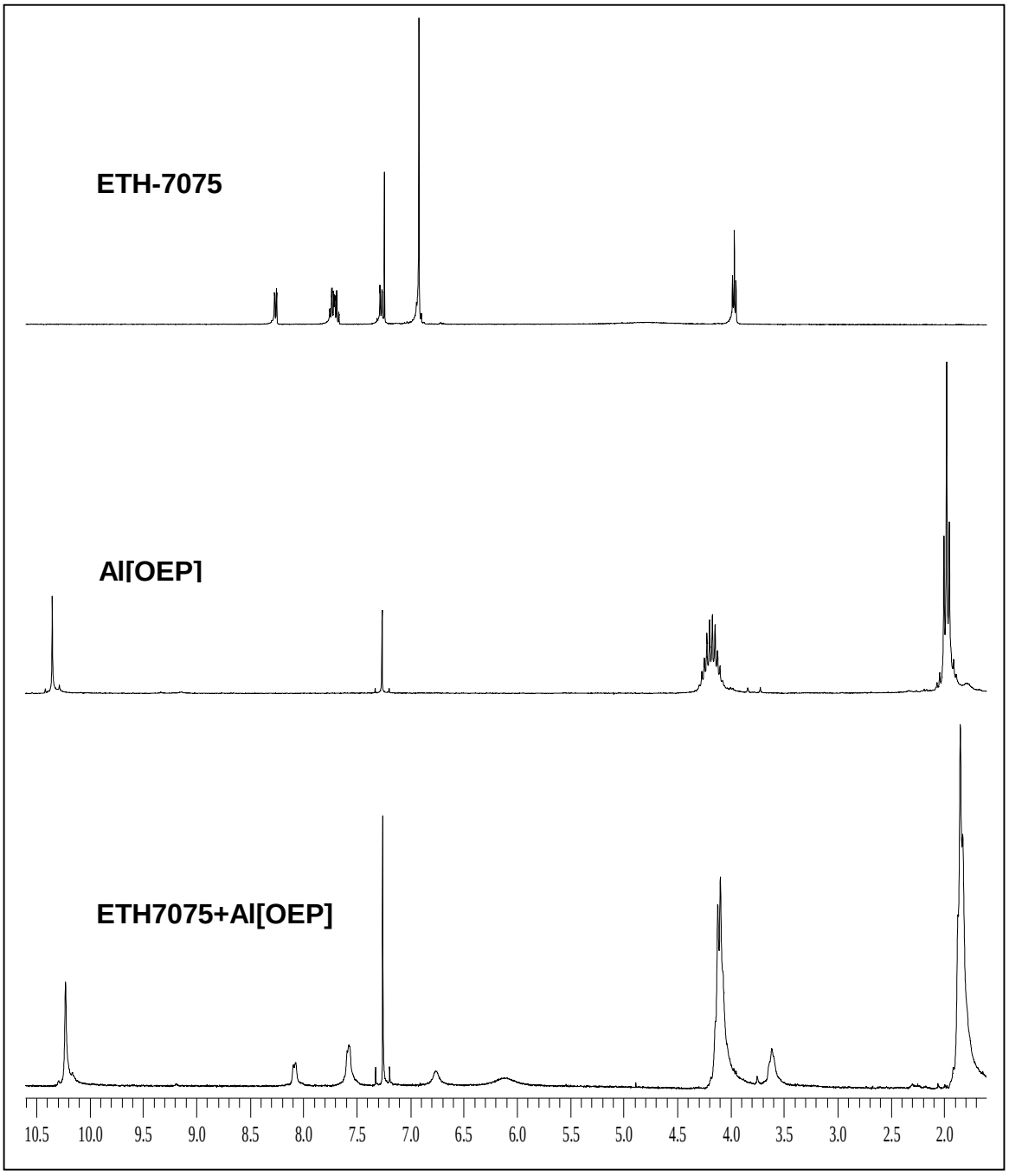

Fig. 2s ^{1}H NMR spectra of ETH-7075, Al[OEP], and a mixture of ETH-7075 and Al[OEP] measured in deuterated chloroform.

