

Supporting Information to

Room temperature vacuum induced ligand removal and patterning of ZnO nanoparticles: from semiconducting films towards printed electronics

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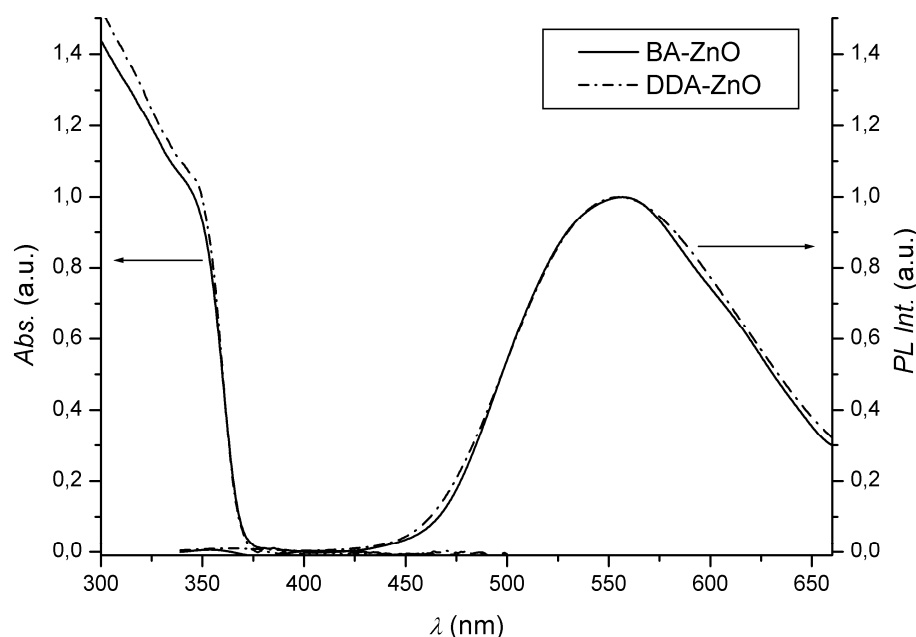


Figure S1 Normalized UV-Vis and PL spectra of BA-ZnO and DDA-ZnO in chloroform solution (excitation for PL measurements at 340 nm).

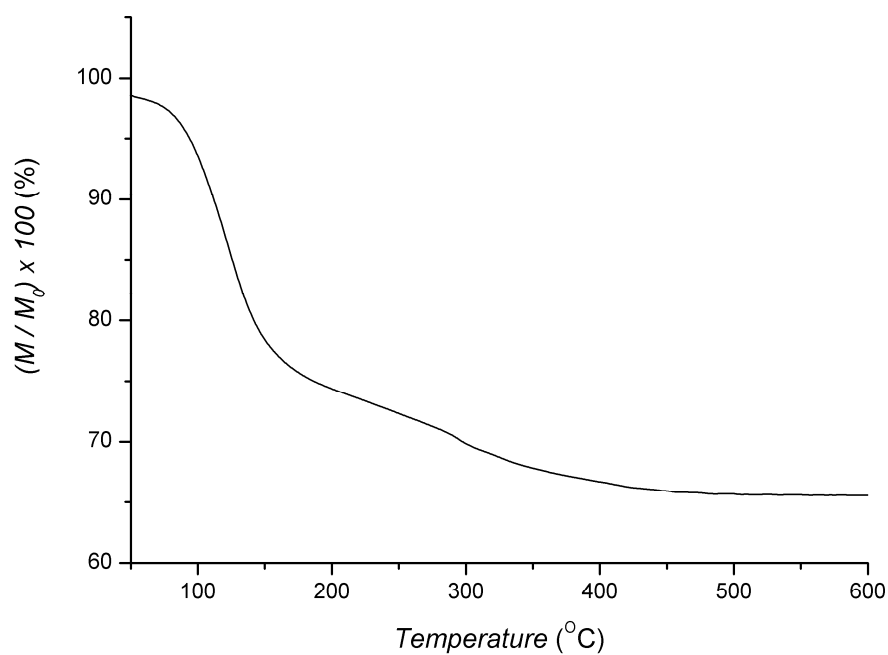


Figure S2: TGA curve of BA-stabilized ZnO nanoparticles between 50°C and 600°C, recorded with a heating rate of 10 K/min.

