

Supporting Information

for

Evolution of microstructure and related optical properties of ZnO grown by atomic layer deposition

Adib Abou Chaaya^{‡1}, Roman Viter^{‡2,3*}, Mikhael Bechelany^{§1*}, Zanda Alute², Donats Erts⁴, Anastasiya Zaleskaya², Kristaps Kovalevskis³, Vincent Rouessac,¹ Valentyn Smyntyna² and Philippe Miele¹

Address: ¹European institute of membranes (IEM, ENSCM-UM2-CNRS, UMR 5635), University of Montpellier 2, Place Eugène Bataillon, F-34095, Montpellier, France, ²Faculty of Physics, Odessa National I.I. Mechnikov University, 42, Pastera, 65026, Odessa, Ukraine, ³Institute of Atomic Physics and Spectroscopy & Institute of Chemical Physics, University of Latvia, 19, Raina Blvd., LV 1586, Riga, Latvia, and ⁴Institute of Chemical Physics, University of Latvia, 19, Raina Blvd., LV 1586, Riga, Latvia

Email: Mikhael Bechelany* - mikhael.bechelany@univ-montp2.fr, Roman Viter* - viter_r@mail.ru

* Corresponding author

§Phone. +33 4 67 14 91 67, Fax. +33 4 67 14 91 19

‡These authors contributed equally to the paper

Additional figures

SEM of ZnO ALD films

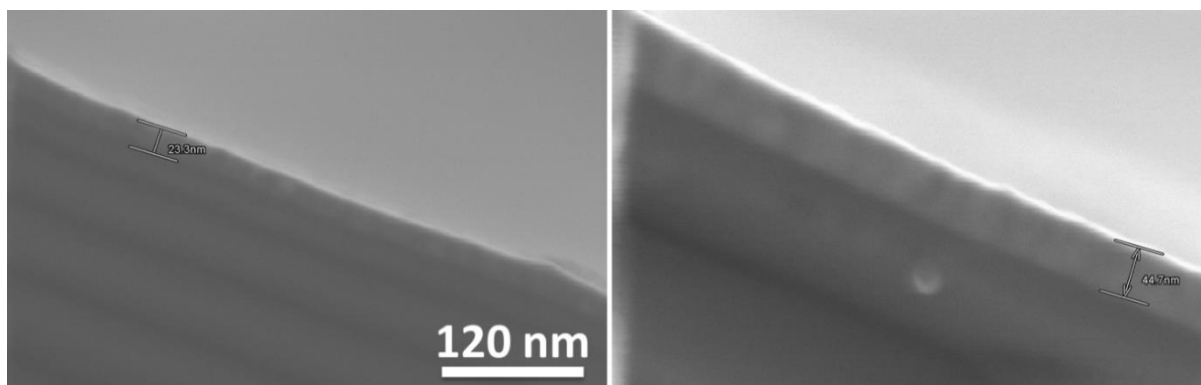


Figure S1: SEM images of the cross section of ZnO ALD films deposited on Si substrates by 100 and 200 cycles.

FTIR spectra of ZnO ALD films of different thickness

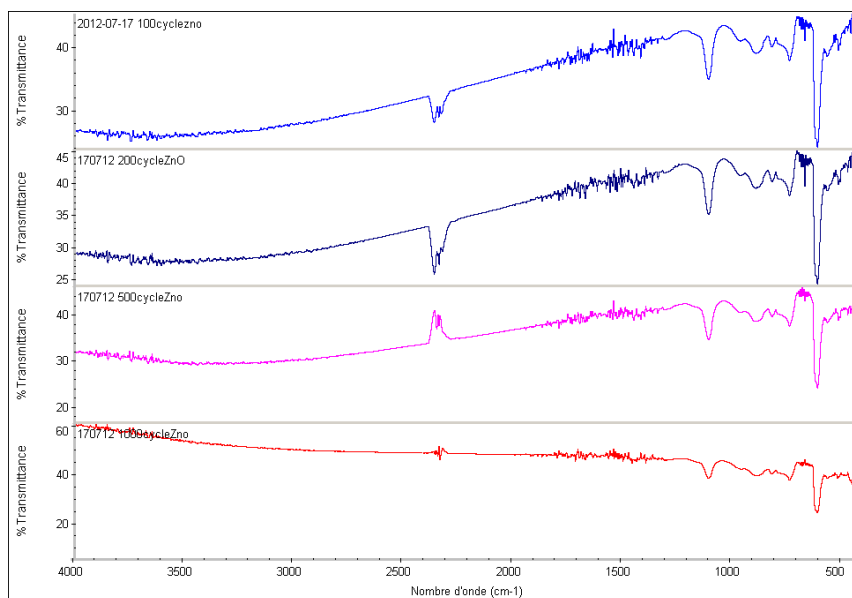


Figure S2: FTIR spectra of ZnO thin films deposited within 100, 200, 500, and 1000 cycles.

