Single step route to highly transparent, conductive and hazy aluminium doped zinc oxide films

Jianwei Li^{*a*}, Sanjayan Sathasivam^{*a*}, Alaric Taylor^{*b*}, Claire J. Carmalt^{*a*} and Ivan P. Parkin^{*a**} *Corresponding author

^aMaterials Chemistry Centre, Department of Chemistry, University College London, 20 Gordon Street, London WC1H 0AJ, UK

^b Department of Electronic & Electrical Engineering, University College London, Torrington Place, London WC1E 7JE, UK

Fax: (+44) 20-7679-7463

E-mail: <u>i.p.parkin@ucl.ac.uk</u>

Supplementary information:

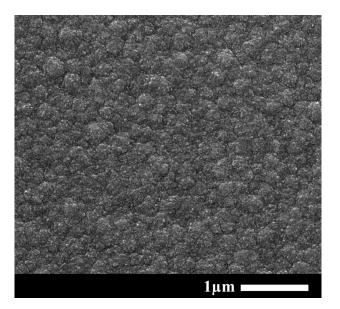


Figure S1: SEM image of as-prepared undoped ZnO thin film by AACVD under 500 °C without using acetylacetone as additive in the precursor.

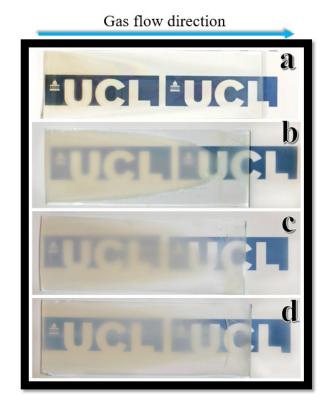


Figure S2: Digital photo showing the appearance of all as-prepared ZnO thin films : a) non-additive undoped ZnO film, b) additive treated undoped ZnO film, c) additive treated 2.9 at.% Al doped ZnO film and d) additive treated 6.1 at.% Al doped ZnO film.

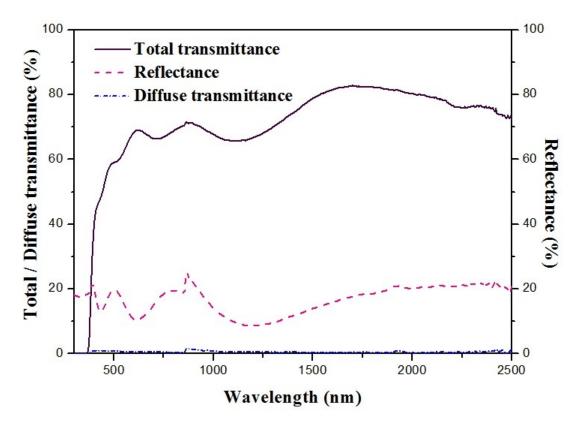


Figure S3: Optical properties of non-additive undoped ZnO film: Total transmittance, reflectance and diffuse transmittance.