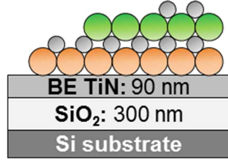
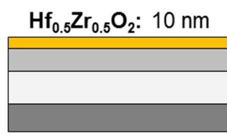
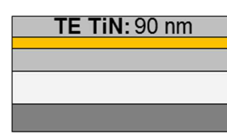
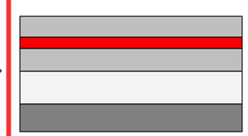
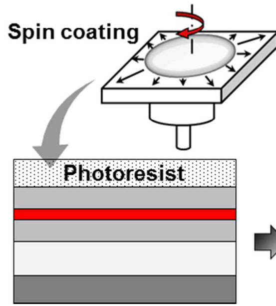
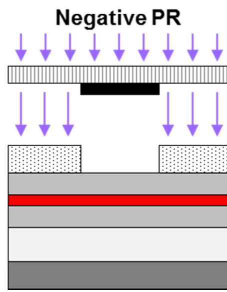


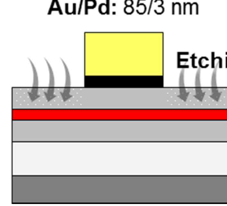












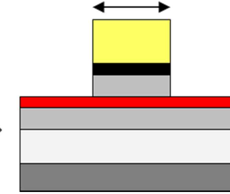
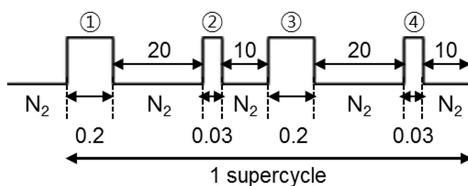
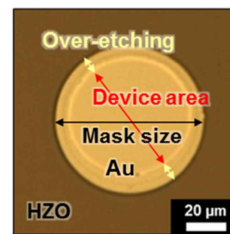


Figure 1. Schematic illustration of the procedure used to fabricate the ozone- and water-based HZO samples.





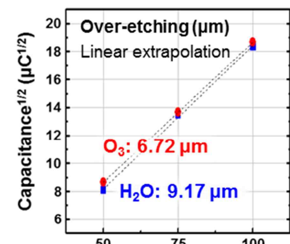


Figure 2. ALD process for the deposition of the ozone- and water-based HZO films and the over-etching values of the ozone- and water-based HZO samples used in this work. These values are estimated by linear extrapolation of the square root of capacitance versus the device diameter and included in all the electrical results.

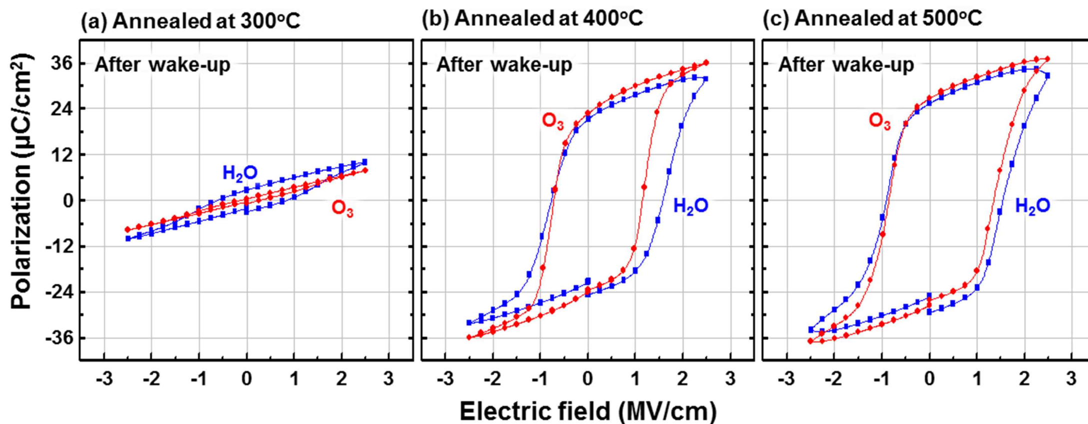


Figure 3. Polarization-electric field hysteresis curves of the ozone- and water-based HZO samples after wake-up field cycling.