Electronic Supplementary Material (ESI) for New Journal of Chemistry.

Supporting Information for

Fabrication of a novel electrochemical sensor for determination of water in some organic solvents based on naphthalene conducting polymers

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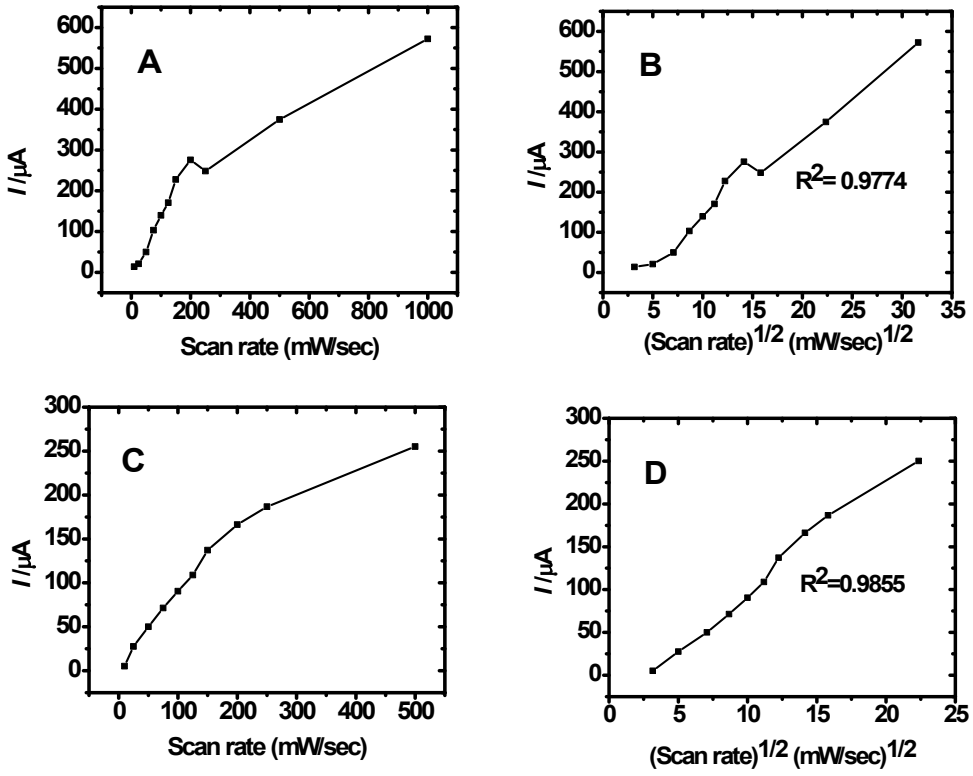


