







<p>Date: 12.02.2019          Authors: Francesco Lenzini / Helge Gehring          Work area: Plasma zone          Workplace: Room 100.030b</p>	<h1>Safety Instruction</h1> <h2>Dry Etching Machine</h2> <h3>Oxford Instruments PlasmaPro80 Plus</h3>	<p>WWU          Münster Nanofabrication Facility (MNF)          Center for Soft Nanoscience (SoN)          Busso-Peus-Str. 10          48149 Münster</p>
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Range of Application		
Operation plasma-enhanced chemical vapor deposition machine		
Hazard for People and the environment		
	<ul style="list-style-type: none"> <li>Process gases: penetration of hazardous substances via respiratory passages, bare or injured skin and mucosae. Skin irritation, eye irritation, poisonous when inhaled, irritation of respiratory passages, cauterization of the skin, severe damage to the eye, mortal danger when inhaled. Suffocating in high concentrations.</li> <li>There can be flammable gases inside the machine.</li> <li>Vacuum chambers can present an implosion hazard.</li> <li>Radio frequency: Possible risk of RF burns.</li> <li>UV-radiation: possible damage to the eye.</li> <li>Hot components: danger by burn.</li> <li>Heavy components: bruise and bone fractures or fatal injury.</li> </ul>	
Safety Measures and Rules of Behavior		
	<ul style="list-style-type: none"> <li>Operating the machine is only allowed after previous instructions and knowledge of the manual PlasmaPro80 plus as well as the safety data sheets of the used gases.</li> <li>Vacuum systems must be flushed thoroughly with nitrogen before opening. Working with vacuum systems only after agreement.</li> <li>A leakage test must be carried out and documented at regular intervals</li> <li>Persons wearing a cardiac pacemaker or metallic implants must not approach the tool at any time.</li> <li>Wear safety goggles to filter the UV light while looking at the plasma.</li> <li>Adequate personal protective equipment has to be worn.</li> <li>Make use of the occupational health care.</li> </ul> <p>In case of any unclear issues contact the responsible person Prof. Pernice.</p>	
Action in Failure		
<ul style="list-style-type: none"> <li>In case of any malfunction or abnormality turn off the machine and secure against starting up and inform your direct supervisor.</li> </ul>		
Action in Accident, First Aid		
	<ul style="list-style-type: none"> <li>After contact with clothes: immediately disrobe and wash out with water. After contact with the skin: wash out with much water, in case of skin reaction consult a doctor. After contact with the eye: wash out for 10 minutes with floating water and open lid slit, immediately consult an eye doctor. After inhalation: get fresh air, immediately consult a doctor.</li> <li>Inform appointed first aider.</li> <li>Immediately treat small injuries.</li> <li>Enter data in the accident book.</li> <li>In case of severe injuries call an emergency doctor (phone 112).</li> <li>Inform your superior.</li> </ul>	
Maintenance and Disposal		
<ul style="list-style-type: none"> <li>Maintenance work must only be carried out by charged and instructed staff.</li> </ul>		