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CORRECTION

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Correction: Stabilization of negative capacitance in ferroelectric capacitors with and without a metal interlayer

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Correction for 'Stabilization of negative capacitance in ferroelectric capacitors with and without a metal interlayer' by T. Rollo, *et al.*, *Nanoscale*, 2020, **12**, 6121–6129, DOI: 10.1039/C9NR09470A.

The authors regret that the value of β in the caption of Fig. 4 was incorrectly given as 4.5×10^9 m^5 C^{-2} F^{-1}. The correct value of β is 2.25×10^{10} m^5 C^{-2} F^{-1}. Fig. 4, along with the full corrected caption, is displayed below.

The Royal Society of Chemistry apologises for these errors and any consequent inconvenience to authors and readers.

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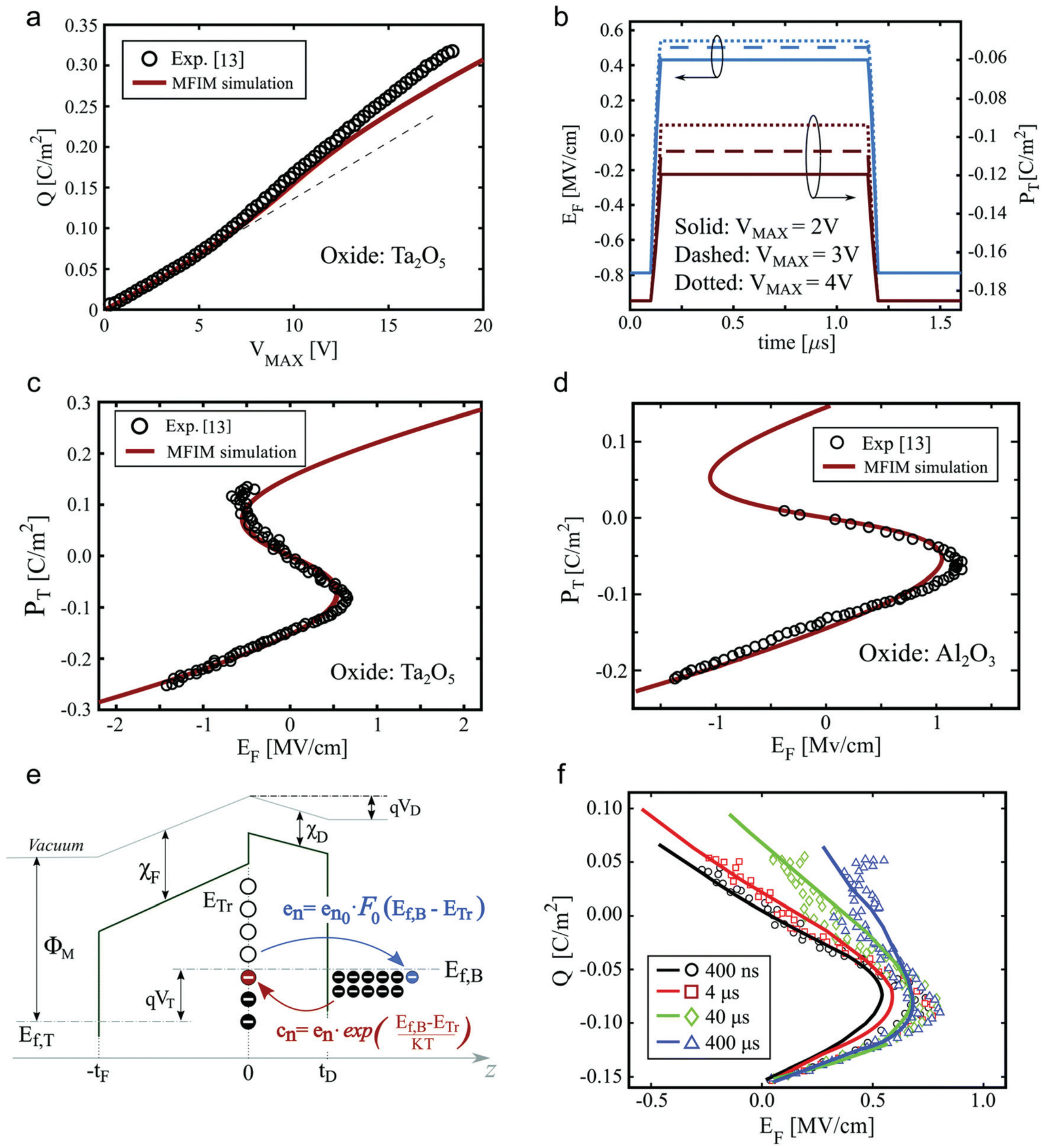

Fig. 4 Comparison between simulations and experiments. Measurements (symbols) and simulations (lines) for the MFIM structures in ref. 12 and 13. For the $Hf_{0.5}Zr_{0.5}O_2$–Ta_2O_5 capacitor the simulation parameters are $\varepsilon_F = 33$, $\varepsilon_D = 23.48$, $t_F = 11.6$ nm, $t_D = 13.5$ nm, $\alpha = -4.6 \times 10^8$ m F^{-1}, and $\beta = 9.8 \times 10^9$ m^5 C^{-2} F^{-1}, while for the $Hf_{0.5}Zr_{0.5}O_2$–Al_2O_3 system the parameters are $\varepsilon_D = 8$, $t_F = 7.7$ nm, $t_D = 4$ nm, $\alpha = -9.45 \times 10^8$ m F^{-1} and $\beta = 2.25 \times 10^{10}$ m^5 C^{-2} F^{-1};[12,13] for both capacitors we used $\rho = 0.5$ mΩ m and $k = 2 \times 10^{-9}$ m^3 F^{-1} m^{-1}. (a) Reversibly stored and released charge, Q, *versus* the top value V_{MAX} of the trapezoidal voltage waveform across the capacitor. (b) Simulated ferroelectric field and charge *versus* time produced by a trapezoidal input V_T with a pulse width of 1 μs and for different V_T amplitudes. (c) Polarisation *versus* ferroelectric electric field for the $Hf_{0.5}Zr_{0.5}O_2$–Ta_2O_5 MFIM capacitor. (d) Polarisation *versus* ferroelectric electric field for the $Hf_{0.5}Zr_{0.5}O_2$–Al_2O_3 capacitor. (e) Sketch of the band structure of the MFIM device with representation of the emission and capture mechanisms. (f) Simulated charge *versus* ferroelectric E_F curves for different pulse widths of the input signal and fixed density $N_T = 7.5^{12}$ eV^{-1} cm^{-2} of acceptor type interface traps with a uniform energy distribution. In these simulations the emission rate is $e_{n0} = 5 \times 10^4$ s^{-1}, the metal gate work-function is $\Phi_M = 4.05$ eV, and the electron affinity is $\chi_F = 2.2$ eV for $Hf_{0.5}Zr_{0.5}O_2$ and $\chi_D = 3.2$ eV for Ta_2O_5.[29]