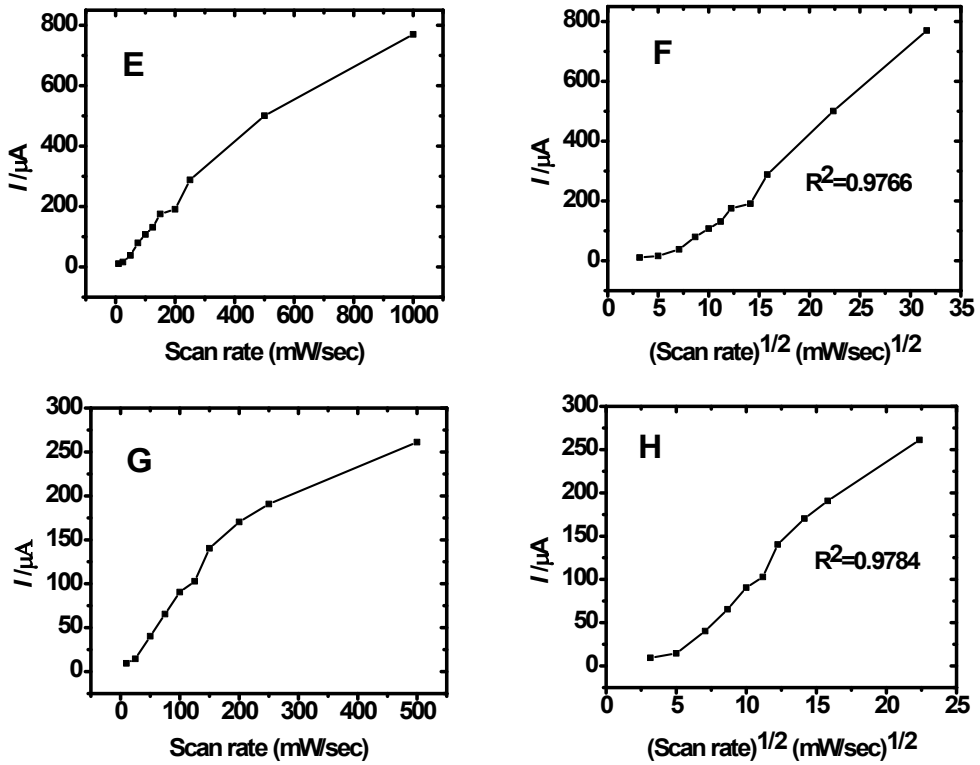


Fig. 1S Scan rate and square root of scan rates dependency of the current for (A, B) PDAN, (C, D) PDHN, (E, F) PDAN/TiO_2 and (G, H) P(DAN-co-DHN) films

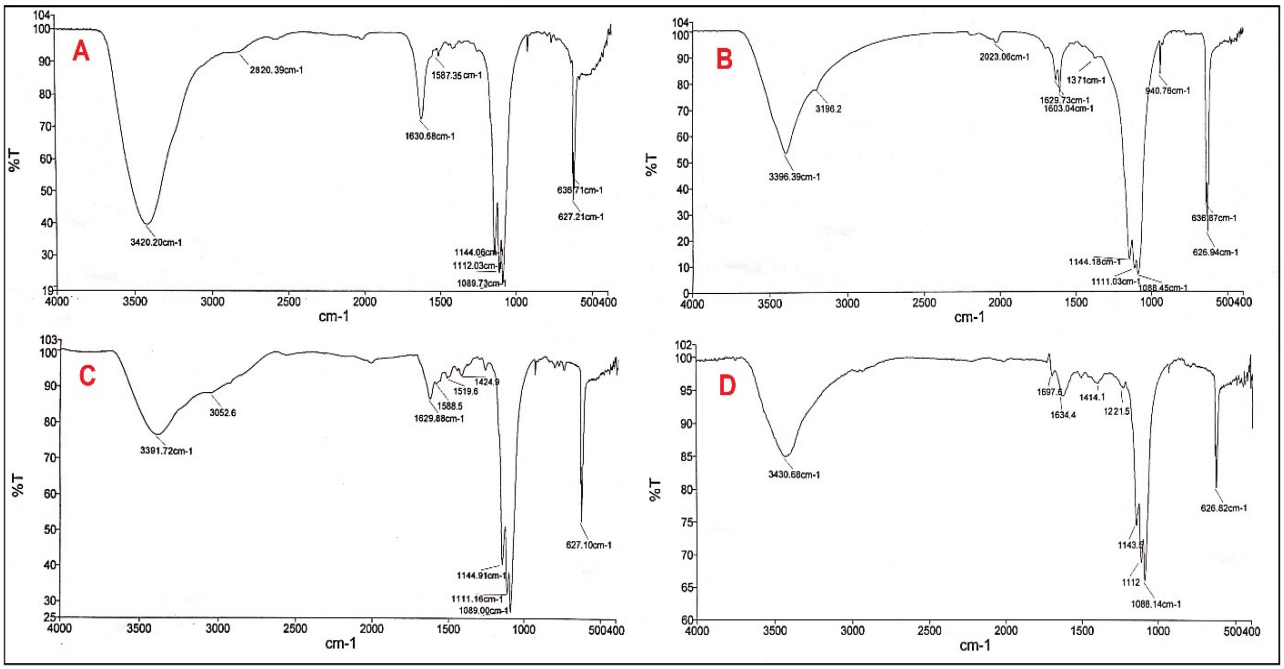


Fig. 2S FT-IR spectra of PDAN (A), PDHN (B), PDAN/TiO_2 (C) and P(DAN-co-DHN) (D) films

