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Photocurrent Enhancement in the ICG Dye Sensitized ZnO Nanowire Device[1] GEN LONG, MICHAEL BEATTIE, HUIZHONG XU, MOSTAFA SADOQI, Department of Physics, St John's University — In this presentation, we report a systematic study of photocurrent in ICG dye sensitized ZnO nanowire/FTO devices. ZnO nanowire is grown by hydrothermal method, with length of ˜200nm to1 μm and diameter of ˜30 to 60nm. ICG dye is incorporated by immersing ZnO grown FTO substrate. Different concentrations, solvents of ICG dye, sizes of ZnO nanowires and annealing temperatures and atmosphere after immersion were studied. The synthesized nanostructures and devices were characterized by XRD, UV-VIS absorption, SEM, AFM, solar simulator, etc. And an enhancement in the photocurrent due to ICG is observed.

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