

Abstract Submitted
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In-situ electromechanical properties of suspended Poly-pyrrole (PPy) nanotube using metal coated AFM tip manipulations¹ SANG WOOK LEE, HAKSEONG KIM, SUNG HO JHANG, Konkuk University, NENM TEAM — Electromechanical properties of individual suspended poly-pyrrole (PPy) nanotube were investigated. PPy nanotubes were positioned and suspended using the ac electrophoresis and micro transfer method. The metal coated atomic force microscope tip was used as a pressure source of the suspended PPy tube and, at the same time, one of the contact electrodes for measuring in-situ current-voltage characteristics while the PPy tube is under stressed. The resistance of the PPy tube was decreased in electromechanical measurements with increasing pressure using a metal coated AFM tip. 1.36 GPa of maximum contact pressure on the tip-tube contact was estimated to reduce the contact resistance for making to 6.8 ohm cm in a lateral configuration.

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