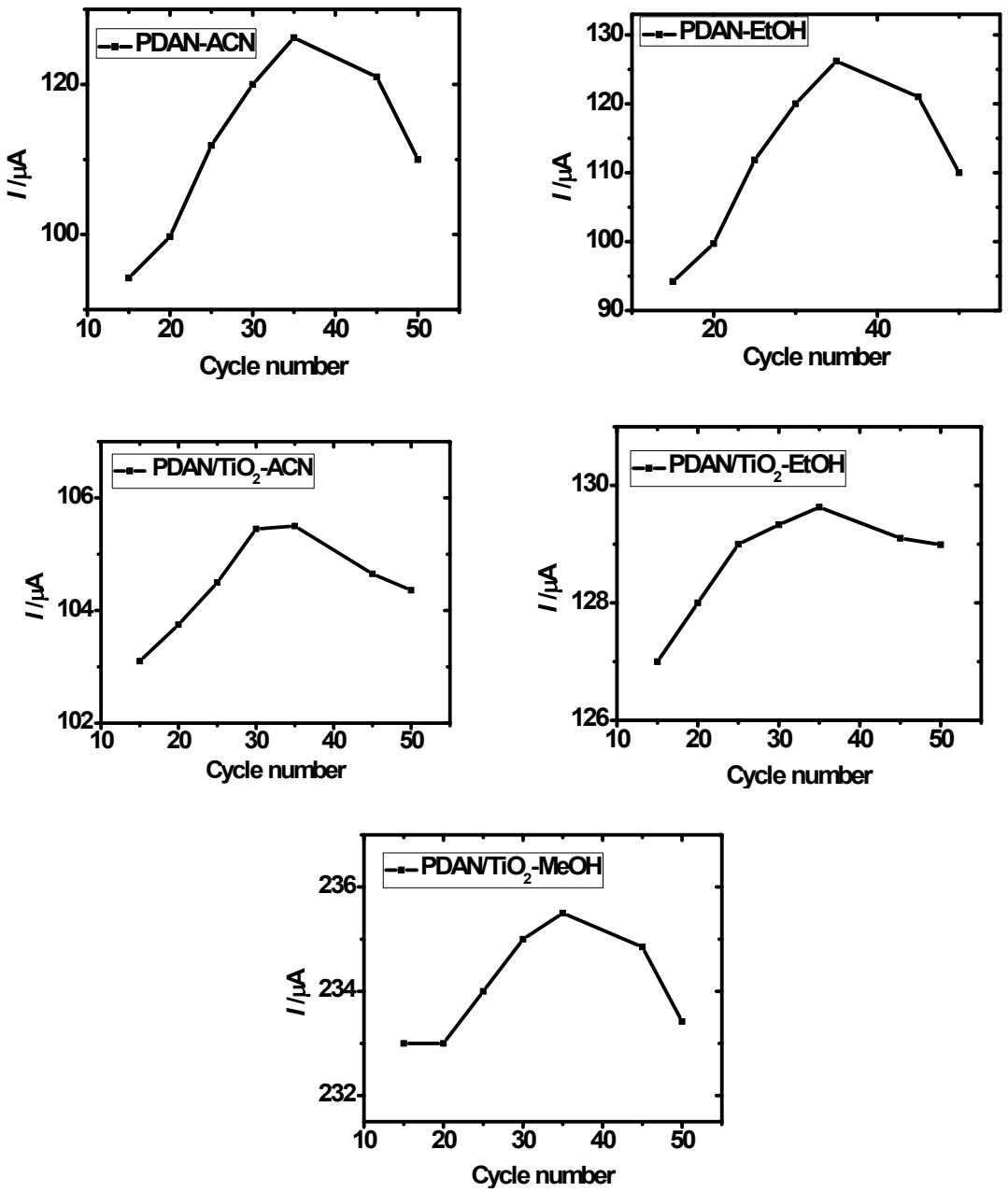


Fig. 3S Cycle number dependency of the current of PDAN and PDAN/TiO_2 electrodes recorded for the ACN, EtOH and MeOH solutions

