

Supplementary Table 1. Discrepancy factors; Unweighted profile R factor (R_p) weighted profile R-factor (R_{wp}), expected R factor (R_{exp}) and goodness fit factor (χ^2)

Comp. x	x=0.0	x=0.025	x=0.05	x=0.075	x=0.1
$R_p(\%)$	9.27	8.64	9.66	9.27	10.5
$R_{wp}(\%)$	12.4	11.8	13.8	12.6	13.8
$R_{exp}(\%)$	12.3	11.7	11.7	11.4	12
χ^2	1.02	1.02	1.39	1.22	1.32

Supplementary Table 2. Values of atomic coordinates (x, y, z) determined from Rietveld refinement of XRD pattern of $\text{CoZnHo}_x\text{Fe}_{2-x}\text{O}_4$

Ions	x=0.0	x=0.025	x=0.05	x=0.075	x=0.1
	x=y=z	x=y=z	x=y=z	x=y=z	x=y=z
Zn	0.1250	0.1250	0.1250	0.1250	0.1250
Fe	0.1250	0.1250	0.1250	0.1250	0.1250
Co	0.5000	0.5000	0.5000	0.5000	0.5000
Fe	0.5000	0.5000	0.5000	0.5000	0.5000
Ho	0.5000	0.5000	0.5000	0.5000	0.5000
O	0.2546	0.2478	0.2498	0.2567	0.2645

Supplementary Table 3. Percentage of the elements, calculated and as obtained from the EDS analysis of $\text{CoZnHo}_x\text{Fe}_{2-x}\text{O}_4$

Comp. x	Theoretical Percentage					Observed Percentage				
	% Co	% Zn	% Ho	% Fe	% O	% Co	% Zn	% Ho	% Fe	% O
0	17.46	8.12	0	47.35	27.07	17.33	8.29	0	46.71	27.67
0.025	17.26	8.03	1.73	46.22	26.76	17.21	8.00	1.71	45.98	27.1
0.05	17.07	7.94	3.41	45.12	26.46	17.03	7.92	3.32	45	26.73
0.075	16.88	7.85	5.06	44.05	26.17	16.78	7.70	5.00	44.00	26.52
0.1	16.69	7.76	6.67	43.00	25.88	16.58	7.68	6.58	43.06	26.1