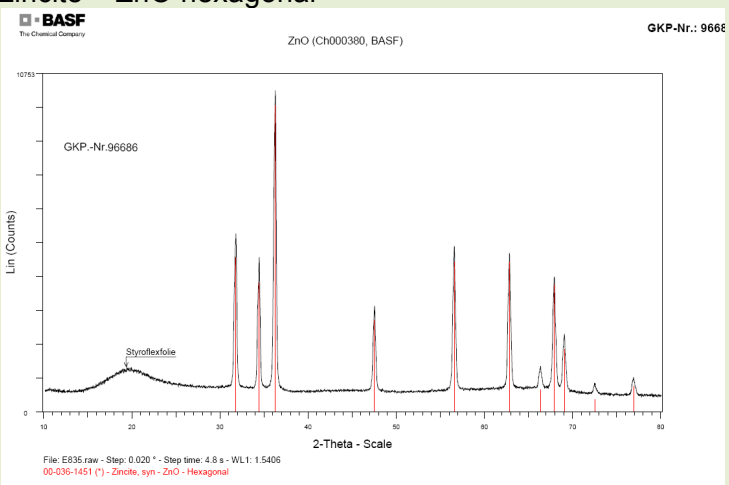
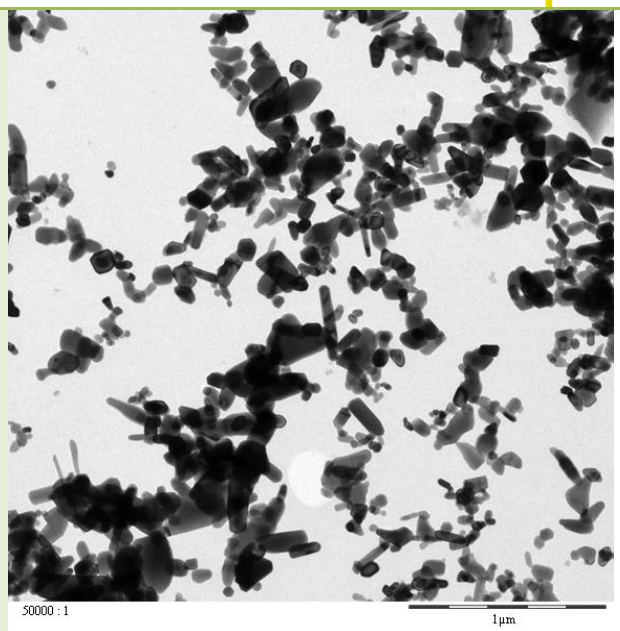
GEFÖRDERT VOM
Bundesministerium
für Bildung
und Forschung

Material Zinc oxide (ZnO)

Charge description/ NanoCare Product number	CH-000380 9
Provider	BASF SE
Available form	Powder
Primary particle size [d_{50} in nm]	150 nm
Particle size distribution	20 to 400 nm, see TEM
pH	n/a (Powder)
BET Surface area	
Particle morphology	Nearly isometric, rod and needle like particles
Crystal phase and crystallinity	Zincite – ZnO hexagonal 
Stabilisation	No
Solubility in water	3 ppm // in DMEM/FCS: 37 ppm Protocol: Initial concentration 10 mg/ml, 24h agitation at 900 rpm; centrifugation and supernatant analysis by ICP-MS
Purity/contamination	Impurities of C and Cl in %-level on the surface, see XPS below; Purity of material 99% see XRD above.

REM/TEM



Zeta potential

Surface area chemistry

XPS-results:
Impurities of C and Cl in %-level on the surface

Probe	Nr.	Bez.		±				±		±		±				
Element		GKP 96686	C					Cl		Na		O				Zn
Interpretation/ Literaturwerte					CH, CC	C-O	O=C-O						ZnO	org.	ZnO	
Core level [eV]					284,8	+1,5	+4,3						530,5	532,3	1022,3	
Auger [eV]															988,3	
	2	ZnO (Ch000380, BASF)	20,7	0,5	16	2	2	3,4	0,2	3,1	0,2	38,0	0,2	34	4	34,8

Die Angaben sind in at%
- Signal nicht nachweisbar
Die Fehlerangaben geben die laterale Heterogenität von zwei Messtellen wieder