

Synthesis and Optical - electrochemical gas sensing application of Ni-doped LiFePO_4 nano-particle

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Table. 1 Crystal size of $\text{LiFe}_{1-0.01x}\text{Ni}_{0.01x}\text{PO}_4$ and LiFePO_4

Sample	$\text{LiFe}_{0.995}\text{Ni}_{0.005}\text{PO}_4$	$\text{LiFe}_{0.99}\text{Ni}_{0.01}\text{PO}_4$	$\text{LiFe}_{0.98}\text{Ni}_{0.02}\text{PO}_4$	LiFePO_4
β_{011} (rad)	0.00317	0.00254	0.00114	0.00269
β_{111} (rad)	0.00254	0.00302	0.00292	0.00269
β_{121} (rad)	0.00432	0.00314	0.00482	0.00293
β_{131} (rad)	0.00241	0.00252	0.00228	0.00252
D_{hkl} (nm)	48.0	49.6	50.5	52.4

Fig.1 (a)Schematic view of Optical waveguide gas sensor; (b)detection cell and the operation principle of waveguide