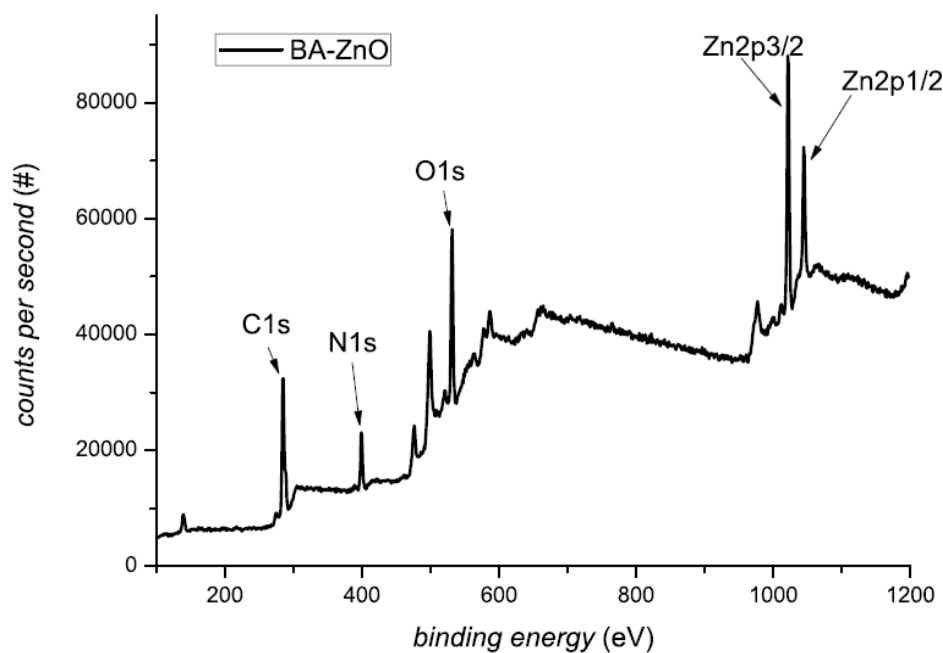


Figure S3: XPS spectrum of untreated BA-ZnO.

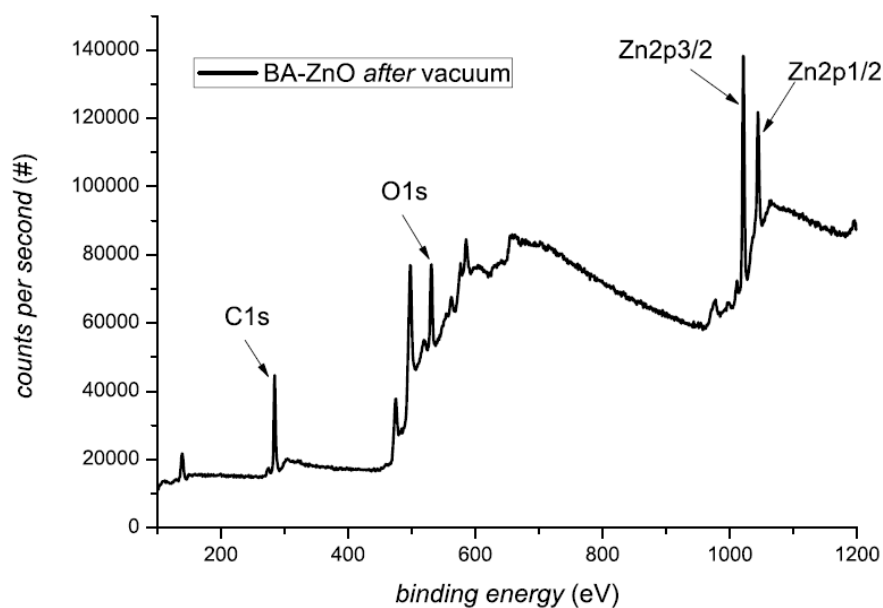


Figure S4: XPS spectrum of BA-ZnO after storing in vacuum overnight.