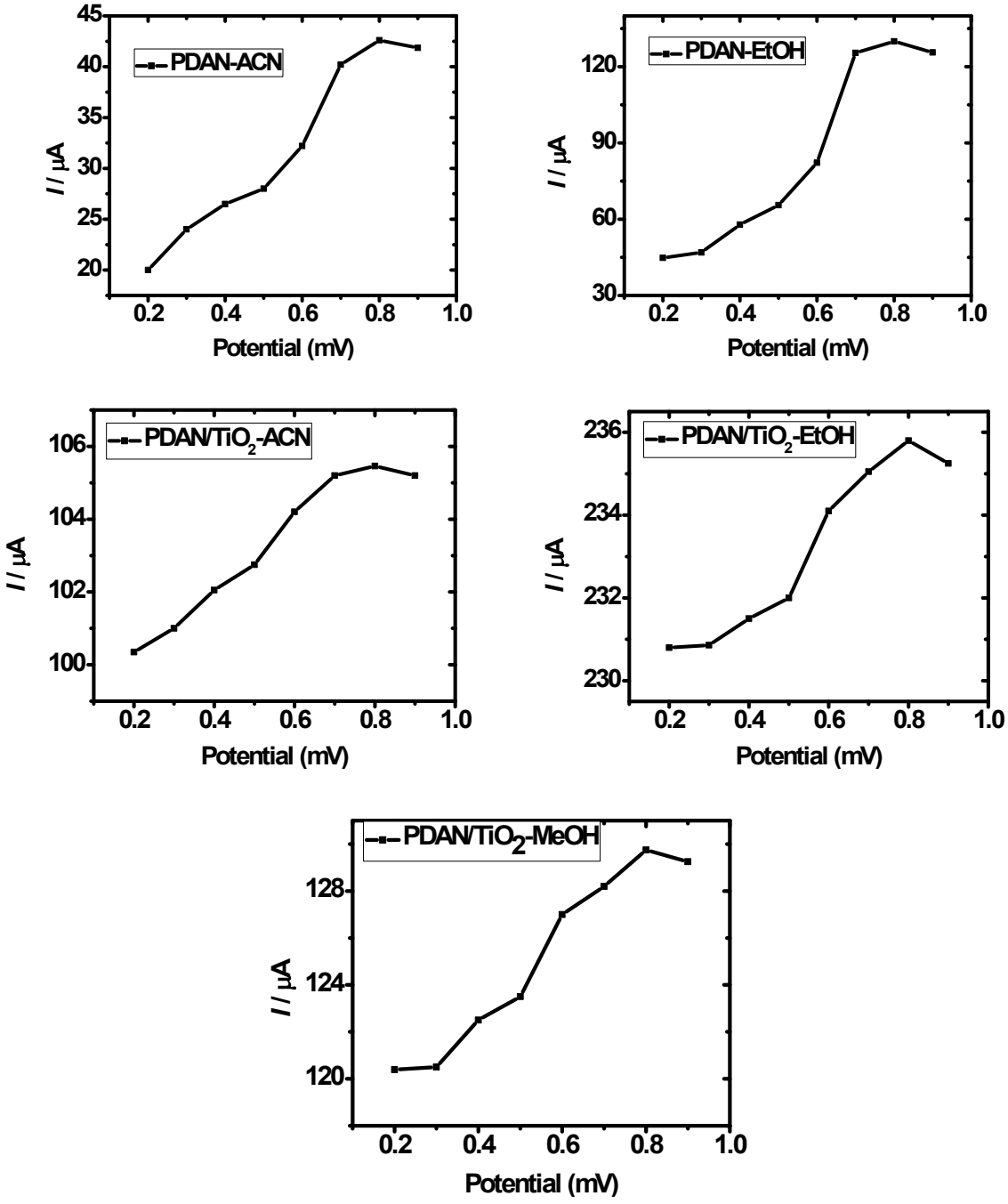


Fig. 4S Response potential dependency of the current of PDAN and PDAN/TiO_2 electrodes recorded for the ACN, EtOH and MeOH solutions

