Influence of Morphology on the Performance of ZnO-based Dye-sensitized Solar Cells

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Supporting Information

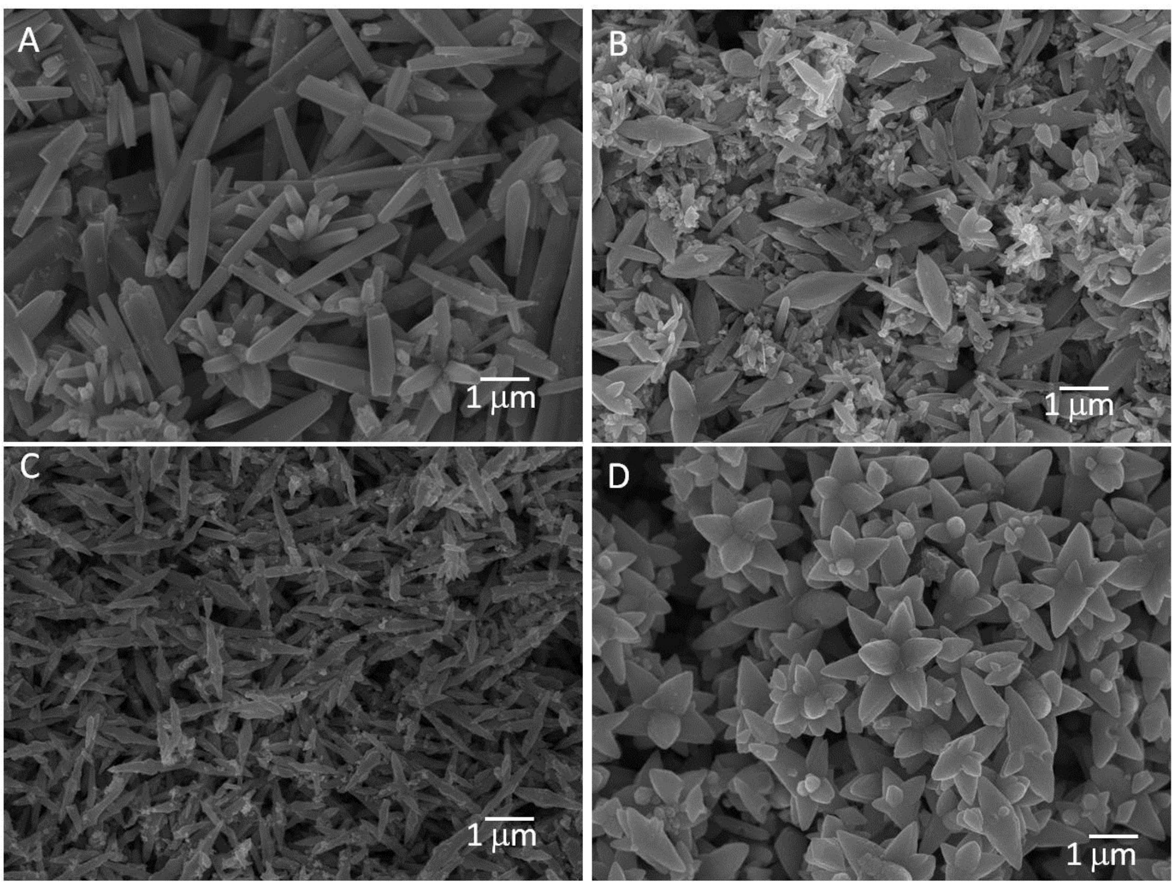

Figure S1. Typical SEM images sintered ZnO films obtained from the ZnO nanomaterials prepared by the sonochemical method at different pH values. A: pH 5.5; B: pH 8; C: pH 10; and D: pH 12.

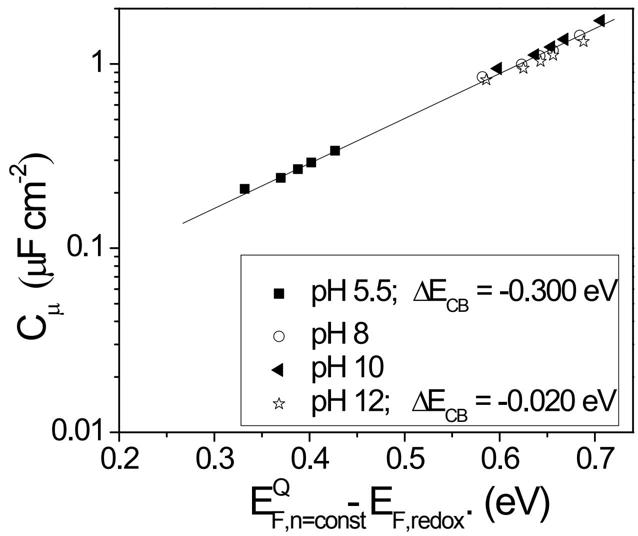

Figure S2. Chemical capacitance extracted from EIS measurements versus the quasi-Fermi level of electrons in the ZnO corrected for a shift of the band edges, thus describing the energetic distribution of traps at the ZnO surface.

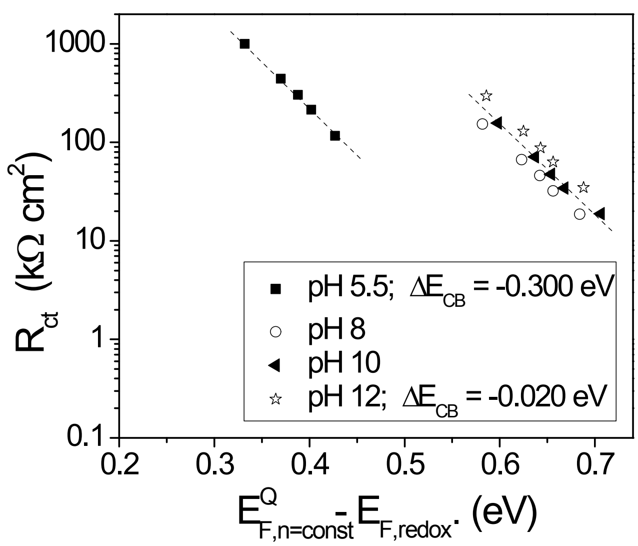

Figure S3. Charge transfer resistance extracted from EIS measurements versus the quasi-Fermi level of electrons in the ZnO nanostructures corrected for a shift of the band edges. It can be seen that the recombination resistance at a constant electron density in the ZnO film for the material prepared at pH 5.5 is significantly lower than for the other three materials.