



Supplementary

Cytotoxicity of NiO and Ni(OH)₂ Nanoparticles is Mediated by Oxidative Stress-induced Cell Death and Suppression of Cell Proliferation

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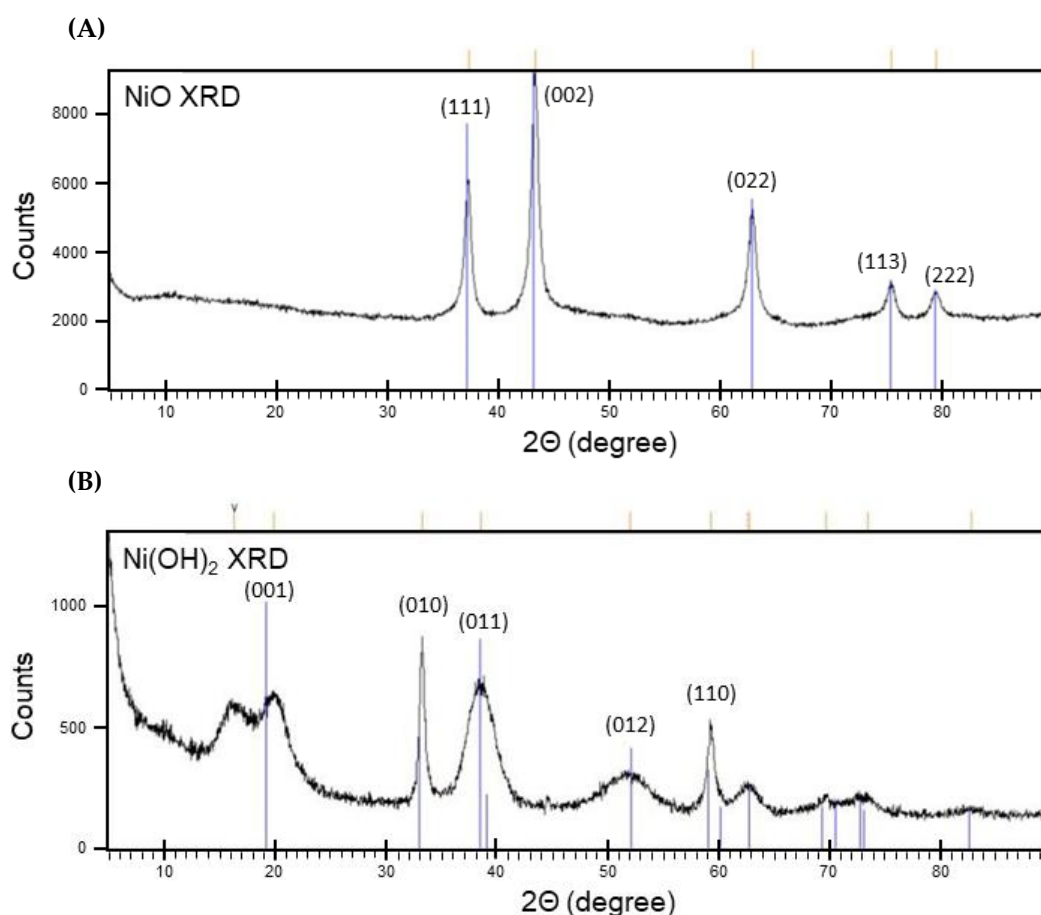


Figure S1. XRD spectra of (A) NiO and (B) Ni(OH)₂, with the (hkl) indicated above each peak.

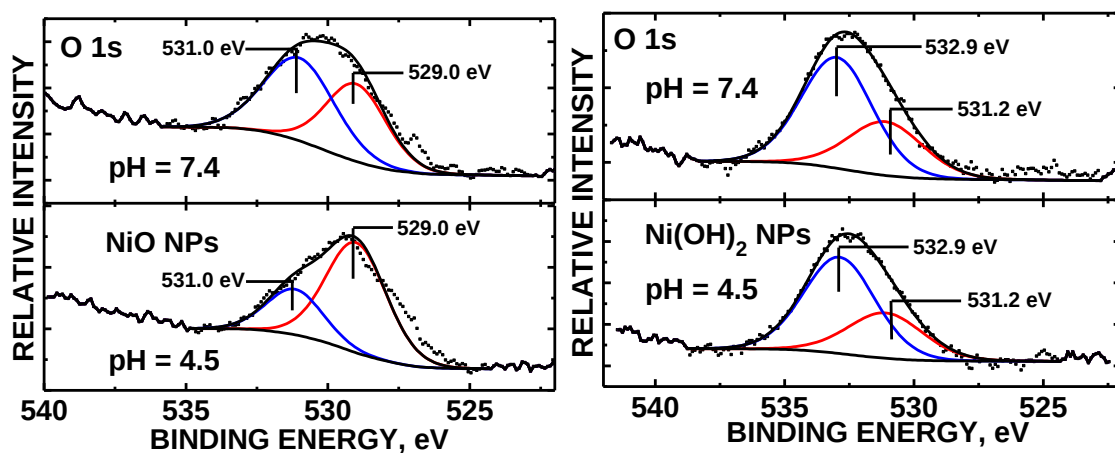


Figure S2. XPS core levels of O 1s orbitals of NiO (left) and Ni(OH)₂ (right) nanoparticles.