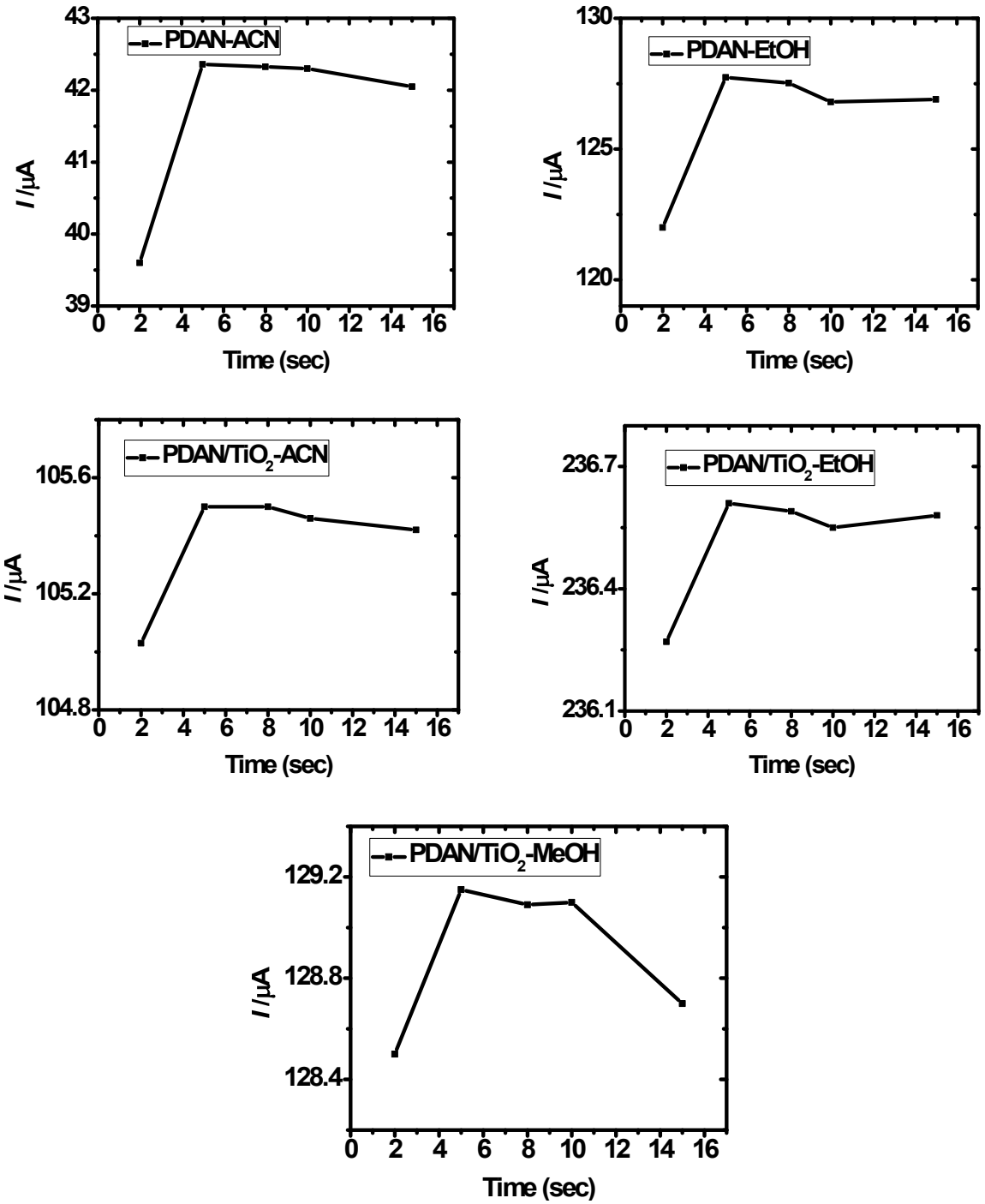
