

Aerosol Assisted Chemical Vapour Deposition of Ga-doped ZnO Films for Energy Efficient Glazing: Effects of Doping Concentration on the Film Growth Behaviour and Opto-electronic Properties

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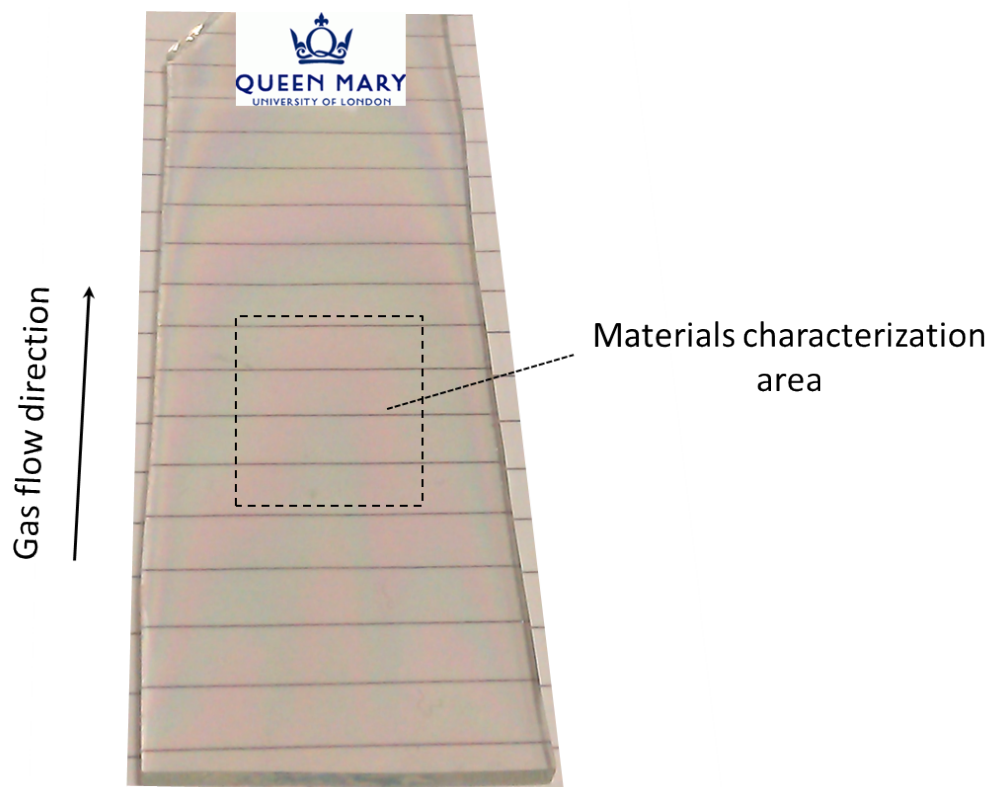


Figure S1 Photograph showing transparent ZnO:Ga film grown by AACVD on glass substrate. The uniform area in the middle of the glass substrate was selected for materials characterization

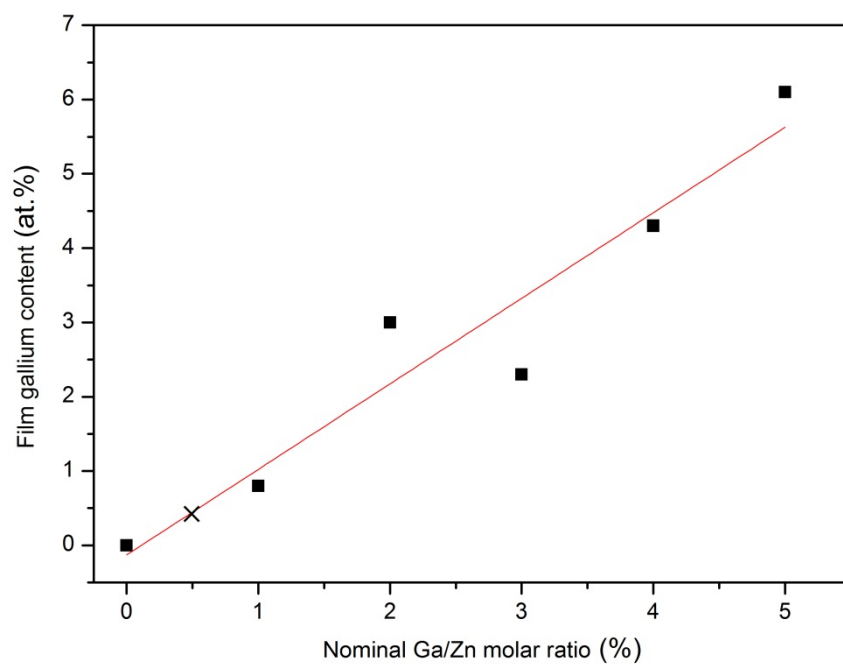


Figure S2 Evolution of the film gallium content as a function of the nominal Ga/Zn molar ratio in precursor solution.