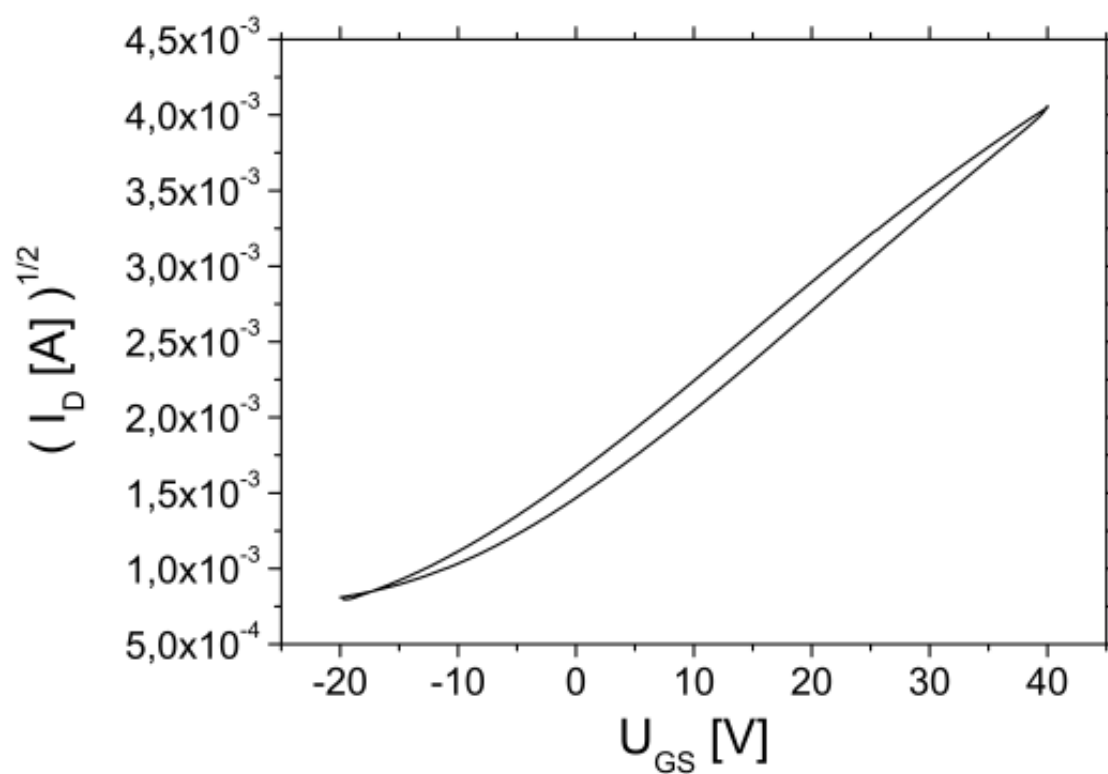


Figure S5 Transfer characteristics of BA-ZnO based FET after vacuum treatment.