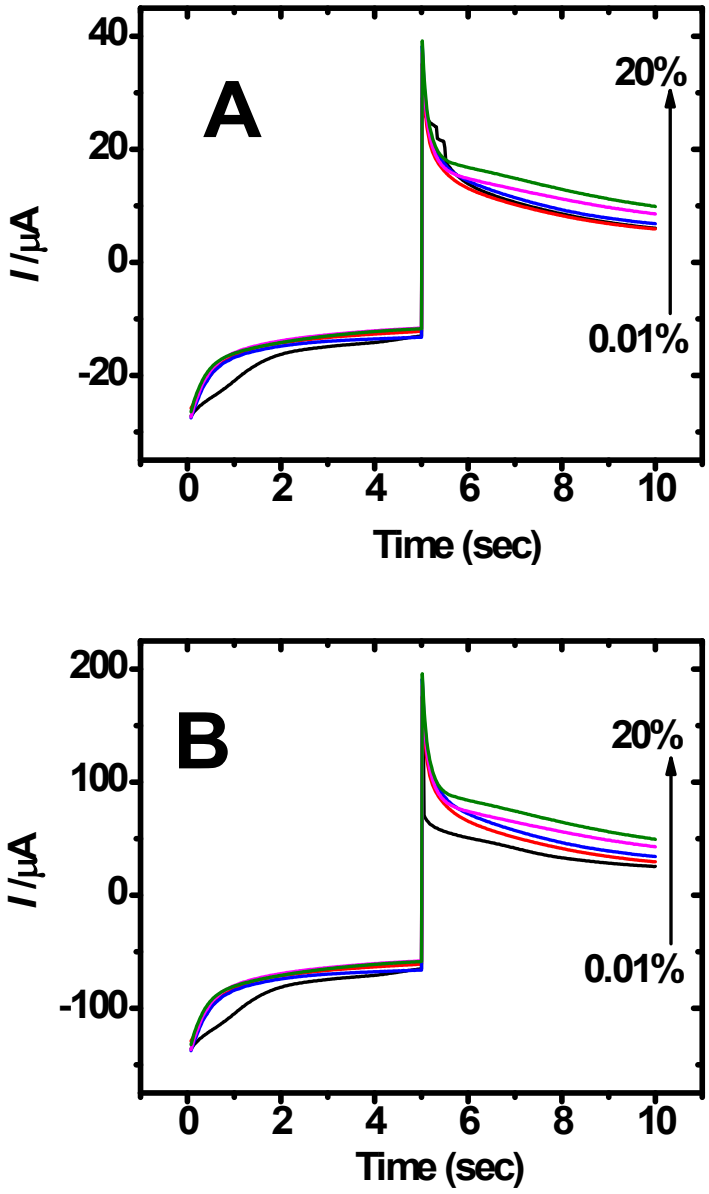