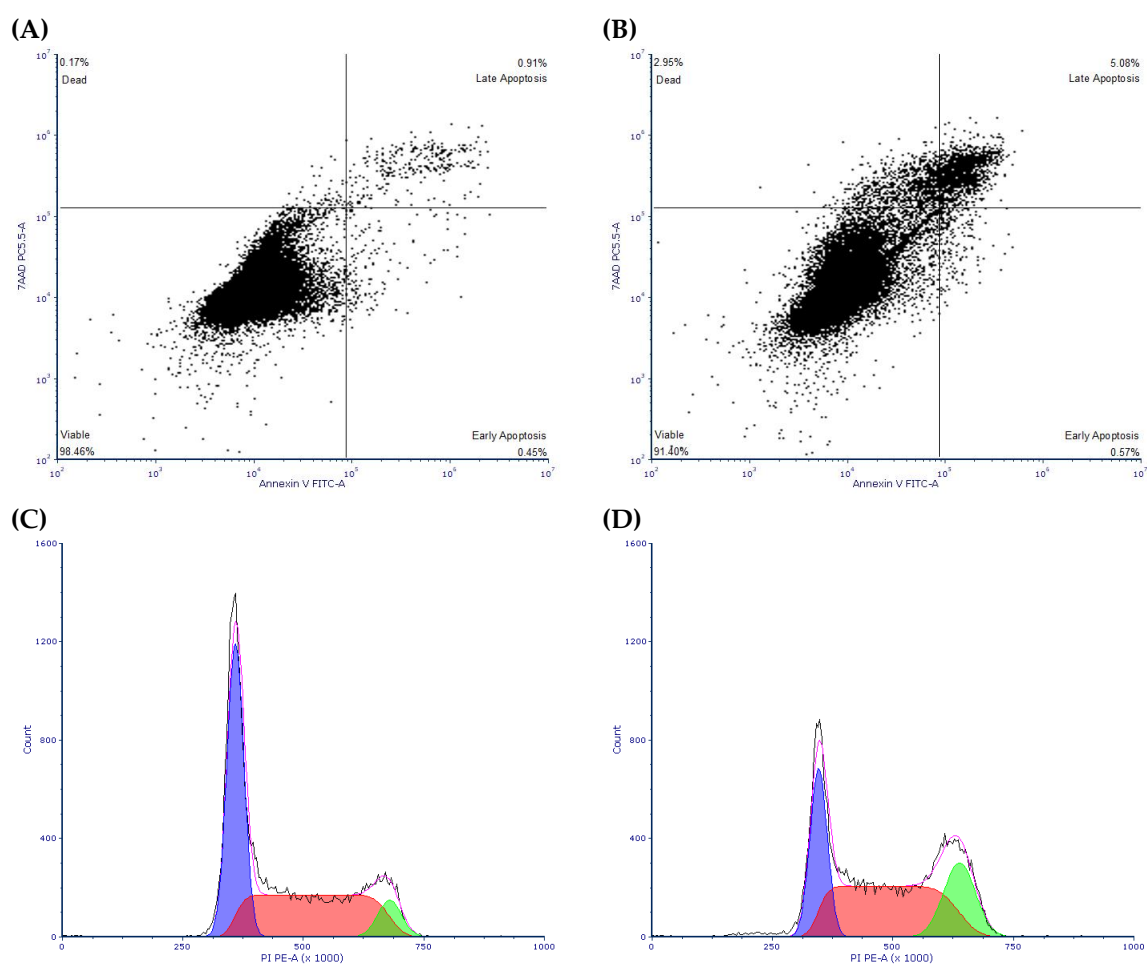


Figure S3. Exemplary flow cytometry data in FCS Express 6. Ni(OH)₂ apoptosis analysis after 24h exposure to (A) 0 and (B) 100 $\mu\text{g/mL}$. Ni(OH)₂ cell cycle analysis after 24h exposure to (C) 0 and (D) 100 $\mu\text{g/mL}$.

Table S1. Point of Zero Charge.

Nanoparticle		Initial pH												
		1.16	1.94	2.96	3.89	4.64	6.2	6.81	6.8	8	9.4	10.83	11.83	12.56
NiO	Final pH	1.53	3.47	6.04	8.34	8.59	8.72	8.72	8.74	8.8	8.77	9.75	11.75	12.7
Ni(OH) ₂		1.32	4.86	7.14	7.85	7.89	7.91	7.9	7.94	7.88	7.91	8.28	11.72	12.73

Table S2. HepG2 Viability.

Nanoparticle	Nanoparticle Concentration (µg/mL)					
	0	10	25	50	75	100
NiO 24h	100.0 ± 0.0	100.3 ± 1.9	103.2 ± 1.3	98.5 ± 0.7	102.2 ± 1.2	99.2 ± 2.5
Ni(OH) ₂ 24h	100.0 ± 0.0	102.2 ± 1.4	103.9 ± 4.4	99.9 ± 2.1	98.9 ± 1.6	96.9 ± 1.6
NiO 48h	100.0 ± 0.0	107.3 ± 3.2	105.1 ± 0.9	101.3 ± 1.7	99.5 ± 1.9	93.7 ± 7.1
Ni(OH) ₂ 48h	100.0 ± 0.0	93.8 ± 7.5	86.1 ± 13.1	86.1 ± 12.4	74.6 ± 11.1	72.1 ± 10.6

Data are expressed at the mean ± the SD.