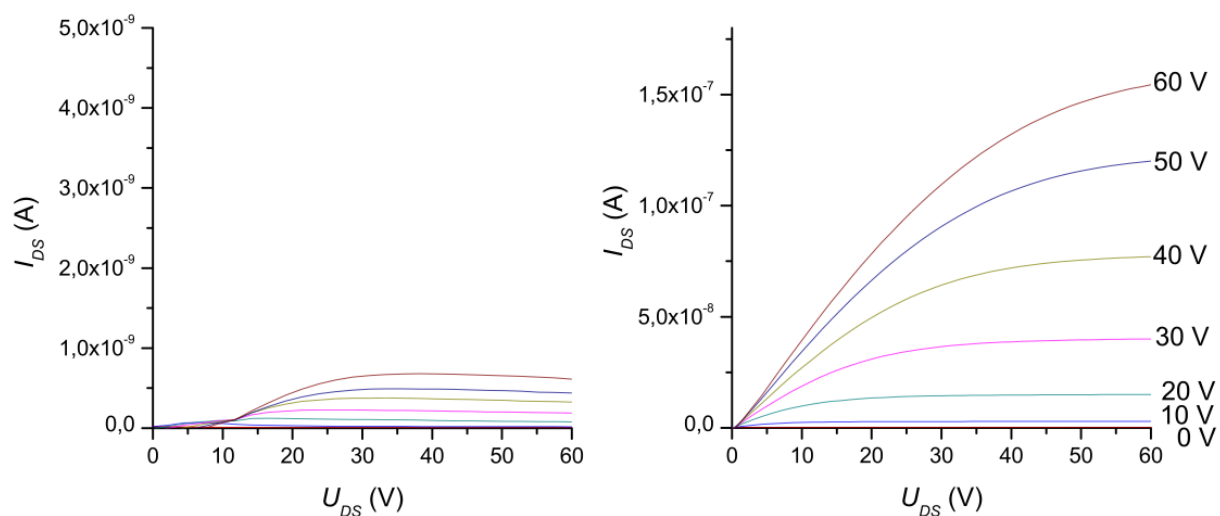


Figure S6: Output characteristics of FETs before (left graph) and after vacuum treatment (right graph) overnight. Gate voltages were varied between 0 V to 60 V.

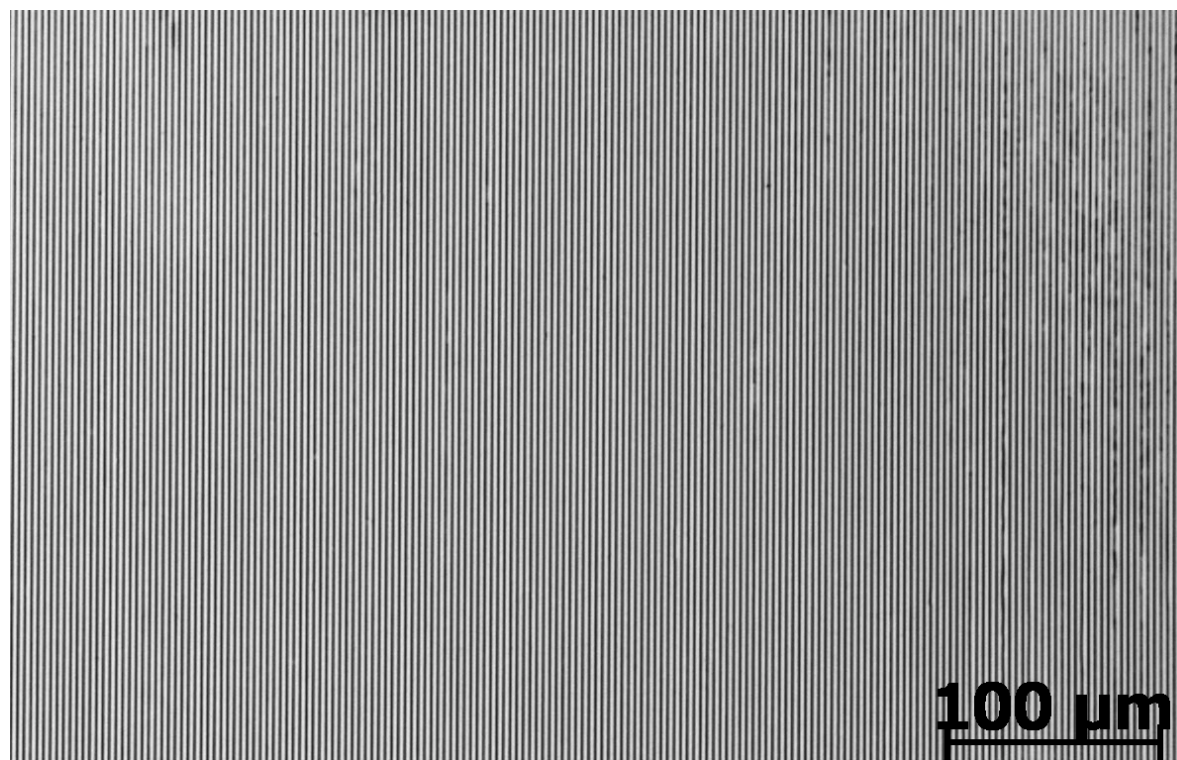


Figure S7: Optical micrograph of micropatterned BA-ZnO nanoparticles.