TEM measurement of 250 nm ZnO ALD films

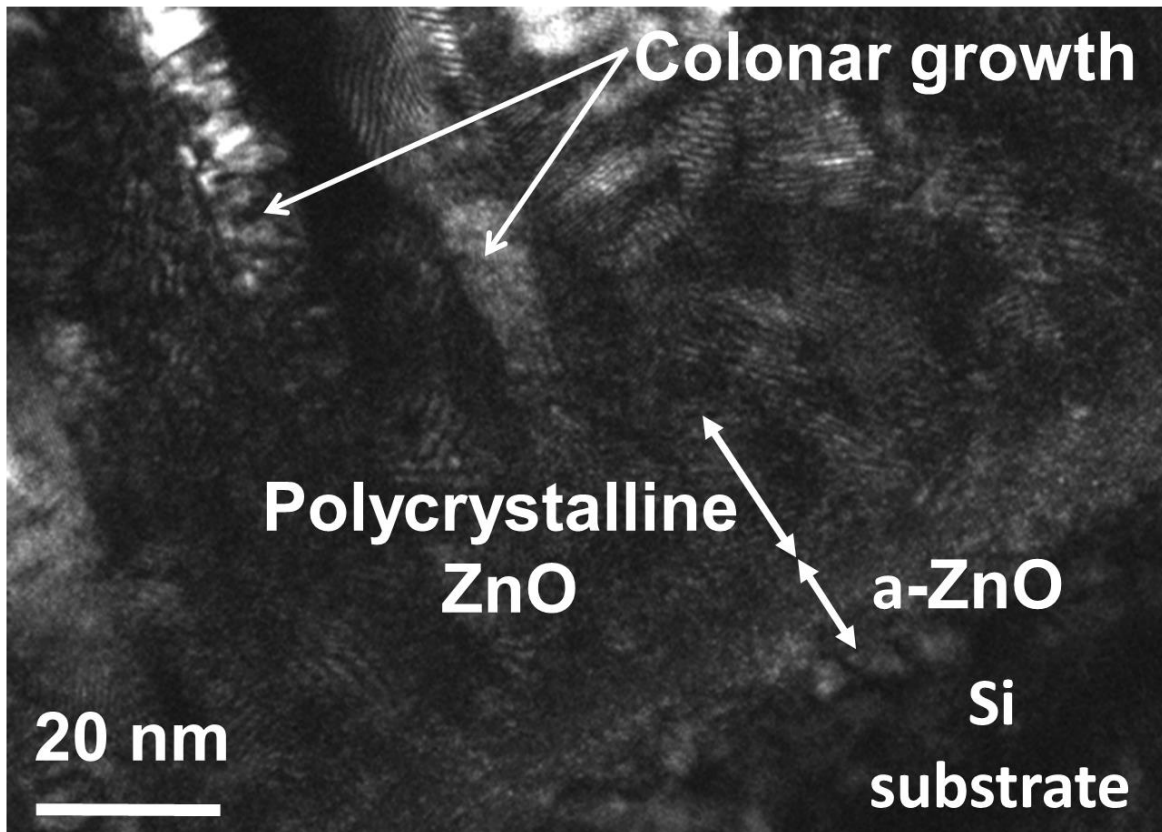


Figure S3: Cross section TEM image of a 1000 cycles ZnO ALD film deposited on Si substrate.

PL measurement of ZnO ALD films of different thicknesses

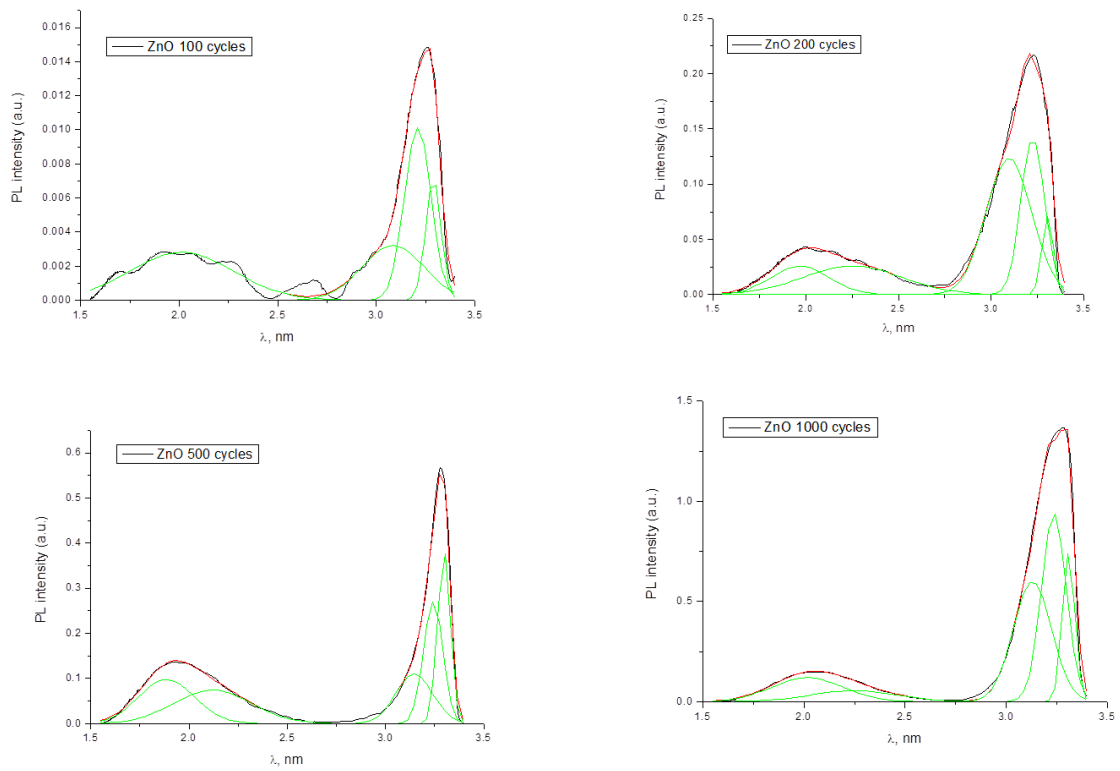


Figure S4: Gaussian fit of PL spectra of 25, 49.8, 124, and 250 nm thick ZnO ALD films.