

Polymer nanowires or nanopores? Site selective filling of titania nanotubes with polypyrrole

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ESI1. TiO₂ nanotubes annealed in argon

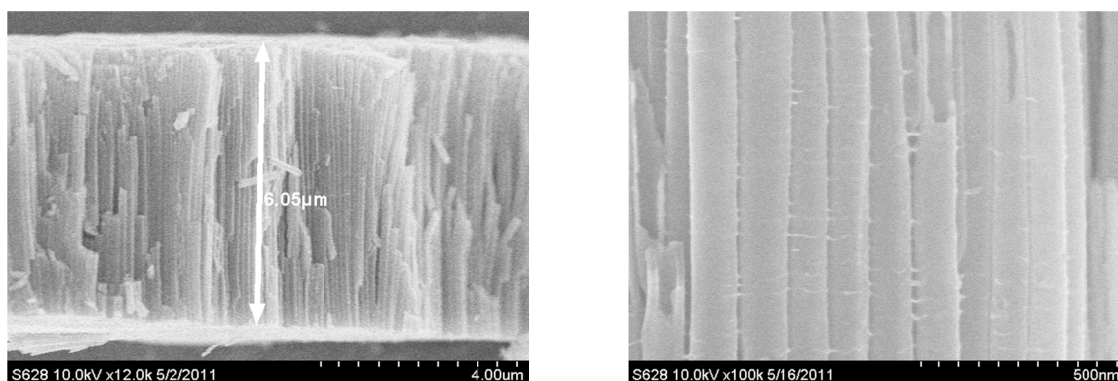


Fig. ESI1 Cross-section view of titania nanotubes formed in ethylene glycol electrolyte containing hydrofluoric acid (0.2M) and 2 vol.% of water. Titania nanotubes were annealed in argon atmosphere at 350°C for 20h.

ESI2. XPS surface analysis

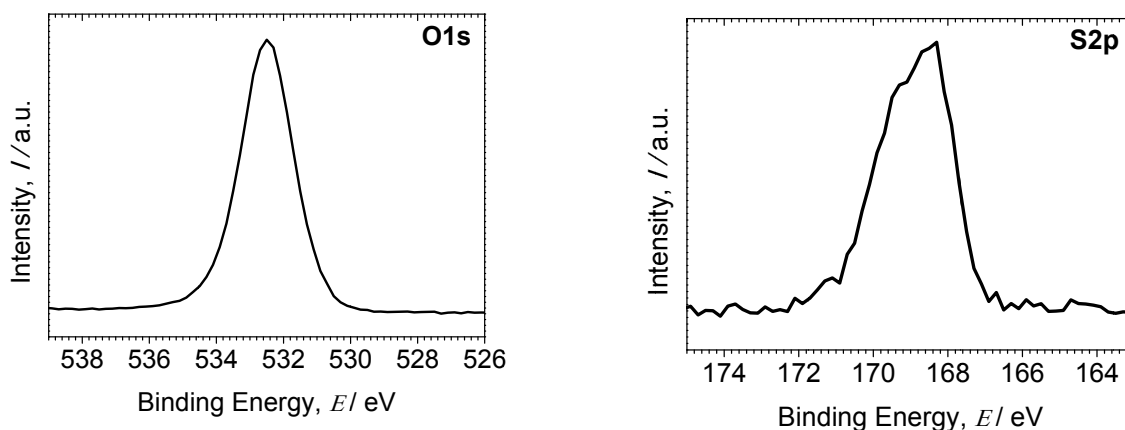


Fig. ESI2 Core level photoelectron peaks for polypyrrole formed in TiO₂ nanotubes matrix, a) O1s b) S2p

ESI3.ToF-SIMS negative spectra

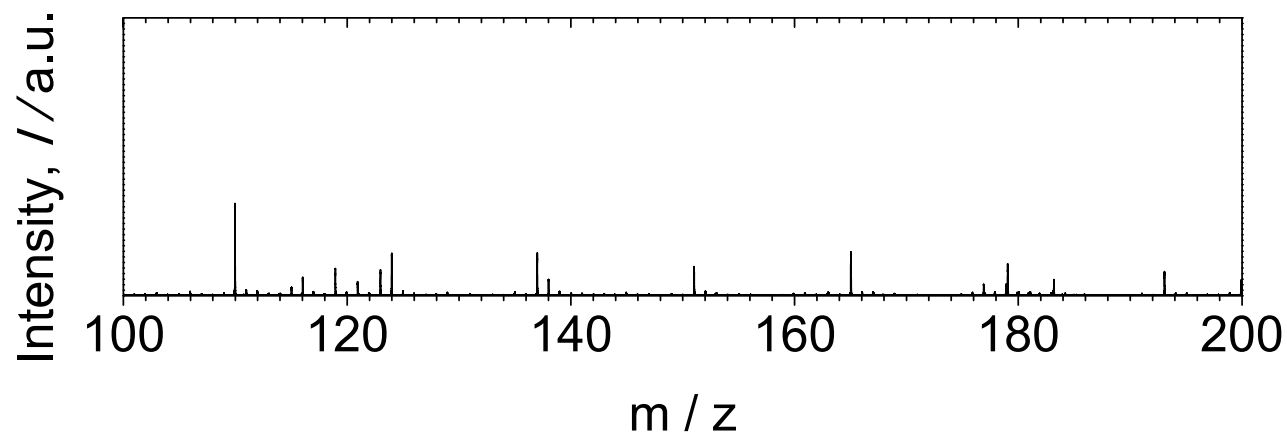


Fig. ESI3 Negative ion ToF-SIMS spectrum (m/z 100-200) for polypyrrole obtained by electrodeposition in titania template.