Room temperature sintering of polar ZnO nanosheets: II-Mechanism

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Supplementary Information

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**FTIR spectra for ZnO-P**

![FTIR spectra](image)

**Figure S1.** Deconvolution of FTIR spectra for ZnO-P after 0 days of unprotected storage
Figure S2. Deconvolution of FTIR spectra for ZnO-P after 2 days of unprotected storage
Figure S3. Deconvolution of FTIR spectra for ZnO-P after 6 days of unprotected storage
Figure S4. Deconvolution of FTIR spectra for ZnO-P after 8 days of unprotected storage
Figure S5. Variation of parameter P (equation (1)) with storage time for the ZnO-P sample previously subjected to unprotected storage (type and position of the FTIR features inside the plots. Band assignments in Figure S5)
Figure S6. Deconvolution of Raman spectra for ZnO-M after 0, 2, 6, 8, 10 and 30 days of unprotected storage
Figure S7. Deconvolution of Raman spectra for ZnO-P after 0, 2, 6, 8, 10 and 30 days of unprotected storage.
**XPS spectra for ZnO-M and ZnO-P**

**Figure S8.** Deconvolution of XPS spectra (Mg-Kα source) for ZnO-M (evolution with unprotected storage time)
Figure S9. Deconvolution of XPS spectra (Al-Kα source) for ZnO-M (evolution with unprotected storage time)
Figure S10. Deconvolution of XPS spectra (Mg-Kα source) for ZnO-P (evolution with unprotected storage time)
Figure S11. Deconvolution of XPS spectra (Al-Kα source) for ZnO-P (evolution with unprotected storage time)
Figure S12. Variation of (Zn2p3/2-II)-(Zn2p3/2-I) binding energy difference with the relative amount of Zn(OH)$_2$