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Hydrothermally grown self-assembled ZnO nanorods on Si substrate

Self assembled ZnO nanorods have been synthesized on seeded Si substrate by a simple hydrothermal route, using an ordinary glass beaker at a temperature of 750C. XRD analysis reveals that the as-grown rods have good crystalline quality and are c-axis oriented. SEM also confirms this orientation and shows single rods having hexagonal features and needle-like tips. Photoluminescence spectra showed strong UV excitonic emission and weak deep-level emission, which indicate good optical properties and very few structural defects.

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