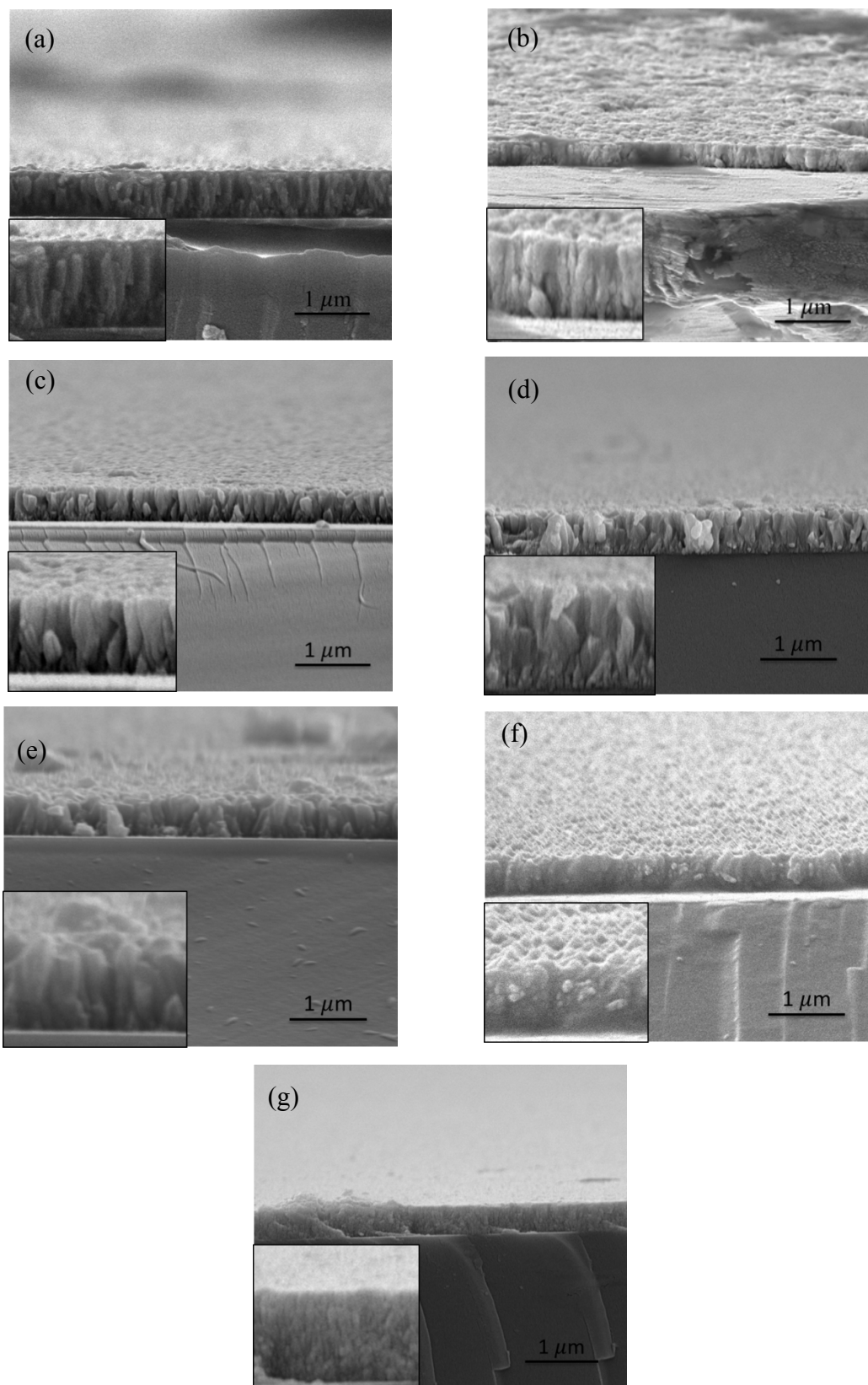


Figure S3 Cross-sectional SEM images of (a) ZnO, (b) ZnO:Ga(0.4), (c) ZnO:Ga(0.8), (d) ZnO:Ga(2.3), (e) ZnO:Ga(3.0), (f) ZnO:Ga(4.3) and (g) ZnO:Ga(6.1) films. The insets show higher magnification images for each sample.

