

Materials List for:

The Effect of Interfacial Chemical Bonding in TiO₂-SiO₂ Composites on Their Photocatalytic NO_x Abatement Performance

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Materials

Name	Company	Catalog Number	Comments
quartz	Aldrich	31623	
tetrabutylorthotitanium (TBOT)	Aldrich	244112	
ethanol	Aldrich		absolute alcohol
hydrochloric acid	Aldrich		
deionised water			18.2 MWΩ.cm
seives	Endecott		
tetraethylorthosilicate (TEOS)	Aldrich	86578	
PC105 (TiO ₂)	Cristal Global		
ammonia solution	Aldrich		
titanium tetraisopropoxide (TTIP)	Aldrich	87560	
barium sulphate	Aldrich		
NO in N ₂	BOC		100 ppm
FTIR spectrophotometer	Perkin Elmer	Spectrum Two	equipped with UATR
X-ray diffractometer	PAN analytical	X'Pert3 Powder	equipped with a CuKα 1.54 Å X-ray source
Scanning electron microscope	ISI	ABT55	ED X-ray analyser and Link Analytical BSE detector
Transmission electron microscope	Jeol	JEM-2000EX	utilising a Gatan Erlangshen ES500W camera
UV-vis diffuse reflectance spectrophotometer	Agilent Technology	Cary 60	
Mass flow controllers	Bronkhorst		
Humidity monitor	Rotronic	Hygropalm	
Solar simulator	Sciencetech	SS0.5kW	1.5 AM filter used
Broadband thermopile detector	Gentec EO	XLP12-3S-H2-D0	
NO _x analyser	Air Monitors Ltd	Thermo Scientific Model 42i-HL	