


Methods, IAAC, Crossing

<h1 style="margin: 0;">NMR spectroscopy</h1> <p style="margin: 0;"><i>Multinuclear Magnetic Resonance</i></p>	<p>Model: <i>Bruker Avance II+ 400 WB</i> Unit and Room: <i>Inorg. Chemistry, 2. floor, R235</i> Responsible: <i>Dr. Harald Scherer, 203-6160/6139</i> Further information: <i>http://portal.uni-freiburg.de/magres</i></p>
<p>Short Description:</p> <p>400 MHz NMR spectrometer with WB magnet (Ultrashield+), Avance II+ console, three frequency channels, 5 mm ATM-BBFO probehead, 4 mm MAS probehead, BLAXH500/100 and BLAXH300/100 amplifiers </p>	<p style="text-align: center;">Picture of the Equipment</p> 
<p>Available Experiments/Techniques:</p> <p>high resolution 1D 1H-, 19F- and X- (frequency range: 31P-109Ag) NMR standard experiments and multipulse sequences, selective excitation with shaped pulses, adiabatic pulses, 1H,X-, 19F,X-, 1H,19F- as well as homonuclear 1H-, 19F- or X- 2D correlation spectroscopy. Solid state NMR, MAS till 15 kHz, HR-MAS</p>	
<p>Special Equipment:</p> <p>sample changer BACS 60, frequency range between 15N and 109Ag for high resolution and between 15N and 33S for MAS available, low temperature capable till -140 °C (MAS), both solid state or high resolution measurements possible.</p>	
<p>Measurements on the equipment are currently done by:</p>	<p><input type="checkbox"/> Students <input checked="" type="checkbox"/> Students after Introduction <input checked="" 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>Synthesis, Crystal Structure, and Reactivity of the strong Methylating Agent Me₂B₁₂Cl₁₂, <i>Angewandte Chemie</i>, accepted 04.02.2010. <i>Chemistry-A European Journal</i> (2009), 15(39), 10047-10059. <i>Journal of Solid State Chemistry</i> (2009), 28(13), 3906-3915.</p>
<p>Typical problems that may be solved with this instrument:</p>	<ul style="list-style-type: none"> - X-nuclei reaction control and routine NMR. - solid state NMR investigations. - most powerful method for structural investigations in solution. - chemical exchange and dynamics in solution on the NMR time scale.