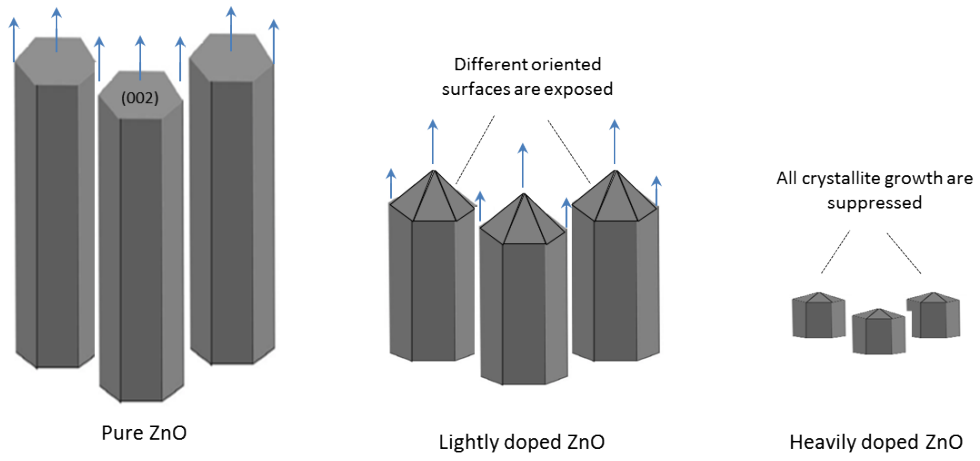


Figure S4 Schematic illustration of the growth behaviour in pure and doped ZnO film.

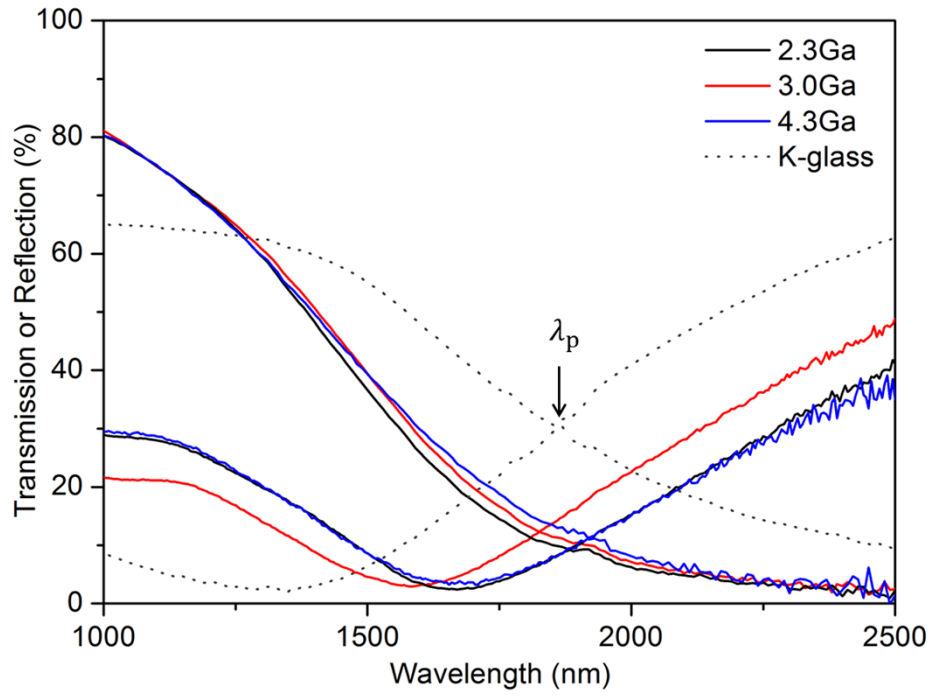


Figure S5 Transmission and reflection spectra of ZnO:Ga(2.3), ZnO:Ga(3.0) and ZnO:Ga(4.3) in the near infrared light. The intersection point corresponds to the plasma wavelength.