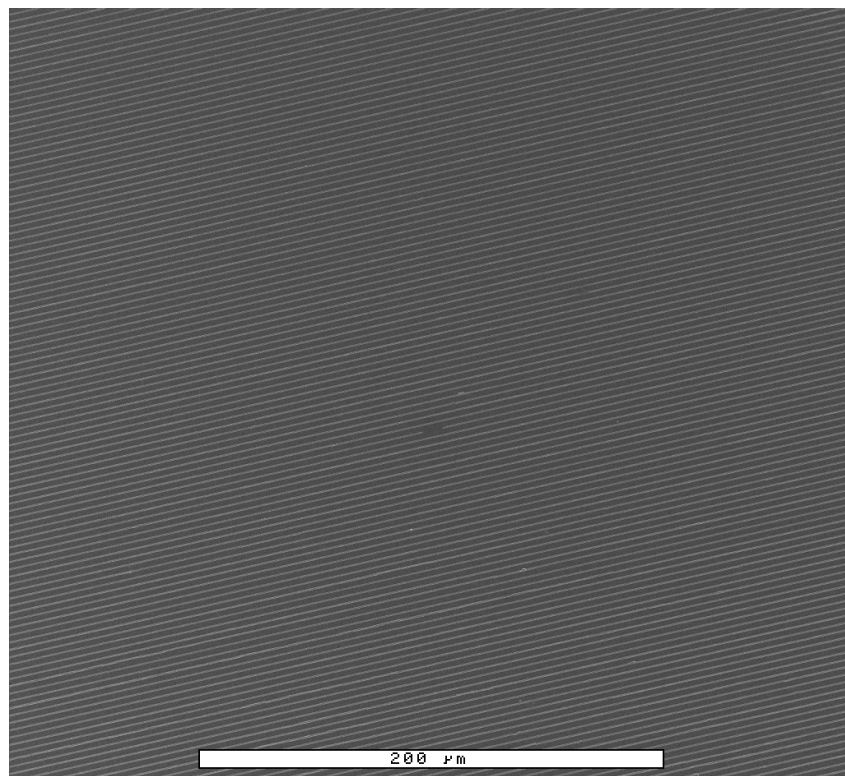


Figure S8: Large area SEM image of structured BA-ZnO nanoparticles.

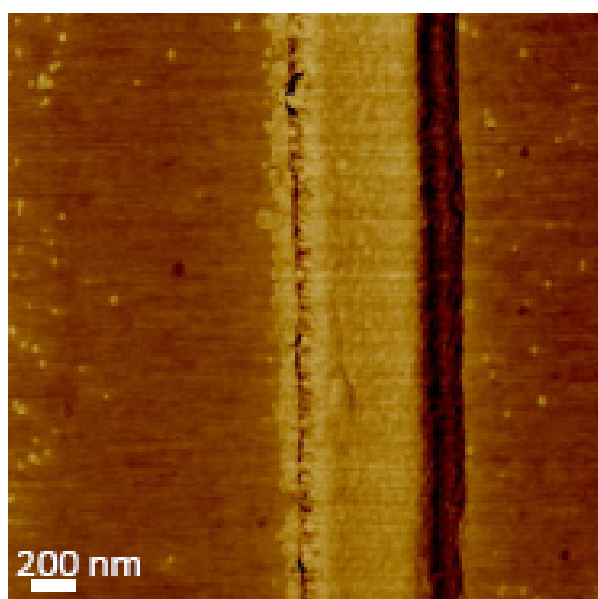


Figure S9: AFM phase image of a single ZnO-line next to the substrate. Only very few nanoparticles can be seen on top of the substrate in the areas next to the line. Phase image: z-contrast 10°.