


Methods, IAAC, Hillebrecht

<p style="text-align: center;">Simultaneous Thermal Analysis (STA)</p> <p style="text-align: center;"><i>Thermal Analysis</i></p>	<p>Model: <i>Netzsch STA 429</i></p> <p>Unit and Room: <i>Inorg. Chem. (Chem. II, basement, R.-143)</i></p> <p>Responsible: <i>Dr. M. Ade, K. Bickel</i></p> <p>Further information: <i>http://portal.uni-freiburg.de/fkchemie/Ausstattung</i></p>	
<p>Short Description:</p> <p>Simultaneous differential thermal analysis (DTA) and thermogravimetry (TG) up to 1400 ° C Thermogravimetric unit with electro-magnetic compensation and sensibility of 10 µg, DTA sensibility 10 µV (Type S-thermocouple)</p>	<p>Picture of the Equipment</p>	
<p>Available Experiments/Techniques:</p> <p>-Thermogravimetry (TG) -Differential Thermal Analysis (DTA)</p> <p>with standard open alumina crucibles in dry flowing air from room temperatur to 1400°C.</p> <p>other atmospheres and crucible materials on request</p>		
<p>Special Equipment:</p> <p>Silica crucibles sealed under vacuum for DTA up to 1050°C DTA sample holder with type E thermocouple (chromel-constantan) with sensitivity 68 µV (< 1000°C)</p>		
<p>Measurements on the equipment are currently done by:</p>	<p><input type="checkbox"/> Students <input type="checkbox"/> Students after Introduction <input type="checkbox"/> Students after extensive training <input checked="" type="checkbox"/> Trained scientific service personal</p>	
<p>Recent Publications, where this instrument was important (optional): Give citation</p>	<p>J . Am. Chem. Soc. 2009, 131, 12172</p>	
<p>Typical problems that may be solved with this instrument:</p>	<p>- <i>Thermal analysis of decomposition reactions and 1st order phase transformations;</i> - <i>Determination of melting, solidification and crystallisation temperatures</i> - <i>Determination of phase diagrams</i> - <i>Determination of solvent contents</i> - <i>Determination of high-temperature oxidation properties</i></p>	