







Date: 06.02.2019
 Authors: Eich/Lomonte
 Work area: FIB zone
 Workplace: Room 100.030h

Safety Instruction

Zeiss Orion Nanofab

WWU
 Münster Nanofabrication
 Facility (MNF)
 Center for Soft Nanoscience
 (SoN)
 Busso-Peus-Str. 10
 48149 Münster

Range of Application		
	Working with vacuum/high-vacuum with focused ion beam, operating under high voltage	
Hazard for People and the environment		
	<ul style="list-style-type: none"> Risk of burn by hot surfaces Hazard due to ionized radiation Risk of shock due to high voltage electrical discharge Danger of implosion by improper handling or using unsuitable materials, parts can fly around Risk of flooding due to leakage in the cooling water system Risk of frostbite due to liquid nitrogen Risk of injury by moving components Danger for embryo/foetus through ionizing radiation! 	
Safety Measures and Rules of Behavior		
	<ul style="list-style-type: none"> The instrument is to be used only by designated Persons No improper handling of switches, buttons etc. Running of the instrument only under supervision Constantly observe nitrogen and pressured air pressure indicators Do not damage service connections People with pacemaker or metal implants must keep a sufficient distance to the machine Wear protective gear (Protection garment and gloves) Follow the instruction manual of the manufacturer Instruct people within the laboratory about potential hazards Pregnant women are generally not allowed to use or stay near the device. 	
Action in Failure		
	<ul style="list-style-type: none"> Shut down machine and vacuum pump, if necessary push emergency stop button Report defects and damage to supervisor Only experts should eliminate malfunctions 	
Action in Accident, First Aid		
	<ul style="list-style-type: none"> Protect yourself and remove injured people out of the danger area, react quickly, involve primary responsible person, In case of stronger injury call emergency services (112) If important, switch off the instrument by the emergency stop button at the machine Firefighting only with CO₂ fire extinguisher Report accident 	
Maintenance and Disposal		
	<ul style="list-style-type: none"> Instrument must be repaired only by authorized persons Dispose used material and hazardous scraps in an environmentally sound manner 	
Consequences in Nonobservance		
	Damage to the instrument, malfunction, costly damage	