Supporting Information

Low-voltage electro-optical memory device based on NiO nanorods dispersed in a ferroelectric liquid crystal

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Rietveld refinement of XRD pattern

The observed diffraction peaks were simulated with a Psuedo-voigt profile function. The normal procedure for the Rietveld refinement has been followed for the simulation of experimental X-ray diffraction data. The Rietveld-refined XRD pattern of the NiO nanorods with the observed (I_{obs}; red dots), calculated (I_{cal}; black solid line) and difference (I_{bos}-I_{cal}; blue solid line) spectra is depicted in Fig. 1(a), resulting in a goodness-of-fit (χ^2) value of 1.95. The structural parameters generated by the Rietveld refinement procedure are listed in Table 1.

Table 1: Refined structural parameters of NiO as obtained through Rietveld full-profile refinement.

Lattice parameters	a = b = c 4.184724 Å; Space group: $Fm\bar{3}m$ (No. 225)			
Profile parameters	Function: Pseudo-voigt			
FWHM parameters	U = -9.455620, V = 15.554802, W = 2.303888			
Atomic label	Atomic positions			
	Wyckoff position	*x* = *y* = *z*	*B*	*Occ.*
O	4b	0.50	3.03460	0.60000
Ni	4a	0.00	0.49964	0.46562
Reliability factors	R_p: 1.73%	R_{wp}: 2.16%	R_{exp}:1.55%	χ^2 = 1.95