Electronic supplementary information (ESI)

Amperometric biosensor based on acetylcholineesterase immobilized in hybrid mesoporous membranes

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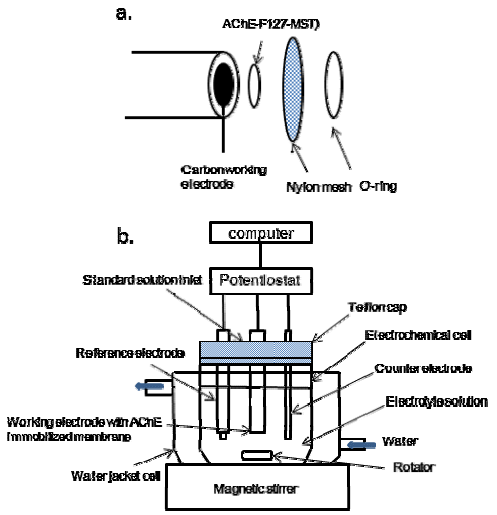

Fig. S1. Schematic diagram of the electrochemical cell setup. (a) Fabrication of AChE immobilized working electrodes with AChE immobilized membrane. (b) The entire measurement system for the detection of acetylcholine and methamidophos solutions

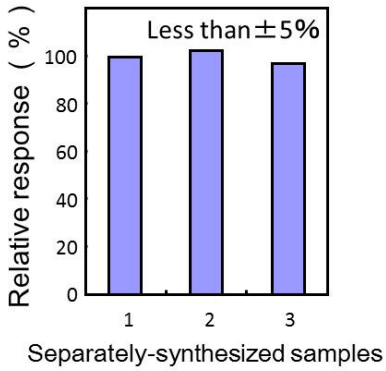

Fig. S2. Electrochemical response of separately-synthesized samples(AChE–(F127-MST) in the same way to the injections of acetylthiocholine solutions (36 μM) at a constant potential of Eapp = 0.2 V. The electrolytes comprise 0.5 mM TCNQ in 90 μl of a phosphate buffer (pH 7.4).

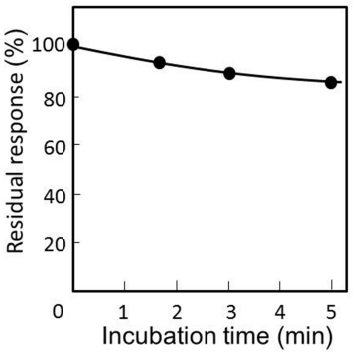

Fig. S3. Effect of incubation time on the current response. Measurements were done in 10 ppb dichlorvos / phosphate buffer (pH 7.4) by injecting acetylthiocholine solution.

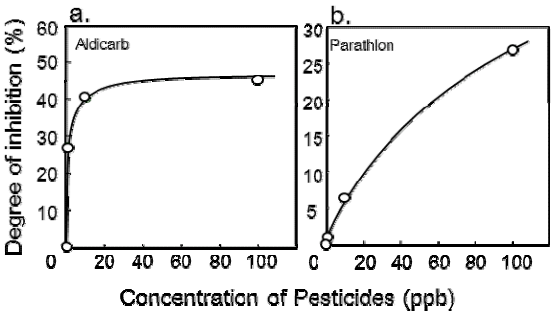

Figure S4. Degree of inhibition against concentration of a)Aldicarb and b)Parathion. Measurements were done in phosphate buffer (pH 7.4) by injecting acetylthiocholine solutions (36 μM).

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