Fig. 5S Response time dependency of the current of PDAN and PDAN/TiO_2 electrodes recorded for the ACN, EtOH and MeOH solutions


A
B
20%
0.01%
I /μA
Time (sec)
40
20
0
-20
200
100
-100
0
2
4
6
8
10

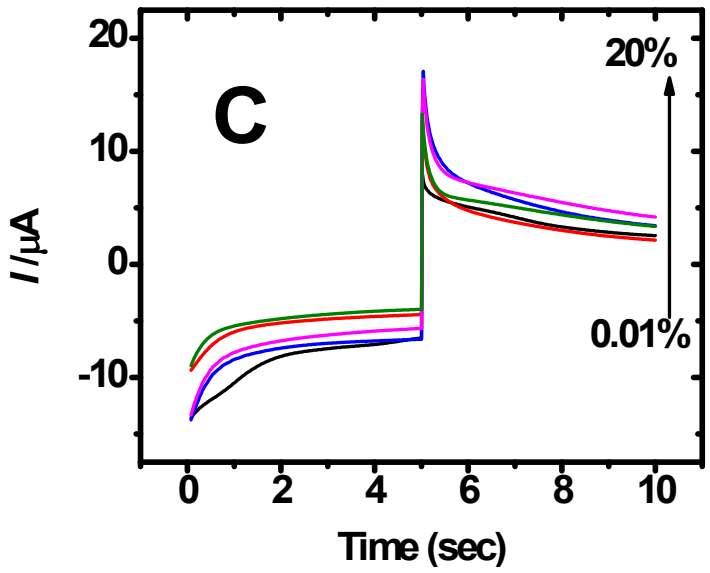
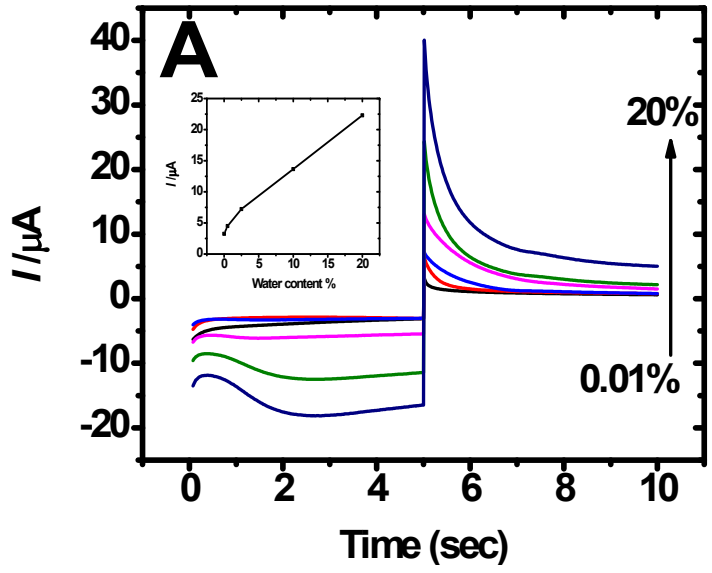
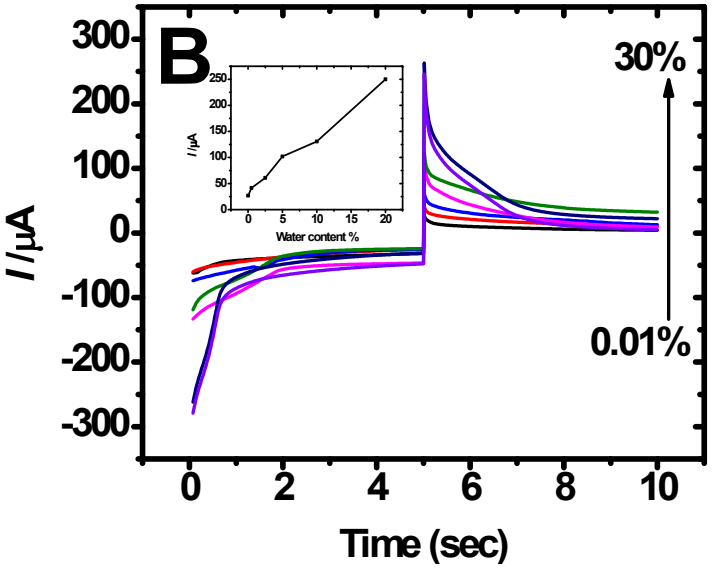


Fig. 6S The response time of the Au/PDHN electrode to changes in the water content of (A) ACN, (B) EtOH and (C) MeOH solutions under optimizes conditions. (Inset): Calibration plots for determining water content in solutions.


A
20%
0.01%
I /μA
Time (sec)
I / μA
Water content %


B
30%
0.01%
I /μA
Time (sec)
I / μA
Water content %

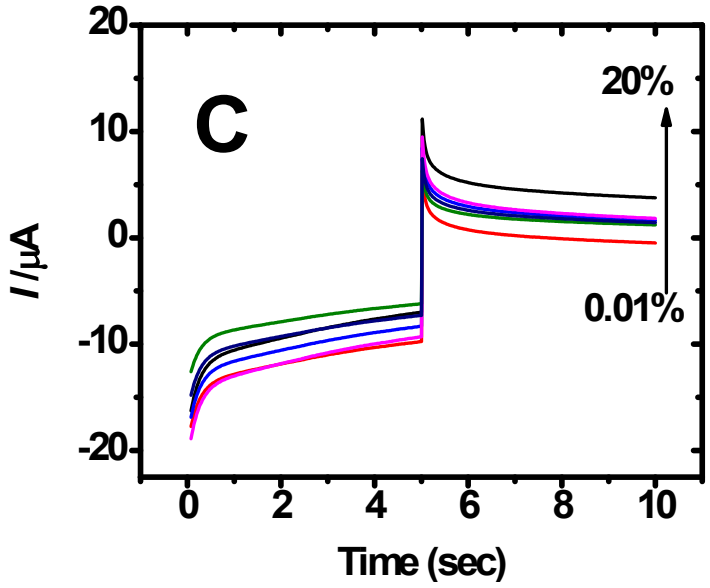


Fig. 7S The response time of the Au/P(DAN-co-PDHN) electrode to changes in the water content of (A) ACN, (B) EtOH and (C) MeOH solutions under optimizes conditions. (Inset): Calibration plots for determining water content in solutions.