Support information for

Study on the microheterogeneity of aqueous alcohol solutions:
formation mechanism of inner pores of ZnO nanostructures

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**Fig. S1** FESEM (a) and TEM (b) images of the ZnO prepared in pure water.

**Fig. S2** XRD patterns of the as-prepared ZnO products synthesized in pure water (line A), in mixed ethanol and water at room temperature (line B), and in mixed ethanol and water at 60 °C (line C).
**Fig. S3** TEM images of the ZnO nanoplates synthesized in the mixed ethanol and water at 60 °C.

**Fig. S4** Transmission FTIR (a) and ATR-FTIR (b) spectra of ZnO synthesized with the presence of ethylene glycol.
**Fig. S5** TEM images of the ZnO prepared in mixed n-propanol and water.

**Fig. S6** ATR-FTIR and transmission FTIR spectra of ZnO synthesized with the presence of n-propanol (a, b) and isopropanol (c, d).
**Fig. S7** TEM images of the ZnO prepared in mixed 1, 2-propylene glycol and water.

**Fig. S8** TEM images of the ZnO prepared in mixed glycerol and water.
Fig. S9 HRTEM images of the ZnO prepared in mixed glycerol and water.
Fig. S10  ATR-FTIR and transmission FTIR spectra of ZnO synthesized with the presence of 1, 2-propylene glycol (a, b) and glycerol (c, d).

Fig. S11  TEM images of the ZnO nanoplates prepared in mixed n-butanol and water.