

Materials List for:

Aerosol-assisted Chemical Vapor Deposition of Metal Oxide Structures: Zinc Oxide Rods

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Materials

Name	Company	Catalog Number	Comments
ZnCl ₂ 99,999 % trace metal basis	Sigma-Aldrich	229997	used as purchased from manufacturer
Ethanol ≥96%	Penta	71430	used as purchased from manufacturer
Reaction cell	home-made		stainless steel cylindrical reaction cell (7000 mm ³ , diameter: 30 mm, height: 10 mm) with integrated heaters to reach the temperature of deposition and provided with a PID controller
Ultrasonic liquid atomizer	Johnson Matthey		Operating frequency #1,6 MHz
Flowmeter			To have a better control of this step the use of a mass flow controller is recommended.
Nitrogen	Linde Gas A.S.		
Silicon wafers	MicroChemicals		<100>, p-type, 525 μm thick, cut into pieces (10 mm × 10 mm)
Glass vial - 100 ml			29/32 joint, 200 mm length
Vacuum trap			29/32 joint, 5 mm hose barbs
Graduated cylinder - 10 ml			
Universal support			
Balance			
Scanning Electron Microscopy (SEM)	Tescan	Mira II LMU	
X-ray diffraction (XRD)	Rigaku	Smart Lab 3kW	Cu Kα radiation
X-ray Photoelectron spectroscopy (XPS)	Kratos	AXIS Supra	Monochromatic Kα radiatio, 300 W emission power, magnetic lens, and charge compensation
Transmission Electron Microscopy (TEM)	Jeol	JEM 2100F	operated at 200kV using Schottky cathode and equiped with EDX