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SNO₂/SILICA CORE-SHELL NANOWIRES

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SnO₂ nanowires have been sheathed using a sputtering technique. The thickness of the silica (SiO_x) shell layers were varied, and the effects of shell thickness on the structure, morphology, and photoluminescence (PL) properties of the coaxial nanowires were investigated. The nanostructures consist of a crystalline SnO₂ core surrounded by an amorphous SiO_x sheath. In addition, spin-coating of polymethylmethacrylate (PMMA) layers on the as-prepared SnO₂/SiO_x core/shell nanowires has been demonstrated. PL measurements revealed that the overall shape and peak position of the PL spectra were not significantly changed by the coating process.