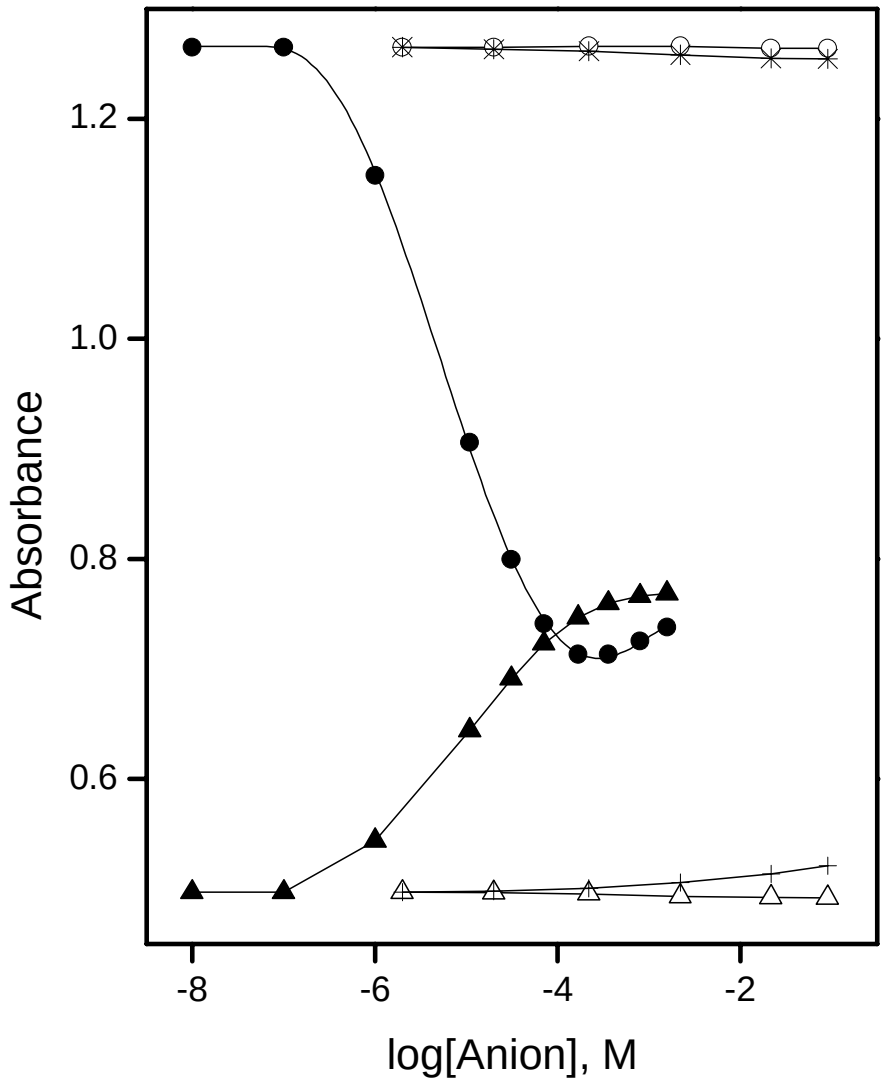

Fig. 3s Absorbance change of Al[OEP]/ETH-7075 based fluoride optical sensitive film, Film-6, measured in 100 mM β-alanine-phosphate buffer, 1 mM CDTA, pH 3.6, toward various anions: (●) fluoride, (☾) perchlorate, and (o) thiocyanate ~ nitrate ~ bromide ~ chloride ~ sulfate measured at 410 nm; (▲) fluoride, (+) perchlorate, and (△) thiocyanate ~ nitrate ~ bromide ~ chloride ~ sulfate measured at 392 nm.

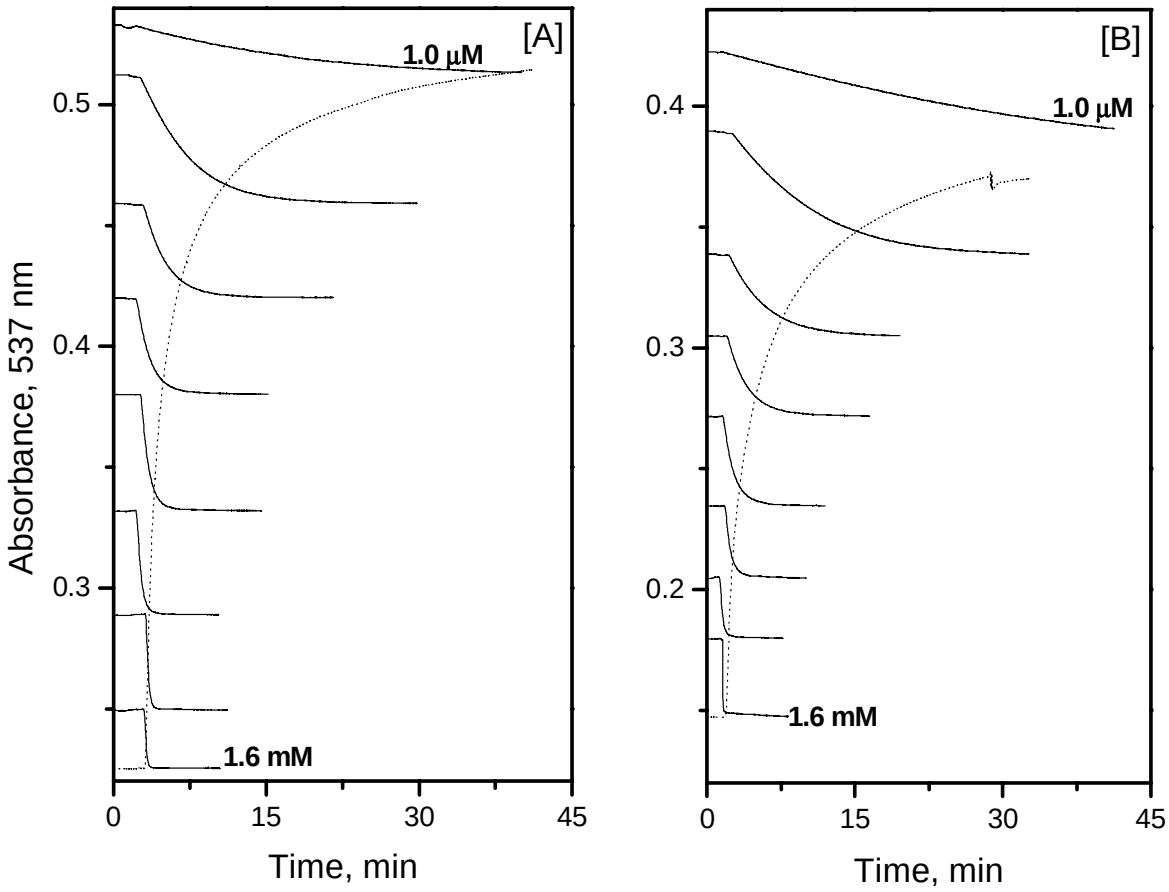

Fig. 4s Typical response and recovery times of Al[OEP]/ETH-7075 based fluoride optical sensing films prepared using o-NPOE [A], and DOS [B] as plasticizers. Measurements were performed in 100 mM β-alanine-phosphate buffer, 1 mM CDTA, pH 3.6, at different fluoride ion concentrations (from top): 1.0, 11, 31, and 71 μM, and 0.17, 0.36, 10.8 and 1.6 mM. Dashed line is the recovery time trace when changing the sample from 1.6 mM to fluoride-free buffer solution.